INFLATION REPORT / I

2011

CNB CZECH NATIONAL BANK

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In 1998, the Czech National Bank switched to inflation targeting. In the inflation targeting regime, the central bank's communication with the public plays a significant role. One of the core elements of this communication is the publishing of quarterly Inflation Reports. Section II of the Inflation Report contains a description of the Czech National Bank's new quarterly macroeconomic forecast, and section III presents its assessment of past economic and monetary developments.

The inflation forecast and the assumptions underlying it are published with the aim of making monetary policy as transparent, comprehensible, predictable and therefore credible as possible. The Czech National Bank is convinced that credible monetary policy effectively influences inflation expectations and minimises the costs of maintaining price stability. Maintaining price stability is the Czech National Bank's primary objective.

The forecast for the Czech economy is drawn up by the CNB's Monetary and Statistics Department. The forecast for inflation at the "monetary policy horizon" (about 12–18 months ahead) is of greatest relevance to the decision-making on the current interest rate settings.

The forecast is the key, but not the only, input to the Bank Board's decision-making. At its meetings during the quarter, the Bank Board discusses the current forecast and the balance of risks and uncertainties surrounding it. The arrival of new information since the forecast was drawn up and the possibility of asymmetric assessment of the risks of the forecast and divergent views of some board members on the development of the external environment or the linkages between the various indicators within the Czech economy mean that the Bank Board's final decision need not correspond to the message of the forecast.

This Inflation Report was approved by the CNB Bank Board on 10 February 2011 and contains the information available as of 21 January 2011. Unless stated otherwise, the sources of the data contained in this Inflation Report are the CZSO or the CNB. All the Inflation Reports published to date are available on the CNB website. Underlying data for the tables and charts presented in the text of this Inflation Report, minutes of Bank Board meetings, and time series of selected economic and monetary indicators (available in the ARAD database) are published at the same internet address.

From this year onwards, the joint document of the Ministry of Finance and the Czech National Bank submitted at the end of each year to the Government for discussion, called "Assessment of the Fulfilment of the Maastricht Convergence Criteria and the Degree of Economic Alignment of the Czech Republic with the Euro Area", which in previous years was annexed to the Inflation Report, is only available as a separate document on the CNB website. The document states that in the current circumstances it is very unlikely that the Czech Republic will be able to fulfil all the Maastricht convergence criteria in the medium term. Maintaining and necessary further increasing the degree of alignment of the Czech economy with the euro area in the next few years is equally uncertain. In this situation, therefore, the document concludes that the Czech Republic has not made sufficient progress in laying the groundwork for euro adoption to allow it to set a target date for entry into the euro area.

CHART I.1

FULFILMENT OF THE INFLATION TARGET

Headline inflation increased in 2010 Q4 and was just above the CNB's inflation target in December
(annual percentage changes)

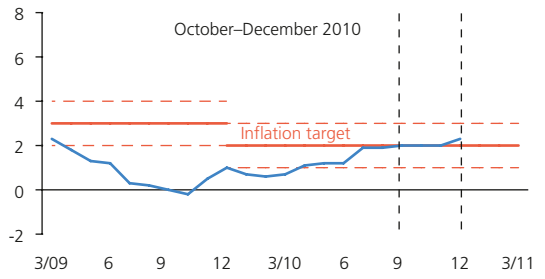


CHART I.2

HEADLINE INFLATION FORECAST

According to the forecast headline inflation will be close to the inflation target
(annual percentage changes)

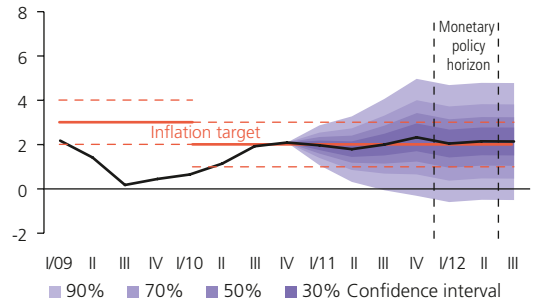
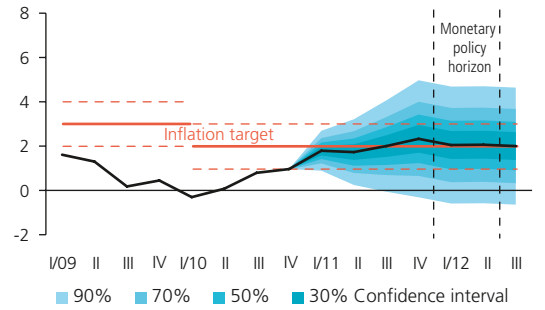


CHART I.3

MONETARY-POLICY RELEVANT INFLATION FORECAST

Monetary-policy relevant inflation will increase and be close to the target
(annual percentage changes)



I. SUMMARY

The recovery of the Czech economy is continuing and is temporarily being driven by investment. In December 2010, headline inflation moved slightly above the target owing to rising global commodity prices, whereas the inflation pressures from the domestic economy are insignificant and growth in import prices of goods with a high degree of processing remains subdued. Monetary-policy relevant inflation is still below the target. The Czech economy will see slowing annual growth this year as a result of fiscal consolidation, a fading investment boom and slowing economic growth abroad. A significant rise in domestic economic growth is expected next year thanks to a recovery in external demand and the unwinding of the effect of fiscal consolidation. Inflation will be close to the inflation target over the next two years. Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual rise in rates as from the end of 2011. The major risks of the forecast relate mainly to foreign developments.

The **annual rate of growth of the Czech economy** accelerated to 2.8% in 2010 Q3. This was mainly due to investment in inventories, but the contributions of fixed investment and household consumption were also slightly positive. A further increase to 3.5% is expected in 2010 Q4. The rising economic performance led to a sharp slowdown in the annual decline in employment.

Headline inflation increased in 2010 Q4 and was just above the CNB's inflation target in December (see Chart I.1). Monetary policy-relevant inflation is still below the target. The increase in inflation was due mainly to rising food and fuel prices. The deepening year-on-year decline in prices within adjusted inflation excluding fuels acted in the opposite direction. Import cost pressures are currently concentrated solely in commodity prices. Overall, the effect of import prices is neutral owing to the mutually offsetting effects of an appreciating exchange rate and rising foreign industrial producer prices. Domestic inflationary pressures are negligible at present, despite the ongoing economic recovery. Profit margins remain squeezed.

Economic growth in the euro area fell in 2010 Q3. A further gradual slowdown in economic growth is expected in most euro area countries this year due to fiscal austerity measures. The market outlook for interest rates in the euro area is rising, especially in the longer term, where it is increasing in expectation of a faster tightening of ECB monetary policy compared to the previous forecast. The fiscal problems of some euro area countries were reflected in fluctuations in the euro-dollar exchange rate. According to the current outlook, this rate should fluctuate just above USD 1.3 to the euro over the next two years. The current growth in oil prices is probably due to fundamentals and to increased interest among financial investors. However, the market outlook no longer foresees significant growth.

Headline inflation will be close to the inflation target over the entire **forecast** horizon (see Chart I.2). On the one hand, the effects of changes to indirect taxes will disappear from headline inflation. On the other hand, **monetary-policy relevant inflation**, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, will increase further and, along with headline inflation, will be close to the target (see Chart I.3). This will be fostered by gradually strengthening pressures from the domestic economy linked with a pick-up in the currently low wage growth and a gradual increase in margins. These pressures will be partly offset by gradual exchange rate appreciation, which, with regard to import prices, will outweigh the effect of rising prices abroad. Import prices will therefore act in the direction of lower net inflation until the end of 2011. In 2012, the forecast expects a further rise in domestic cost pressures due to rising growth in wages and economic activity. Food prices will increase in the short term, but after the effect of high agricultural producer prices unwinds, their annual growth will slow. Fuel prices will show a similar pattern. Adjusted inflation excluding fuels will gradually rise and turn positive in 2011 Q3.

Consistent with the forecast is stability of market **interest rates** close to their current levels initially, followed by a gradual rise in rates as from the end of 2011 (see Chart I.4). The low interest rate level will reflect, among other things, the effects of fiscal consolidation this year and the still low level of foreign interest rates in the short run. The gradual **koruna´s exchange rate** appreciation over the forecast horizon is due particularly to a low outlook for foreign interest rates in the short run, which will result in a positive interest rate differential persisting over most of the forecast period (see Chart I.5).

Expected economic growth will reach 1.6% this year. This represents a slowdown compared to the expected 2010 figure of 2.4% (see Chart I.6). This slowdown will be a result of fiscal restriction, falling investment in the construction of solar power stations and the replenishment of inventories, and declining growth in external economic activity. Czech GDP growth will pick up considerably to 3.0% in 2012 as external demand growth accelerates and the effect of the consolidation of public budgets unwinds.

The GDP growth slowdown and fiscal restriction will also affect the **labour market**. After turning positive at the start of 2011, annual employment growth will slow to zero again. The general unemployment rate should decline gradually over the coming two years, although mainly as a result of a fall in the labour force. Wage growth in the business sector will gradually rise, whereas wages in the non-business sector will fall in 2011 owing to fiscal austerity measures, and will then be broadly flat in 2012.

CHART I.4

INTEREST RATE FORECAST

Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual rise in rates as from the end of 2011
(3M PRIBOR, %)

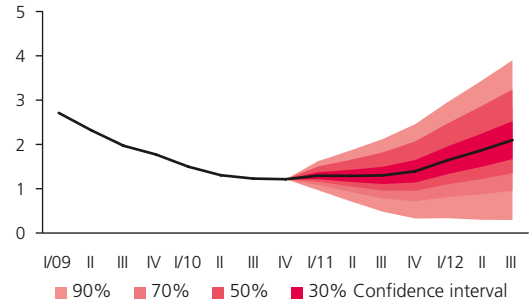


CHART I.5

EXCHANGE RATE FORECAST

The nominal exchange rate is gradually appreciating over the forecast horizon
(CZK/EUR)

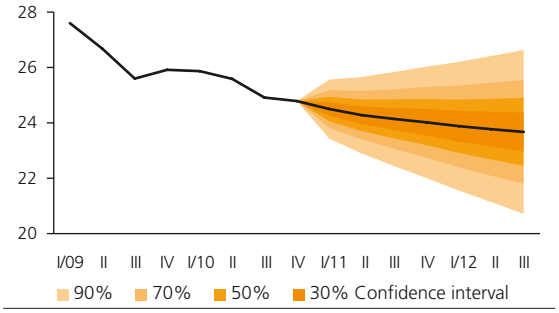


CHART I.6

GDP GROWTH FORECAST

GDP growth will slow in 2011 as a result of fiscal restriction, slower growth in external demand and lower investment growth
(annual percentage changes; seasonally adjusted)

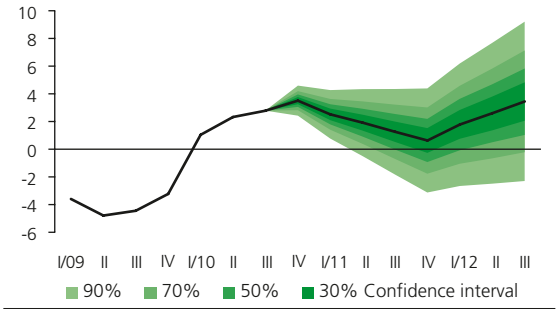


CHART I.7

HEADLINE INFLATION – COMPARISON OF BASELINE AND ALTERNATIVE SCENARIOS

Headline inflation differs visibly from the baseline only in the commodity price scenario
(annual percentage changes)

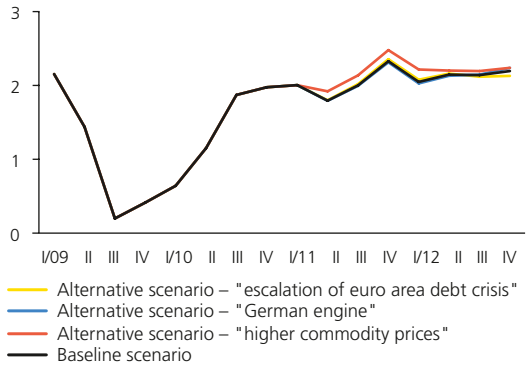
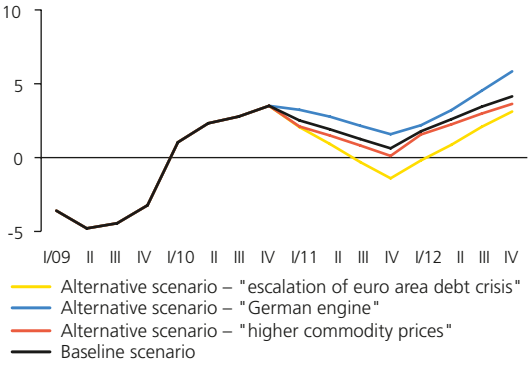


CHART I.8

GDP GROWTH – COMPARISON OF BASELINE AND ALTERNATIVE SCENARIOS

Two-sided risks surround the GDP growth forecast
(annual percentage changes; seasonally adjusted)



Several significant risks in the external environment were identified in the forecasting process, leading to the creation of three alternative scenarios. The first of them – **the higher commodity price scenario** – assumes 20% higher global prices in all major commodity groups compared to the baseline scenario. The ECB reacts to this shock by immediately increasing its key interest rates, which dampens the growth in industrial prices in the euro area. External economic activity contracts as well. This, along with high foreign rates, fosters depreciation of the koruna over the entire forecast horizon. The weaker exchange rate slightly improves domestic exporters' price competitiveness, but the effect of lower external demand prevails over the entire forecast horizon, leading to lower GDP growth compared to the baseline scenario (by 0.5 percentage point this year and 0.4 percentage point in 2012). Domestic inflation increases slightly, particularly in the area of administered energy prices, whereas in the area of market prices the effects of higher import prices and subdued domestic economic activity roughly offset each other (see Chart I.7). This scenario leads to an immediate rise in domestic market interest rates, which are higher than in the baseline scenario over the entire forecast horizon.

The higher external growth scenario ("the German engine") assumes that growth in the euro area will continue to benefit heavily from the "machine-like" growth rate of German exports. Annual economic growth in 2011–2012 will therefore be 0.5 percentage point higher than in the baseline scenario. The stronger external economic growth is accompanied by a monetary policy tightening in the euro area. The faster growth in external demand and improvement in the goods and services balance lead to appreciation of the koruna over the entire forecast horizon. However, the appreciation pressure is only partly dampened by the growth in foreign rates. Domestic GDP growth is 0.8 percentage point higher in 2011 and 0.9 percentage point higher in 2012 than in the baseline scenario (see Chart I.8). However, the stronger economic growth does not imply higher domestic inflation, since it is offset by the stronger exchange rate of the koruna. In 2011, interest rates are almost identical to those in the baseline scenario; only in 2012 are they higher (see Chart I.9).

The lower external growth scenario ("escalation of the euro area debt crisis") describes the situation where economic growth in the euro area is strongly dampened by an escalation of the debt crisis and by the more pronounced fiscal restriction necessitated by this situation. The scenario is simulated in such a way that annual growth in external economic activity in 2011–2012 is 1 percentage point lower than in the baseline scenario. The contraction in external demand, accompanied by a decline in euro rates, leads to a lower domestic interest rate level and a weaker koruna exchange rate at the longer end of the forecast. Compared to the baseline scenario, GDP growth is 1.3 percentage points lower in 2011 and 1.5 percentage points lower in 2012. However, as regards inflation, the slower economic growth is offset by a weaker exchange rate.

At its monetary policy meeting on 3 February 2011, the Bank Board decided by a majority vote **to leave the interest rates unchanged**. The risks to the new forecast were assessed as significant, associated with external developments, heading in both directions and being balanced overall. Higher commodity prices imply an upside risk to inflation, while the current appreciation of the koruna´s exchange rate implies a downside risk.

CHART I.9

3M PRIBOR – COMPARISON OF BASELINE AND ALTERNATIVE SCENARIOS

Higher commodity prices have an immediate impact on domestic market interest rates; the remaining scenarios only affect the longer rate outlook

(in %)

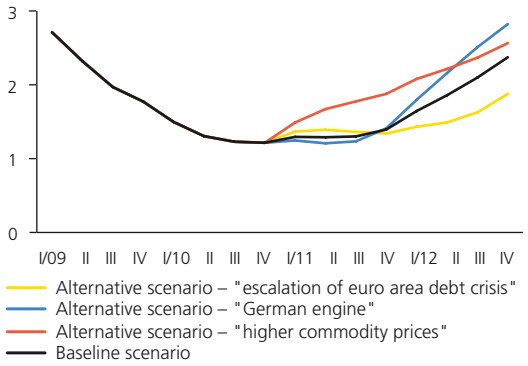


CHART II.1.1

EFFECTIVE GDP IN THE EURO AREA

Growth will slow during 2011 H1, as economic activity will be depressed by fiscal restriction
(annual percentage changes; differences in p.p. – right-hand scale)

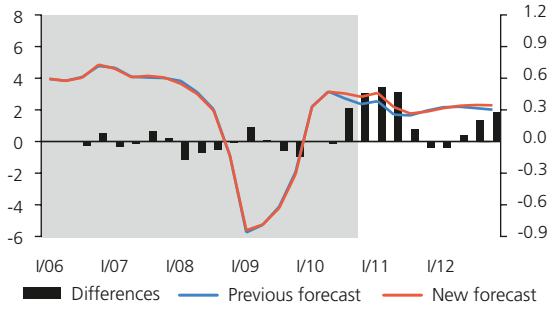


CHART II.1.2

EFFECTIVE PPI IN THE EURO AREA

The outlook for industrial producer price inflation for 2011 has been affected by the growth of commodity and energy prices
(annual percentage changes; differences in p.p. – right-hand scale)

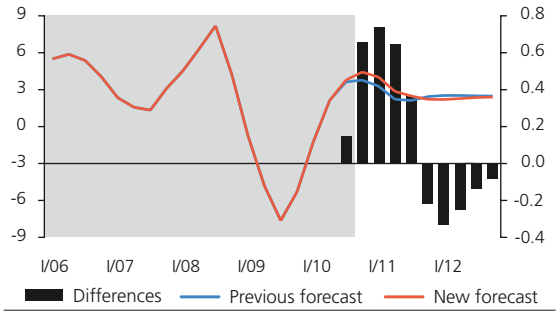
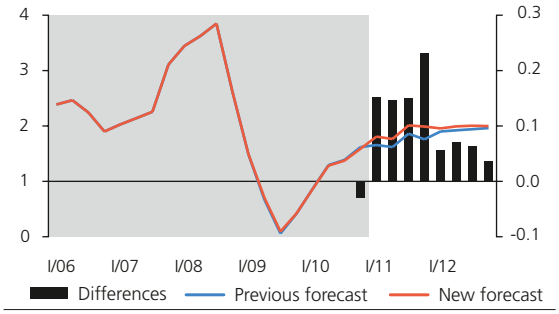


CHART II.1.3

EFFECTIVE CPI IN THE EURO AREA

The outlook for effective inflation lies at the 2% limit and has increased compared to the previous forecast
(annual percentage changes; differences in p.p. – right-hand scale)



II. THE FORECAST, ITS CHANGES AND RISKS

II.1 EXTERNAL ASSUMPTIONS OF THE FORECAST

The economic recovery in the euro area should continue this year and the next. In 2011 H2, however, GDP growth will begin to fully reflect the fiscal consolidation in individual member states. Relatively high price growth across commodity markets was reflected in current consumer and producer price inflation, thereby increasing the inflation outlook for the first half of this year as well. The market outlook for 3M EURIBOR rates is still rising, but the increasing inflation is shifting it towards an earlier monetary policy tightening. The euro-dollar exchange rate is currently volatile, but its outlook does not show any pronounced trend. Prices of oil and other commodities increased markedly in 2010 Q4, but no further pronounced growth in prices is expected until the end of 2012.

The **outlook for effective economic activity in the euro area** suggests a continuing recovery this year and the next (see Chart II.1.1).[1] The higher rate of growth is concentrated mainly in the first half of this year. Subsequently, the economic activity results will fully reflect the fiscal consolidation in individual euro area member states. The growth outlooks for 2011 and 2012 are around 2.2% on average, thanks mainly to the German economy, which accounts for a large part of the effective indicator. Confidence in the results of German industry still prevails and is supported by leading indicators. However, the outlook is subject to sizeable risks in both directions (see the alternative scenarios in sections II.4.2 and II.4.3).

The **outlook for growth in the effective indicator of producer prices in the euro area** (see Chart II.1.2) has been affected mainly by the recent growth in prices of food and industrial and energy commodities. This effect is particularly visible at the start of this year, when the forecast for industrial producer prices moves upwards and then fades in line with the assumed calming on commodity markets. Overall, the average growth in the effective indicator of producer prices was revised upwards by 0.4 percentage point for 2011, and annual growth of 2.9% is thus expected. Producer price inflation is expected to slow to 2.3% in 2012. Uncertainty in the form of potential longer-lasting growth in commodity prices is expressed in the "higher commodity price growth" alternative scenario (see section II.4.1).

Consumer price inflation in the euro area rose faster than predicted in the previous forecast. The December 2010 figure of 2.2% is above the ECB's definition of price stability (below but close to 2%). Although countries currently recording subdued price growth have

1 The outlook for external variables, which we take from Consensus Forecasts (CF) and from prices of market contracts, was updated on 10 January 2011. The grey areas in the charts divide the known past from the outlook. This convention is used throughout this Report.

the largest weight in the effective indicator of inflation in the euro area (see Chart II.1.3), its outlook shifted upwards. The higher expected annual inflation in the euro area is affected by the data published at the start of January and also reflects commodity prices. Consumer prices are therefore expected to rise by 1.9% this year and by 2.0% in 2012.

The **3M EURIBOR path** is still gradually rising and has moved upwards compared to the previous forecast (see Chart II.1.4). Although the growth in rates is still subdued this year, it is expected to pick up at the close of 2011, with the three-month rate reaching 1.9% at the end of 2012 (compared to only 1.5% in the previous forecast). These market expectations for this year are in line with the view of the Consensus Forecasts (CF) analysts. Most of them do not currently expect the ECB's key rate to go up before the end of 2011. The first increase is therefore expected beyond this horizon. However, the survey of analysts and the calculation of the market outlook for interest rates took place on 10 January 2011, i.e. three days before the ECB's monetary meeting. The President of the ECB subsequently drew attention to the inflation risks and might have steered analysts' and market expectations towards an earlier rate increase.

The **euro-dollar exchange rate** depreciated during November 2010 owing to the fiscal problems in some euro area member states. Between December and mid-January, it was volatile and showed no major trend. The outlook foresees no trend either and the exchange rate should fluctuate just above USD 1.3 to the euro over the entire horizon (see Chart II.1.5). Compared to the previous forecast, the euro is thus only slightly weaker this year and stronger in 2012. A potential continuation of the fiscal problems in the euro area poses a risk to the euro. By contrast, if the quantitative easing programme in the USA is not reduced, the excess liquidity could start inflating an asset price bubble, which would lead to depreciation of the dollar.

Based on market outlooks, the **price of Brent crude oil** is expected to rise only gradually to just below USD 100 a barrel and then stay flat until the end of 2012 (see Chart II.1.6). Compared to the expectations in the previous forecast this represents an upward revision of around 9% on average. The market outlook for Brent crude oil prices is in line with the expectations of the CF analysts, who also expect WTI oil prices to rise only slightly. WTI oil is currently more than USD 5 a barrel cheaper than Brent oil owing to high stocks in the USA. In addition to the continuing global economic recovery, the currently high oil prices are probably due to the investment of excess liquidity in oil derivatives.

CHART II.1.4

3M EURIBOR

The market outlook for interest rates is gradually rising and by contrast to the previous forecast reflects expectations of faster monetary policy tightening
(in %; differences in p.p. – right-hand scale)

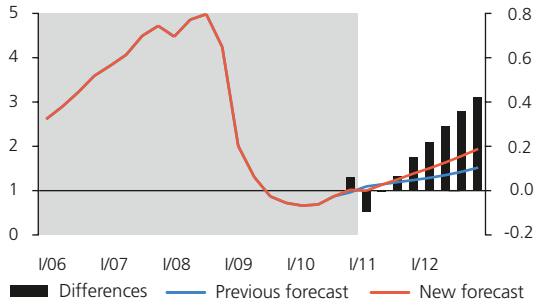


CHART II.1.5

EURO-DOLLAR EXCHANGE RATE

The outlook for the euro against the dollar is just above 1.3 USD/EUR and is little changed from the previous forecast
(USD/EUR; differences in % – right-hand scale)

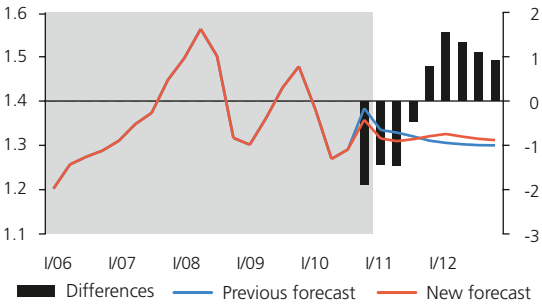


CHART II.1.6

PRICE OF BRENT CRUDE OIL

The oil price and its outlook both increased, probably as a result of investment of excess liquidity in oil derivatives
(USD/barrel; differences in % – right-hand scale)

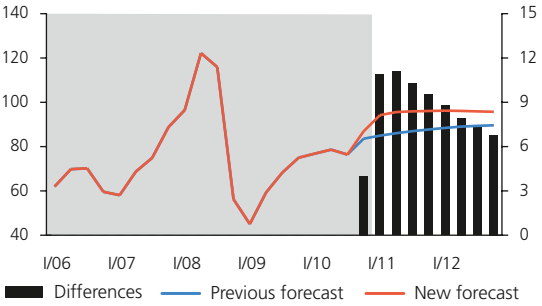


CHART II.2.1

HEADLINE INFLATION AND MONETARY-POLICY RELEVANT INFLATION

Both headline and monetary-policy relevant inflation will be close to the inflation target
(annual percentage changes)

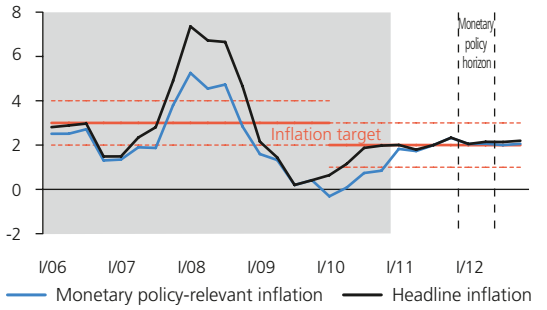


CHART II.2.2

ADMINISTERED PRICES AND FUEL PRICES

Administered price inflation will increase slightly this year
(annual percentage changes; excluding first-round effects of indirect tax changes)

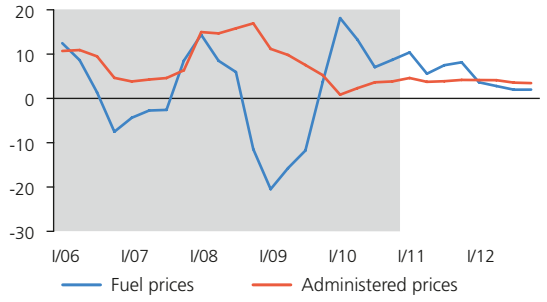


TABLE II.2.1

FORECAST OF ADMINISTRATIVE EFFECTS

The growth of administered prices will be due to further growth in regulated rents and a rise in energy prices
(annual percentage changes; impact in p.p.)

	2010 actual		2011 forecast		2012 forecast	
Administered prices – total [a]	3.8	0.66	4.3	0.74	3.4	0.62
of which (selected items):						
Regulated rents	16.8	0.23	15.0	0.24	15.0	0.27
Electricity	-2.5	-0.09	5.0	0.17	3.0	0.11
Natural gas	6.7	0.16	3.4	0.08	1.0	0.03
Heat	3.3	0.08	2.0	0.05	2.0	0.05
Healthcare	7.8	0.16	4.0	0.08	2.0	0.04
First-round impacts of tax changes in non-administered prices		1.02		0.00		0.14

a) Incl. effects of indirect tax changes

II.2 THE FORECAST

Headline inflation was 2.1% and monetary-policy relevant inflation 1.0% on average in 2010 Q4. Import cost pressures are currently concentrated solely in commodity prices and are neutral overall owing to the mutually offsetting effects of an appreciating exchange rate and rising foreign industrial producer prices. Domestic inflationary pressures are negligible at present, despite the ongoing economic recovery. At the forecast horizon, both headline and monetary-policy relevant inflation will be close to the 2% target. This will be fostered by gradually strengthening pressures from the domestic economy linked with a pick-up in the currently low wage growth and a gradual increase in margins. These pressures will be partly offset by gradual exchange rate appreciation, which, with regard to import prices, will outweigh the effect of rising prices abroad. In 2011, GDP growth will slow to 1.6% as a result of fiscal restriction, falling investment in inventories and solar power stations, and declining growth in external economic activity. Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual rise in rates as from the end of 2011.

Annual **headline inflation** was 2.1% on average in 2010 Q4. Monetary-policy relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, was 1.0% on average. In the coming quarters, annual headline inflation and monetary-policy relevant inflation will be close to the inflation target (see Chart II.2.1). The return of monetary-policy relevant inflation to the target will be fostered by administered and food prices.

Annual **administered price inflation** in 2010 Q4 was roughly the same as in Q3, at 3.8%. In 2011 Q1, the forecast expects a pick-up in annual administered price inflation to 4.6%, mainly because of higher electricity prices (see Chart II.2.2). Up to the end of 2011, administered price inflation should fluctuate within the range of 3.5%–4.5%, with a subsequent gradual slowdown in 2012 (see Table II.2.1). Growth in regulated rents, an increase in electricity prices at the start of 2011 and a gradual rise in other energy prices will be the main sources of growth in administered prices in 2011 and 2012. The risk of a higher rise in administered energy prices is part of the "higher commodity price growth" alternative scenario (see section II.4.1).

As regards **changes to indirect taxes,** from January 2011 annual inflation will only be affected by the lagged effects of higher excise duties and VAT on cigarettes (of about 0.2 percentage point in 2011 Q1; this effect will disappear in 2011 Q3). The forecast assumes no changes to indirect taxes in 2011. At the start of 2012, as in the previous forecast, it assumes only a harmonisation increase

in excise duties on cigarettes, with a contribution to inflation of just over 0.1 percentage point.[2]

Net inflation continued rising in 2010 Q4, reaching 0.4% in annual terms (see Chart II.2.3). This was mainly a result of continuing relatively high growth in food and fuel prices. Commodity prices (including agricultural producer prices) will, together with a gradual renewal of domestic cost pressures and balancing of margins, contribute to net inflation. In 2011, however, these effects will be partly offset by gradual exchange rate appreciation and later also by a renewed slowdown in food price inflation.

Annual **adjusted inflation excluding fuels** remained negative in Q4, falling further to -1.3%. These low figures are in line with the anti-inflationary external cost pressures (except for commodity prices, which are so far affecting only the early stages of the production chain), subdued domestic cost pressures and weak domestic demand, which is keeping businesses' margins at a squeezed level. Adjusted inflation excluding fuels will rise gradually at the start of the forecast horizon and turn positive in 2011 Q3. It will then increase further, reaching 2% at the end of 2012.

Annual **food** price inflation rose further in 2010 Q4. The main driver of this rise was strong growth in agricultural producer prices. The current rise in consumer food prices is lower than the observed growth in producer prices. Looking ahead, another important factor is that food sellers reacted only partially to the past decrease in input prices and increased their margins in the past. Sellers therefore still have potential to absorb rising costs; there is no such potential in the other components of net inflation. This absorption potential will suppress growth in food prices over the forecast horizon, but annual food price inflation will nonetheless be about 4% in 2011 Q1 (see Chart II.2.4). Once the effect of rising agricultural commodity prices has dropped out, annual food price inflation will ease to around 1.5% in 2012.

Annual **fuel** price inflation increased in 2010 Q4 and is forecasted to rise in 2011 Q1 as well (see Chart II.2.5), as a result of rising world prices of oil and petrol in late 2010 and early 2011. Given the flat market outlooks for oil and petrol prices and the expected appreciation of the koruna, fuel price growth will decrease in the period ahead, to 2% at the end of 2012.

Money market **interest rates** were flat in 2010 Q4, while rates with longer maturities increased. Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual increase in rates as from the end of 2011 (see Chart II.2.6). The low interest rate level will reflect, among other things, the effects of fiscal consolidation in 2011 and the still low level of foreign interest rates at the shorter end of the forecast.

2 The risk of a possible increase in the reduced VAT rate in 2012 was analysed in one of sensitivity scenarios in Inflation Report IV/2010.

CHART II.2.3

NET INFLATION AND ADJUSTED INFLATION EXCLUDING FUELS

Adjusted inflation excluding fuels will turn positive in 2011 Q3
(annual percentage changes)

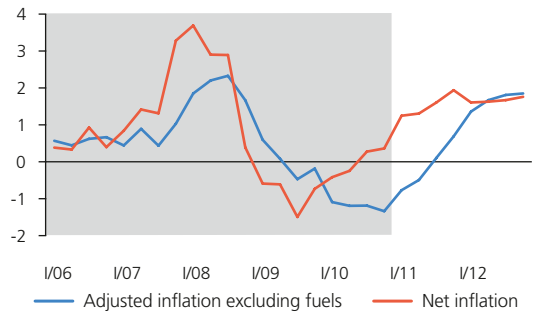


CHART II.2.4

FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

Agricultural producer price inflation has peaked, but food price inflation will continue to rise
(annual percentage changes)

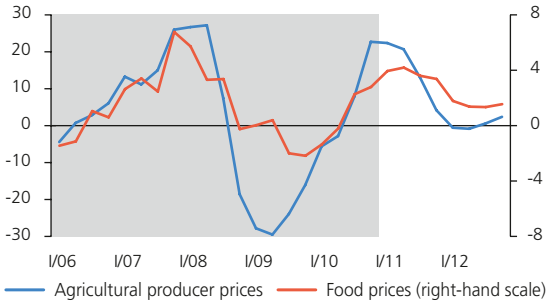


CHART II.2.5

FUEL PRICES AND OIL PRICES

The current high growth in fuel prices will gradually weaken
(annual percentage changes)

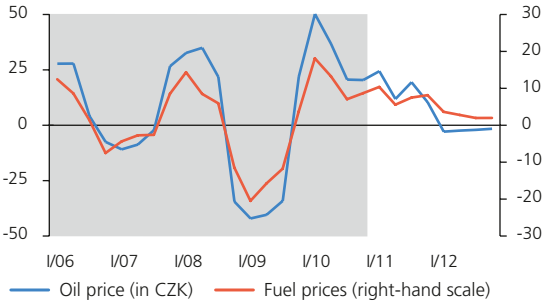


CHART II.2.6

INTEREST RATE FORECAST

Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual increase in rates as from the end of 2011
(3M PRIBOR and 3M EURIBOR in %)

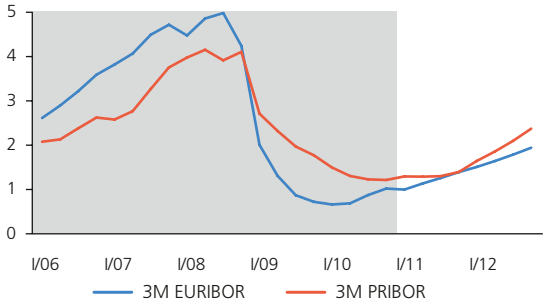


CHART II.2.7

EXCHANGE RATE FORECAST

The nominal exchange rate of the koruna against the euro is gradually appreciating over the forecast horizon
(CZK/EUR and CZK/USD)

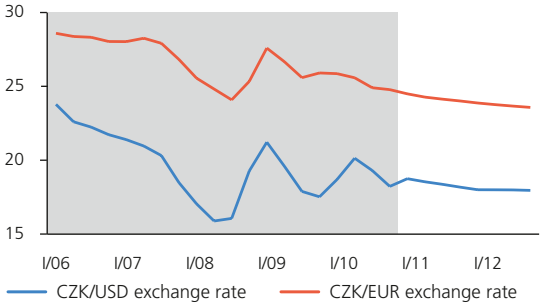
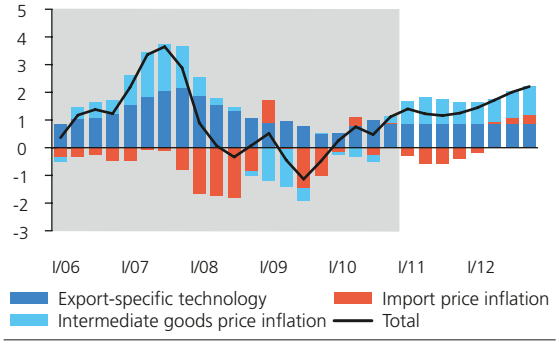


CHART II.2.8

COSTS IN THE CONSUMER SECTOR

The re-emerging pressures from the domestic economy will be partly offset by anti-inflationary import prices
(quarterly percentage changes; contributions in p.p.; annualised)



The **koruna-euro exchange rate** appreciated slightly on average in 2010 Q4, although it weakened temporarily at the very end of the year. These fluctuations were mostly due to foreign investors' sentiment, related to the risks in the USA and Europe. The short-term forecast for 2011 Q1 assumes an average exchange rate of CZK 24.5 against the euro. The gradual appreciation of the exchange rate over the forecast horizon (see Chart II.2.7) is due above all to a low outlook for foreign interest rates at the shorter end of the forecast, which will result in a positive interest rate differential persisting over most of the forecast period. The appreciation of the koruna will also be caused by a positive outlook for the goods and services balance, reflecting, among other things, a decline in imports of photovoltaic panels and subdued domestic demand. The exchange rate appreciation will also be fostered by declining risk premia owing to fiscal consolidation and renewed real convergence in 2012.

The inflation forecast described above and the corresponding interest rate path reflect an assessment of the current economic situation and its outlook. Based on the observed data, we estimate that quarterly growth in **nominal marginal costs in the consumer goods sector** will be slightly positive in 2010 Q4 (see Chart II.2.8). The effect of import prices is neutral at present (except for the immediate impact of world commodity prices) and the appreciating exchange rate and rising external inflation offset each other. Pressures from the domestic economy, approximated by intermediate goods price inflation, are insignificant. The estimated evolution of export-specific technology is linked to the persisting difference in the evolution of prices of tradables and non-tradables (the Balassa-Samuelson effect) and traditionally fosters positive inflation.

At the start of the forecast horizon nominal marginal cost growth in the consumer sector is moderate. Pressures from the domestic economy are renewing, but are still dampened at the beginning of the forecast horizon by low growth in wages and a slowing pace of economic recovery. Import prices will turn anti-inflationary (the effect of the appreciating exchange rate will outweigh the expected growth in industrial producer prices in the euro area). In addition to renewed growth in external and domestic demand, the forecast expects further growth in domestic cost pressures from early 2012.

Nominal marginal costs in the intermediate goods sector rose quarter on quarter in 2010 Q4, as the contribution of the price of capital was temporarily positive in response to higher investment activity. Nominal wage growth was only partly offset by growth in labour-augmenting technology (see Chart II.2.9), which is consistent with the observed rise in whole-economy labour productivity. Domestic cost pressures will start to return gradually owing to wage growth and, as from 2012, a more robust recovery in economic activity. The negative contribution of the price of capital in 2011 is chiefly due to an expected quarter-on-quarter fall in investment (the effect of decreasing construction of solar power stations and slowing replenishment of inventories).

Profit mark-ups in the consumer goods sector continued to be assessed as squeezed below their long-term level in 2010 Q4 (see Chart II.2.10). They will remain flat at the current levels in 2011 Q1, owing above all to low wage growth. Starting from 2011 Q2, margins will gradually return to their long-term level via higher inflation and slow growth in costs.

Whole-economy **labour productivity**, which shifted to annual growth during 2010 Q1, will increase over the entire forecast horizon. However, its evolution will reflect the slowdown in economic growth in 2011 and the fitful recovery in employment, and so annual labour productivity growth will temporarily slow this year.

As assumed in the forecast, the average **nominal wage in the business sector** increased by 3.3% in 2010 Q4 and by 2.7% for the entire 2010.[3] It will increase by 3.7% in 2011 and its annual growth rate will pick up further in 2012, to as much as 5% (see Chart II.2.11). This pick-up will mainly reflect the recovery in economic activity.

The average **wage in the non-business sector** decreased by 0.2% year on year in 2010 owing to government austerity measures. The forecast expects an annual decline of 2.5% in 2010 Q4. Wages and salaries in the non-business sector are expected to fall by around 3.4% this year as a result of fiscal consolidation. By our estimation, half of this decline will be due to declining employment, so the average wage will drop by 1.7%. In 2012, average wage growth in the non-business sector will rise to 0.5% year on year.

In 2010 Q3, real GDP growth increased by 2.8% year on year (and by 1.0% quarter on quarter), which represents a pick-up in growth compared to the previous quarter. According to the previous forecast, the growth should have been only 0.1 percentage point lower in 2010 Q3. Gross capital formation contributed the most to annual GDP growth, mainly thanks to investment in inventories, but the contribution of fixed investment was also positive (see Chart II.2.12). Household consumption acted in the same direction. By contrast, the contributions of net exports and government consumption were negative.

Growth in economic activity probably rose slightly in 2010 Q4 (see Chart II.2.13) owing to quarterly increases in household consumption and net exports. Conversely, gross capital formation probably

3 One risk associated with this short-term forecast is the estimated impact of tax optimisation whereby part of firms' profit is paid through wages. The lower personal income tax rate (currently 15%) relative to the corporate income tax rate (currently 19%), together with caps on social and health insurance premium payments, means that it is more beneficial for someone who is simultaneously the owner and employee of a firm to pay himself profit in the form of wages. The effect of this tax optimisation is concentrated at the end of the year. In 2010, it was already strongly visible in the November data on wages in industry. Given the favourable performance of non-financial corporations and the rising use of this form of tax optimisation, its effect will probably be higher in 2010 than in 2009. The contribution of this effect to the annual average wage growth in the business sector is estimated at less than 1 percentage point in 2010 Q4.

CHART II.2.9

COSTS IN THE INTERMEDIATE GOODS SECTOR

Domestic cost pressures will contribute only modestly to growth in intermediate goods prices
(quarterly percentage changes; contributions in p.p.; annualised)

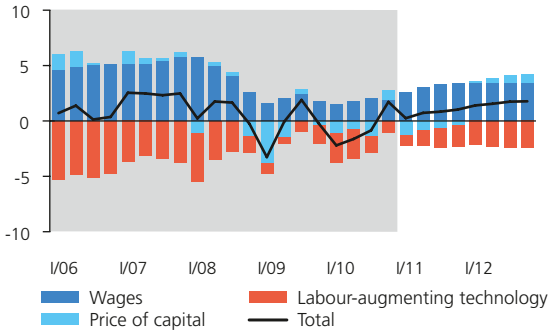


CHART II.2.10

GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

Corporate profit mark-ups will gradually return to their equilibrium level starting from 2011 Q2
(percentages)

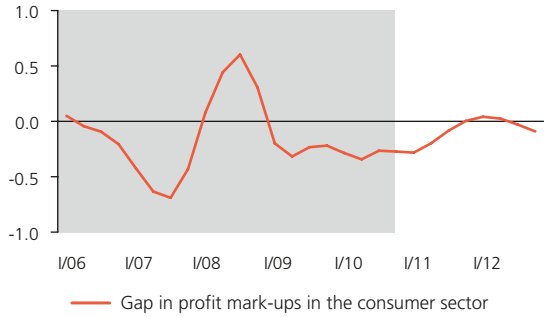


CHART II.2.11

AVERAGE NOMINAL WAGE

Wage growth in the business sector will start to pick up, but wages in the non-business sector will fall in 2011
(annual percentage changes; seasonally adjusted)

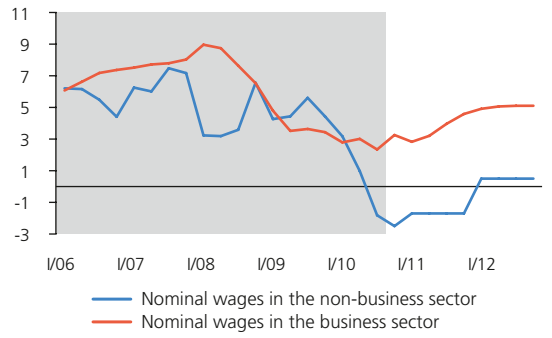


CHART II.2.12

STRUCTURE OF ANNUAL GDP GROWTH

The contribution of net exports will turn positive this year
(annual percentage changes; contributions in p.p.; seasonally adjusted)

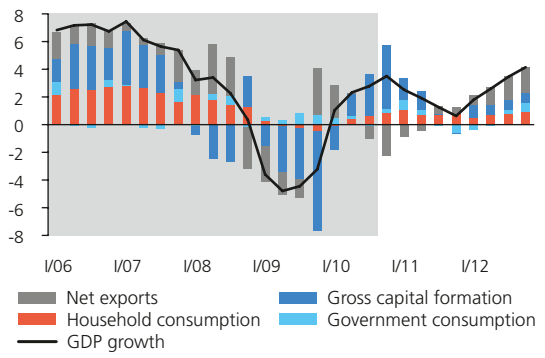


CHART II.2.13

GDP GROWTH FORECAST

GDP growth will slow in 2011 as a result of fiscal consolidation and lower growth in total investment
(percentage changes; seasonally adjusted)

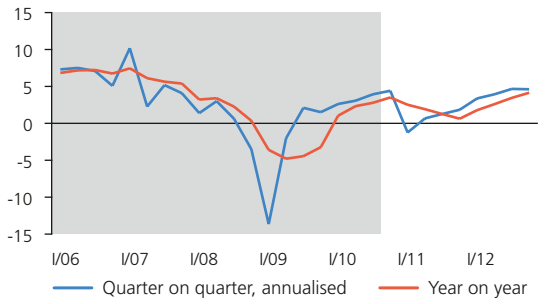
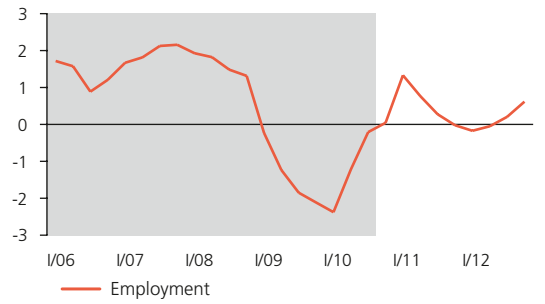


CHART II.2.14

AGGREGATE EMPLOYMENT

The recovery of aggregate employment will be fitful
(annual percentage changes)



decreased in quarter-on-quarter terms. Annual GDP growth is forecasted to reach 3.5% in 2010 Q4 and 2.4% in 2010 as a whole. The GDP growth rate is expected to decrease to 1.6% in 2011, owing to slowing growth of all components of domestic demand. The slowdown, or decline, in household and government consumption will reflect above all the expected impact of government austerity measures. As regards investment, the effects of replenishment of inventories and investment in solar power stations at the end of 2010 should wane.[4] The contribution of net exports will act against a slowdown in the annual GDP growth rate, as it will be neutral for the entire 2011 in contrast to its slightly negative contribution in 2010. The contributions of all expenditure components to GDP growth will increase in 2012 and the GDP growth rate will increase considerably to 3.0%. The largest contribution is expected to come from net exports thanks to rising external demand and a more modest recovery in domestic demand. The contribution of household consumption will also be positive owing to faster wage growth.

The recovery in economic activity during 2010 was reflected in another sizeable moderation of the annual fall in **employment** in 2010 Q3. The forecast assumes that total employment increased slightly year on year in 2010 Q4 and that this growth will continue until 2011 Q3 (see Chart II.2.14). Employment will then decline again, owing to slower annual GDP growth and redundancies in the public sector. A partial recovery in employment will again occur thanks in particular to growth in export-oriented industrial production. The services sector, which has a larger weight in total employment (59%) and significantly slowed its decline last year, will probably no longer be affected by any sizeable contraction in employment.

The seasonally adjusted **general unemployment rate** was flat in 2010 Q3. The forecast assumes a gradual decline from 7.3% in 2010 to 6.8% in 2011 and 6.6% in 2012 (see Chart II.2.15). This reflects the fading decline in employment and the expected fall in the labour force due to the shrinking working age population. The **registered unemployment rate** decreased in 2010 Q3, but increased again in 2010 Q4. This was largely a result of changes in legislation and the subsequent reaction of job applicants to these changes. Some newly registered unemployed people had registered in December 2010 instead of in January 2011.[5] The evolution of the registered unemployment rate over the forecast horizon is similar to that of the general unemployment rate. A risk of the forecast for both indicators is the estimate of the impacts of fiscal consolidation (which will increase the unemployment rate by about 0.2 percentage

4 However, the possibility that part of this investment will be realised in 2011 Q1 is a risk of the forecast.

5 As unemployed persons were allowed earn up to one-half of the minimum wage in so-called "non-colliding" employment, it was possible until the end of 2010 for one person to be registered as an unemployed person in the MLSA statistics and as an employed person in the ILO statistics. This possibility was abolished on 1 January 2011, but is still valid for those who registered before this date. This measure can be expected to contribute to convergence of the two unemployment rates in the long run.

point; this effect will fade gradually). As regards the general rate, the effect of the aforementioned legislative changes is a risk as well.

The recovery in annual real **household consumption** growth observed in 2010 is likely to halt in 2011 and consumption growth will be more moderate. The recovery in 2010 Q2 and Q3 can be explained mainly by a lower saving rate compared to previous years as a result of smoothing of consumption over time. At the same time, data uncertainty persists regarding the real household consumption data (see the box in Inflation Report IV/2010). In 2011 H1, disposable income growth will be depressed by the government austerity measures. Slowing consumption growth will also be fostered by an expected gradual increase in the saving rate from its currently low levels and by a rise in the consumption deflator. The resulting real consumption growth will be 0.6% in 2011. In 2012, it can be expected to accelerate to 1.5% thanks to faster wage growth and the unwinding of the effect of fiscal consolidation (see Chart II.2.16).

The evolution of household consumption over the forecast horizon is determined primarily by **gross disposable income**. The total volume of wages will continue to rise slowly (see Chart II.2.17). The forecast expects a further pick-up in average wage growth in the private sector and a modest rise in the number of employees. The contribution of the average wage in the non-business sector will be negative in 2011. The contribution of social benefits, which are the second-largest component of disposable income, is also positive, owing mainly to a rise in pension expenditure, which will outweigh the cuts in the state social support area. The contribution of the operating surplus and mixed income relating to the profits of small businesses will be minimal to slightly positive at the forecast horizon. Current taxes and social contributions will record negative contributions to disposable income, particularly in 2011, as a result of government consolidation measures. This effect will then fade away in 2012. Overall growth in gross disposable income will pick up gradually. This is an important condition for a recovery in nominal consumption.

In 2011, households will again gradually start to increase their **saving rate**, which dropped during the crisis as a result of consumption smoothing. The positive difference between consumption growth and disposable income growth will gradually disappear in 2011 and disposable income will increase faster in 2012.

The emerging slowdown in real **government consumption** growth in the first half of 2010 culminated in a slight decline of 0.5% in 2010 Q3. The forecast expects slight growth again in 2010 Q4. Owing to austerity fiscal measures, annual growth in government consumption in 2011 will first slow and then turn strongly negative at the end of the year. Real growth will be renewed in the second half of 2012.

CHART II.2.15

GENERAL UNEMPLOYMENT RATE

The unemployment rate will fall gradually
(percentages; seasonally adjusted)

CHART II.2.16

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption growth will stay positive, while government consumption will fall sharply
(annual percentage changes; seasonally adjusted)

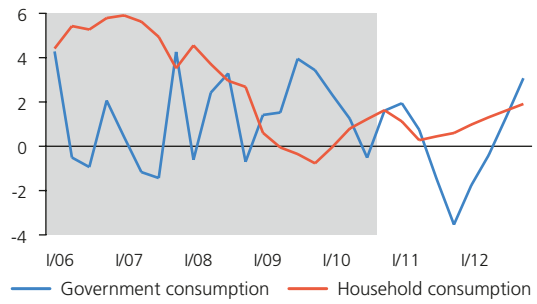


CHART II.2.17

NOMINAL DISPOSABLE INCOME

Gross disposable income will rise mainly because of renewed growth in wages and salaries
(annual percentage changes; contributions in percentage points)

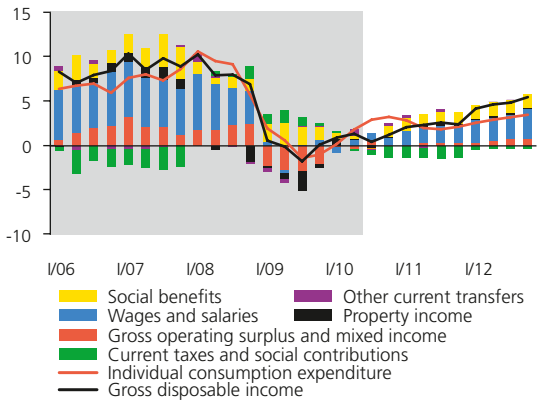


CHART II.2.18

GROSS CAPITAL FORMATION

Total investment growth will slow sharply this year owing to falling investment in solar power stations and to replenishment of inventories
(annual percentage changes; seasonally adjusted)

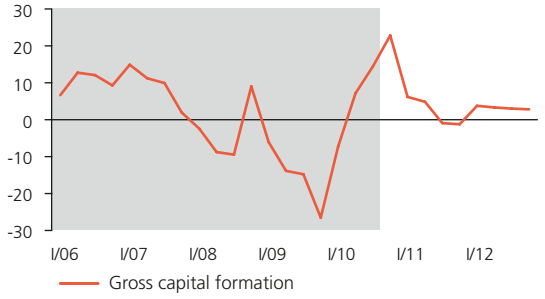


CHART II.2.19

REAL EXPORTS AND IMPORTS

The decline in imports of photovoltaic panels is being reflected in falling import growth
(annual percentage changes; annual changes in CZK bn.; seasonally adjusted)

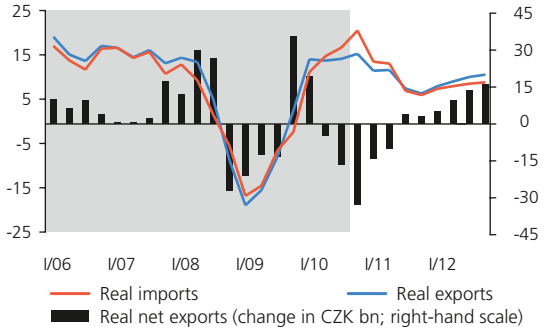


TABLE II.2.2

BALANCE OF PAYMENTS FORECAST

The increase in the goods and services surplus will be offset by a growing income deficit
(CZK billions)

	2009 actual	2010 est.	2011 forec.	2012 forec.
A. CURRENT ACCOUNT	-37.0	-105.0	-110.0	-110.0
Trade balance	180.6	200.0	220.0	240.0
Balance of services	27.0	-35.0	-40.0	-40.0
Income balance	-230.9	-260.0	-280.0	-300.0
Current transfers	-13.7	-10.0	-10.0	-10.0
B. CAPITAL ACCOUNT	41.0	38.0	48.0	48.0
C. FINANCIAL ACCOUNT	123.9	177.0	145.0	140.0
Direct investment	26.4	125.0	90.0	105.0
Portfolio investment	113.8	160.0	110.0	70.0
Financial derivatives	-7.7			
Other investment [a)]	-8.6	-55.0	-15.0	5.0
D. ERRORS AND OMISSIONS	-38.4			
E. CHANGE IN RESERVES (- = increase)	-60.6	-58.0	-18.0	-13.0

a) excluding operations of banking sector

Gross capital formation recorded a high annual increase of 14.4% in 2010 Q3. This was fostered mainly by inventories, but also by fixed investment, which recovered after a long period of decline. The forecast expects gross capital formation growth to pick up further to 22.8% year on year in 2010 Q4. However, annual gross capital formation growth will slow significantly at the start of 2011 because of the fading effect of the installation of photovoltaic panels and the weakening contribution of changes in inventories (see Chart II.2.18). Fixed investment and gross capital formation overall will grow at a subdued quarter-on-quarter rate in the second half of 2011 and in 2012.

Real **exports of goods and services** rose by 14.1% year on year in 2010 Q3. The forecast expects a further year-on-year rise in 2010 Q4 (see Chart II.2.19), but quarter-on-quarter growth will slow according to the forecast for external demand. Export growth is expected to slow further in 2011; the forecast expects an upswing in 2012. The forecast for exports is based on the profile of expected growth in external effective demand.

Amid accelerating growth in exports and gross investment, which are the most import-intensive expenditure components of GDP, **imports of goods and services** also recorded a marked increase in 2010 Q3 (of 16.6%). The forecast expects a sharp slowdown in import growth in 2011, mainly reflecting the expected evolution of exports and gross capital formation.

Amid significantly faster growth in imports than in exports, the contribution of **net exports** to annual GDP growth was negative in 2010 Q3 (-0.9 percentage point). A further decline in the negative contribution to -2.2 percentage points is expected in 2010 Q4. The contribution of net exports to annual GDP growth will remain negative – albeit less significantly – in the first half of 2011, then it will turn positive and rise gradually. The contribution of net exports to annual GDP growth will reach 1.9 percentage points at the end of the forecast horizon.

The balance of payments forecast assumes approximately flat **current account** deficits in 2011 and 2012 at the 2010 level (see Table II.2.2). In real terms, this represents a slight decline from about 3% of GDP in 2010 to around 2.7% in 2012. A slight increase in the goods and services surplus in both years will be roughly offset by a rise in the income deficit. The slight annual increase in the goods and services balance in 2011 will be related to slower import growth (the effect of fading imports for photovoltaic power stations) and slow growth in domestic demand (a result of restrictive fiscal policy). Relatively strong annual growth in commodity prices on world markets, fuels in particular, will act in the opposite direction. A recovery in external demand is expected to contribute to a further slight rise in the goods and services surplus in 2012. The increasing income deficit in both years will be due mainly to continuing growth in non-residents' profits on foreign direct investment in the Czech Republic and growth in interest expenses related to a rise in external financing of government debt.

The balance of current transfers is expected to stay the same. Higher net drawdown of EU funds and a widening of the private transfers deficit will counteract each other.

The current account deficit will be financed by a slightly higher capital account surplus due to a rising inflow of EU funds and a net inflow of direct and portfolio investment on the financial account. The net inflow of **direct investment** will decline slightly in 2011 compared to 2010, owing mainly to a slight increase in investment by residents abroad and an expected decrease in the inflow of loans from foreign parent companies. The forecast expects moderate annual growth in the overall direct investment balance again in 2012. Economic growth should stimulate interest in investing in the Czech Republic, while the outflow of capital should decrease in connection with the decision by ČEZ to re-direct investment from abroad to the Czech Republic. **The portfolio investment** surplus will fall substantially because of a lower need for external financing of the fiscal deficit and a decline in external financing by ČEZ. A decline in the overall portfolio investment surplus should also be fostered by residents' renewed interest in investment abroad. At the forecast horizon, no major risk of the external imbalance of the Czech economy continues to be apparent.

The expected future economic developments described above are reflected in the **government finance** outlook for 2011 and 2012 (see Table II.2.3). The expected government finance result for 2010 was revised on the basis of the available quarterly national accounts data and the state and local budget performance last year. The CNB forecast assumes a marked annual decline in the **general government deficit** to 5.1% of GDP in 2010 as a result of the fiscal austerity measures approved two years ago. The measures included an increase in indirect taxes, which, however, failed to raise as much budget revenue as originally estimated, particularly in the case of excise duties on fuels. On the other hand, government debt servicing costs declined significantly in 2010 thanks to lower interest rates on government bonds, while an estimated CZK 6 billion in additional revenues was raised through the sale of emission permits.[6]

In 2011 the decline in the deficit should intensify to 4.3% of GDP, owing to the consolidation measures adopted at the end of last year in connection with the approval of the state budget for 2011. Their restrictive effect on domestic economic activity is consistent with the previous forecast in terms of both its magnitude and the way it is captured in the macroeconomic forecast. Therefore, we still expect the overall impact of the consolidation measures on GDP growth to be -0.8 percentage point in 2011, with the main channels of fiscal restriction being government consumption and household consumption. At the same time, the consolidation of public budgets will gradually have a slightly positive supply effect and will lead to

6 However, emission permit revenues are classed as one-off measures and therefore have no effect on the structural deficit.

TABLE II.2.3

FISCAL FORECAST

The fiscal consolidation will lead to a noticeable reduction of the general government deficit in 2011
(% of GDP)

	2009 actual	2010 forec.	2011 forec.	2012 forec.
Government revenue	40.2	41.0	41.6	41.2
Government expenditure	45.9	46.1	45.9	45.4
of which: interest payments	1.3	1.2	1.4	1.6
GOVERNMENT BUDGET BALANCE	-5.8	-5.1	-4.3	-4.2
of which:				
primary balance [a)]	-4.5	-3.9	-2.9	-2.6
one-off measures	0.4	-0.1	-0.2	-0.1
ADJUSTED BUDGET BALANCE [b)]	-6.1	-5.0	-4.2	-4.1
Cyclical component (ESCB method) [c)]	0.0	-0.3	-0.7	-0.6
Structural balance (ESCB method) [c)]	-6.2	-4.7	-3.5	-3.4
Fiscal stance in p.p. (ESCB method) [d)]	-2.0	1.5	1.2	0.0
Cyclical component (EC method) [c)]	-0.9	-0.5	-0.5	-0.1
Structural balance (EC method) [c)]	-5.3	-4.5	-3.6	-4.0
Fiscal stance in p.p. (EC method) [d)]	-1.2	0.8	0.9	-0.4
Government debt	35.3	39.3	41.9	44.0

a) government budget balance minus interest payments
b) adjusted for one-off measures; CNB estimate
c) CNB estimate
d) year-on-year change in structural balance (positive value indicates fiscal restriction, negative value fiscal expansion)

TABLE II.2.4

FORECAST OF SELECTED VARIABLES

The unemployment rate will gradually fall in 2011 and 2012
(annual percentage changes, unless otherwise indicated)

	2009 actual	2010 forec.	2011 forec.	2012 forec.
Real gross disposable income of households	-0.8	-0.2	0.8	3.2
Total employment	-1.4	-0.9	0.6	0.2
Unemployment rate (in per cent)[a)]	6.7	7.3	6.8	6.6
Labour productivity	-3.0	3.3	1.0	2.9
Average nominal wage	4.0	2.2	2.7	4.2
Average nominal wage in business sector	3.2	2.7	3.7	5.0
Current account deficit (ratio to GDP in per cent)	-1.0	-2.8	-2.9	-2.7
M2	6.2	4.0	6.4	7.7

a) ILO methodology

a reduction of the sovereign risk premium. The fiscal forecast for this year now incorporates measures aimed at reducing support for solar energy. These measures have roughly comparable impacts on the revenue and expenditure sides of the budget.

The forecast for 2012 is based on an assumption of unchanged fiscal policy compared to 2011 and expects only a slight decline in the general government deficit to 4.2% of GDP as a result of faster economic growth. The general government **structural deficit** was just below 5% of GDP in 2010 and will fall to roughly 3–4% of GDP in 2011–2012. The expected evolution of the general government deficits will result in an increase in general government debt from 35.3% of GDP in 2009 to 44% of GDP in 2012. Box 1 provides a closer look at the forecast for government debt and interest payments (debt service) and at the results of the government debt sensitivity analyses.

Additional **consolidation measures**, whose adoption should lead to the 3% reference value being achieved by 2013 (as stipulated in the excessive deficit procedure), remain a downside risk to the general government deficit prediction for 2012. Another uncertainty of the financial forecast for 2012 is the potential launch of the pension reform, which is planned for the start of 2012, and the method of financing that reform.

BOX 1
FORECASTS FOR GENERAL GOVERNMENT DEBT AND DEBT SERVICE, AND SENSITIVITY ANALYSES

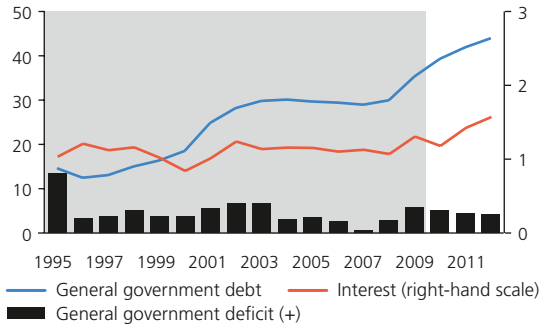
Chart 1 shows general government debt and debt service against the backdrop of the general government balance. Following a period of stable government debt as a ratio to GDP in 2002–2008, this ratio has been rising over the last two years as a result of higher general government deficits and slow nominal GDP growth. The ratio of debt service to GDP, which was relatively stable at around 1% of GDP in the past, surged in 2009 but fell back again in 2010 as government debt servicing costs decreased because of lower interest rates on government bonds. This saving is not expected to apply in the years ahead.

The general government debt forecast is based on the outlook for the general government balance. Besides the general government balance for the given year, the change in general government debt is influenced by stock-flow adjustment (SFA) items, as shown in Table 1. The largest items are predicted for the purposes of the forecast: net acquisition of currency and deposits, shares and other equity, and other financial assets; net incurrence of other liabilities; and appreciation/depreciation of foreign-currency debt. The forecast for SFA items is based on selected indicators of the macroeconomic forecast (nominal GDP and exchange rates), on assumptions regarding the state

CHART 1 (BOX)

GENERAL GOVERNMENT DEBT, INTEREST, AND THE GENERAL GOVERNMENT BALANCE

Government debt is rising sharply at the forecast horizon owing to the expected general government deficits
(% of nominal GDP)



budget (e.g. planned privatisations and EIB loans) and on other information (e.g. in the past, drawdown of reserve funds of organisational units of the state). Simple econometric models are specified for the forecast of selected SFA items, and trend projection or the average of previous years is used in some cases. Specifically, the item currency and deposits, for example, is linked to privatisation revenues and drawdown of reserve funds. Shares and other equity are inversely proportional to privatisation revenues. Growth proportional to GDP is assumed for other financial assets.

The forecast for debt service (interest) is based on the general government debt forecast and the "effective" interest rate path. In the first year of the forecast, the effective interest rate (see Chart 2) is set as a weighted average of long-term bond yields and short-term yields on T-bills and bonds with maturity of up to one year. In subsequent years, in addition to the aforementioned initial level, it takes into account the expected path of short-term rates according to the current forecast. After falling in 2010, the effective rate is thus rising in relation to the expected rise in monetary policy rates. The calculation of interest payments is performed through several iterations. These ensure that the debt level, interest paid and the general government balance are mutually consistent.

Given the uncertainty going forward, it is appropriate to perform **sensitivity analyses** for changes in interest rates and the government debt-to-GDP ratio. The first analysis measures the impact of an increase in government bond yields of 1 percentage point on the general government balance. The calculation assumes that the change in rates only affects debt with interest refixation of up to one year. The current results show a relatively low cumulative impact on the general government fiscal balance of around 0.1, 0.2 and 0.3% GDP over three years. The other sensitivity analysis measures the sensitivity of interest payments to a one-off increase in the government debt-to-GDP ratio of 5 percentage points amid unchanged interest rates. Such an increase in general government debt currently implies a rise in interest of around 0.2% of GDP in 2011.

TABLE 1 (BOX)

STOCK-FLOW ADJUSTMENT ITEMS

The general government debt of the Czech Republic is rising by an amount less than that corresponding to the general government deficit

(% of nominal GDP)

	2009 actual	2010 forec.	2011 forec.	2012 forec.
A. Net borrowing(+)/ lending(-) (EDP)	5.8	5.1	4.3	4.2
B. Stock-flow adjustments (SFA=1+2+3) [a]	-1.0	-0.5	-0.4	-0.3
1. Net acquisition of financial assets	0.3	0.3	0.4	0.4
Currency and deposits	-1.4	0.0	0.0	0.0
Securities other than shares	0.1	0.0	0.0	0.0
Loans	0.0	0.0	0.0	0.0
Shares and other equity	-0.2	0.0	0.0	0.0
Other financial assets	1.7	0.4	0.4	0.4
2. Adjustments	-0.9	-0.8	-0.8	-0.6
Net incurrence of liabilities in fin. derivatives	0.0	0.0	0.0	0.0
Net incurrence of other liabilities	-0.7	-0.6	-0.5	-0.5
Issurances above/below nominal value	0.2	0.0	0.0	0.0
Difference between interest accrued and paid	-0.3	0.0	0.0	0.0
Redemptions of debt above/below nom. value	0.0	0.0	0.0	0.0
Appreciation/depreciation of foreign-currency debt	-0.1	-0.2	-0.2	-0.1
Other changes in volume of debt	0.0	0.0	0.0	0.0
3. Statistical discrepancies	-0.4	0.0	0.0	0.0
C. Change in government gross debt (A+B)	4.8	4.7	3.9	3.9

a) A negative SFA means that the government debt increases less than the annual deficit (or decreases faster than implied by the surplus)

CHART 2 (BOX)

EFFECTIVE INTEREST RATE ON THE GENERAL GOVERNMENT DEBT

After falling in 2010, the effective interest rate will rise slightly

(%)

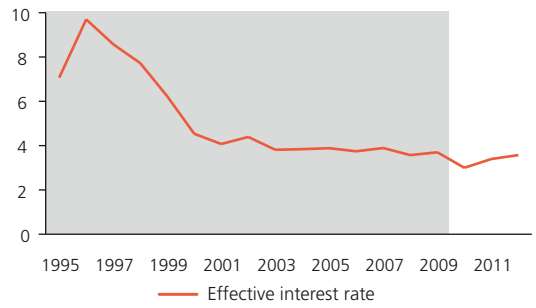


CHART II.3.1

CHANGE IN THE HEADLINE INFLATION FORECAST

The headline inflation forecast is slightly higher in 2011
(annual percentage changes; differences in p.p. – right-hand scale)

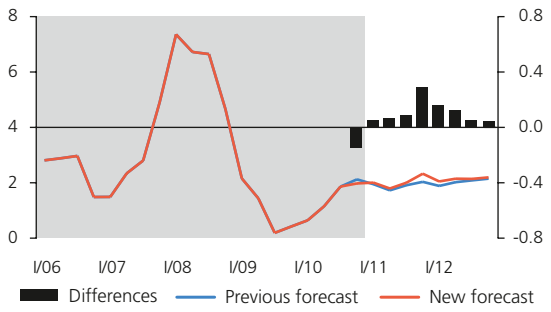


CHART II.3.2

CHANGE IN THE NET INFLATION FORECAST

The slight increase in the net inflation forecast is due mainly to higher fuel price growth
(annual percentage changes; differences in p.p. – right-hand scale)

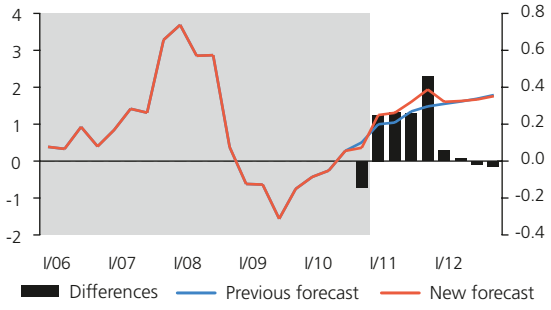
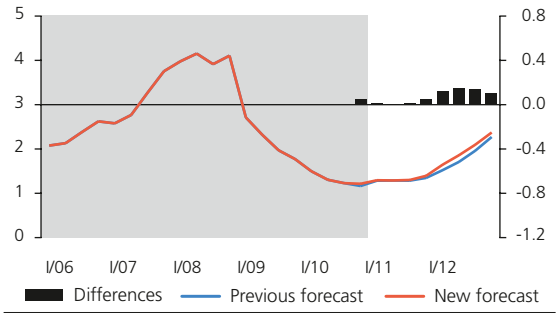


CHART II.3.3

CHANGE IN THE INTEREST RATE PATH

The market interest rate forecast is slightly higher from the end of 2011
(in %, differences in p.p. – right-hand scale)



II.3 COMPARISON WITH THE PREVIOUS FORECAST

Overall, the changes are small compared to the previous forecast. The headline inflation forecast for 2011 is marginally higher, while the market interest rate path is slightly higher at the longer end of the forecast. The change in the external outlook creates pressure for higher interest rates, while the initial state acts in the opposite direction, due mainly to lower observed wage growth. These pressures offset each other at the start of the forecast horizon, but the external effect prevails at the longer end of the forecast. Annual GDP growth will be slightly higher in both 2011 and 2012 thanks to an improved external outlook. The pace of wage growth in the business sector is little changed, as is the exchange rate forecast.

The forecast for annual **headline inflation** is little changed from the previous forecast. Its path is only slightly higher (see Chart II.3.1).

The outlook for **administered price inflation** is lower in 2011, owing to a smaller increase in electricity prices in 2011 Q1. This effect will outweigh higher growth in regulated rents in 2011, which, by contrast, dominates the change in the forecast for administered prices in 2012.

The **net inflation** forecast is slightly higher in 2011 compared to the previous prediction (see Chart II.3.2). This change is due mainly to expected faster short-term growth in fuel prices. The net inflation forecast is unchanged in 2012.

The overall inflation pressures are assessed similarly as in the previous forecast. Only the **gap in profit mark-ups in the consumption sector** remains slightly squeezed in 2011 Q1. The more protracted decline in mark-ups is due mainly to higher growth in cost pressures, primarily reflecting high growth in commodity prices. As in the previous forecast, the mark-ups return gradually to equilibrium as from 2011 Q2.

All the main variables of the **external environment outlook** have changed. The outlook for 3M EURIBOR rates is rising roughly from mid-2011. External demand was higher than assumed in 2010. There is a similar revision for 2011, while the forecast for 2012 is little changed. Industrial producer price inflation is also higher in 2011 compared to the previous forecast. The overall effect of the change in the external outlook on the change in the future domestic market rate path is positive over the entire forecast horizon, although negligible at the start of the forecast.

The forecast for market **interest rates** remains unchanged until 2011 Q3 and then increases gradually (see Chart II.3.3). Especially in 2011, the positive contribution of the new external outlook is offset by the negative contribution of the initial state stemming from the lower wage growth in 2010 and national accounts data revisions. Lower future government consumption acts towards slightly lower rates in 2012, but does not outweigh the effect of the external outlook amid the fading effect of the initial state. The effect of changes in the other factors on market interest rates is negligible (see Chart II.3.4).

The prediction of the nominal **koruna-euro exchange rate** is little changed (see Chart II.3.5). Although the rate in 2010 Q4 was weaker than in the previous forecast, this effect is offset by the short-term exchange rate forecast, which takes into account the significant appreciation in January 2011.

The forecast for annual **GDP** growth is slightly higher (see Chart II.3.6). This revision is due mainly to higher growth in external economic activity, reflected in a larger contribution of net exports to GDP growth, and to a lesser extent also to a revision of investment growth in 2010 H1.

Compared to the previous forecast, the new forecast expects slightly higher **household consumption** growth. This is due to an expected improvement in the labour market (a higher employment outlook combined with a roughly unchanged outlook for average wages).

Owing to a revision of the time series of investment volumes and prices in 2010 H1, **gross capital formation** is significantly higher despite the slightly lower quarterly growth rate recorded in 2010 Q4. At the end of 2010, investment in solar power stations was at the upper bound of the range estimated in the previous forecast. Therefore, the new forecast expects a greater drop in investment in 2011 Q1[7] followed by renewed slightly higher growth compared to the previous forecast.

The growth rates of **exports and imports** have been revised significantly downwards as a result of data revisions and new data. As in the case of investment, imports will fall more sharply at the start of 2011 compared to the previous forecast. The growth rates of exports and imports at the longer end of the forecast are similar to the previous forecast.

7 Owing to the revision of historical data, however, this drop will be from a higher level of investment than according to the previous forecast.

CHART II.3.4

DECOMPOSITION OF CHANGES IN THE INTEREST RATE FORECAST

The changes in the individual factors are insignificant and partly offset each other
(3M PRIBOR; percentage points)

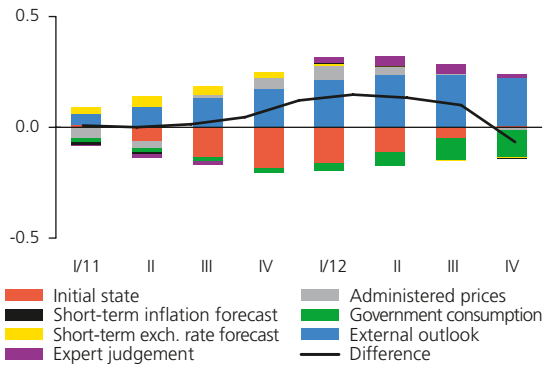


CHART II.3.5

CHANGE IN THE EXCHANGE RATE FORECAST

The changes in the exchange rate forecast are insignificant
(CZK/EUR; differences in CZK – right-hand scale)

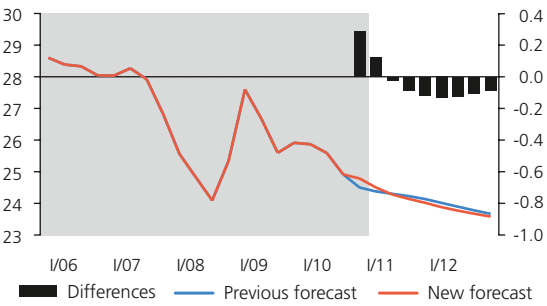


CHART II.3.6

CHANGE IN THE GDP FORECAST

The forecast for annual GDP growth is slightly higher over the entire horizon
(annual percentage changes; differences in p.p. – right-hand scale)

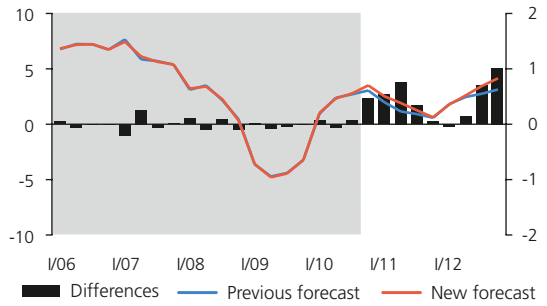
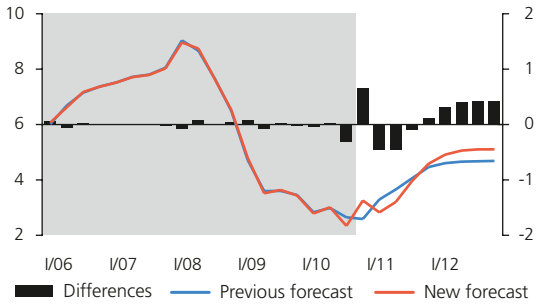


CHART II.3.7

CHANGE IN THE NOMINAL WAGE FORECAST

The change in the business-sector nominal wage forecast is insignificant

(annual percentage changes; differences in p.p. – right-hand scale, seasonally adjusted)



The forecast for average nominal wage growth in the business sector in 2011 has been revised slightly downwards as a result of the low wages observed in 2010 H2.[8] However, stronger economic activity will contribute to higher wage growth from the end of 2011 onwards (see Chart II.3.7).

8 The one-off sharp change in 2010 Q4 is due solely to tax optimisation by corporations; this factor has no direct effect on corporations' costs.

II.4 ALTERNATIVE AND SENSITIVITY SCENARIOS

Several significant risks were identified in the forecasting process, leading to the creation of three alternative scenarios. All are motivated by different external development scenarios. These alternative external scenarios were modelled using NiGEM, a global multicountry model that enables us to simulate the complete response of foreign variables to shocks. An exchange rate sensitivity scenario was also prepared as usual.

II.4.1 Alternative scenario – higher commodity price growth

This scenario quantifies the risk of further **commodity price growth**. In recent months, prices of agricultural and energy commodities have risen considerably, but in some cases (oil, for instance) they are still below the highs recorded in 2008. Moreover, the continuing quantitative easing of monetary policy – especially in the USA – and the shift away from investment in government bonds are providing liquidity that can be invested in commodity derivatives, supporting further price growth. NiGEM contains five commodity price indices. Their levels were increased by 20% compared to the baseline scenario for a period of four years starting in 2011 Q1. This one-off shock to the commodity price level propagates via the various transmission channels in the world economy. Monetary authorities, including the ECB, react to the shock with an immediate rise in rates. Producer price inflation therefore remains relatively subdued and economic growth is slowed by the monetary policy reaction. The overall commodity shock, which shows up in all the economic regions in NiGEM, has a negligible effect on exchange rates. The simulation results are shown in Table II.4.1 in the form of deviations from the assumptions of the baseline scenario of the forecast.

The effects of this external development scenario on the **domestic economy** are shown in Table II.4.2 (again in the form of deviations from the baseline scenario). The growth in commodity prices causes a rise in import prices and administered prices as from the start of the forecast horizon. Subdued external demand and high foreign rates, which lead to a negative interest rate differential, foster depreciation of the koruna over the entire forecast horizon. The weaker exchange rate and growth in prices abroad give rise to a change in the structure of overall inflation pressures. Import prices have an inflationary effect in 2011 H2. However, net inflation increases only moderately owing to subdued pressures from the domestic economy, which renew only very slowly, as wage growth is restricted by weak domestic economic activity. The weaker exchange rate slightly improves exporters' price competitiveness, but the effect of lower external demand prevails over the entire forecast horizon, leading to lower GDP growth compared to the baseline scenario. The gradual rise in domestic market interest rates is a reaction to the growth in foreign rates and also reflects the pass-through of commodity prices to domestic inflation.

TABLE II.4.1

ALTERNATIVE SCENARIO OF HIGHER COMMODITY PRICE GROWTH – EXTERNAL VARIABLES

Monetary authorities, including the ECB, react to the higher commodity prices by raising interest rates, which depresses the rise in inflation and slows GDP growth
(deviations from baseline scenario)

	External PPI inflation (in p.p.)	3M EURIBOR (in p.p.)	Effective GDP (in p.p.)	Exchange rate (USD/EUR)
I/11	-0.2	0.4	-0.1	0.0
II/11	0.0	0.6	-0.1	0.0
III/11	0.3	0.6	-0.1	0.0
IV/11	0.4	0.7	-0.2	0.0
I/12	0.7	0.7	-0.1	0.0
II/12	0.6	0.6	-0.1	0.0
III/12	0.5	0.6	-0.2	0.0
IV/12	0.4	0.6	-0.1	0.0

TABLE II.4.2

ALTERNATIVE SCENARIO OF HIGHER COMMODITY PRICE GROWTH – THE DOMESTIC ECONOMY

The higher interest rates slow economic growth, so inflation remains subdued despite the weaker exchange rate
(deviations from baseline scenario)

	CPI inflation (in p.p.)	3M PRIBOR (in p.p.)	GDP (in p.p.)	Nominal exchange rate (CZK/EUR)
I/11	0.0	0.2	-0.4	0.0
II/11	0.1	0.4	-0.4	0.2
III/11	0.1	0.5	-0.4	0.3
IV/11	0.2	0.5	-0.5	0.3
I/12	0.2	0.4	-0.2	0.3
II/12	0.1	0.4	-0.3	0.3
III/12	0.1	0.3	-0.5	0.3
IV/12	0.0	0.2	-0.5	0.2

II.4.2 Alternative scenario – higher external economic growth ("the German engine")

This scenario quantifies the impacts of continuing **growth in the effective indicator of economic growth** in the euro area. The strong results of China, India and other countries, mainly from Asia, are currently having a favourable effect on the export performance of the German economy, which has a large share in the effective indicator of external economic growth. This trend may continue into 2011, i.e. external growth may not slow as much as expected in the baseline forecast scenario based on the January CF. In NiGEM, this scenario is simulated by a positive shock to German exports (and partly also French and Italian exports) so that full-year economic growth in 2011–2012 is 0.5 percentage point higher than in the baseline scenario. The stronger economic growth exerts upward pressure on inflation in the long run and is therefore accompanied by a monetary policy tightening. This, in turn, dampens the inflation pressures, so the external effective PPI path is little changed. In this scenario, the euro appreciates slightly against the US dollar (see Table II.4.3).

The faster growth in effective external demand, accompanied by a modest growth in foreign rates, immediately spills over to the **domestic economy**. The growth in external demand and improvement in the goods and services balance lead to a lower risk premium and consequently to appreciation of the koruna over the entire forecast horizon. The appreciation pressure is only partly dampened by growth in foreign rates, which lead to a widening of the slightly negative interest rate differential. Import prices have an anti-inflationary effect until the start of 2012 H2, with the nominal appreciation outweighing the higher foreign prices. By contrast, pressures from the domestic economy build up on account of the economic recovery. Domestic cost pressures return at the start of the forecast horizon, as the recovering economic activity leads to a rise in wage costs. The effects of import prices and domestic inflation pressures offset each other, so the impact on inflation is negligible. The rise in external demand has a positive effect on all GDP components except government expenditure (the fiscal restriction assumption remains unchanged). In particular, GDP growth is significantly driven by a rise in net exports. As regards domestic interest rates, the anti-inflationary effect of the strengthening koruna initially outweighs the stronger economic growth. From early 2012 onwards, however, the domestic economic recovery is dominant and monetary policy responds by raising interest rates (see Table II.4.4).

Table II.4.3

ALTERNATIVE SCENARIO OF HIGHER EXTERNAL GROWTH – EXTERNAL VARIABLES

The higher economic activity leads to a rise in foreign rates
(deviations from baseline scenario)

	External PPI inflation (in p.p.)	3M EURIBOR (in p.p.)	Effective GDP (in p.p.)	Exchange rate (USD/EUR)
I/11	0.0	0.1	0.8	0.1
II/11	-0.1	0.2	0.6	0.1
III/11	-0.1	0.2	0.5	0.1
IV/11	-0.1	0.2	0.4	0.1
I/12	-0.1	0.4	0.3	0.1
II/12	0.1	0.5	0.5	0.1
III/12	0.2	0.6	0.6	0.1
IV/12	0.3	0.7	0.7	0.1

Table II.4.4

ALTERNATIVE SCENARIO OF HIGHER EXTERNAL GROWTH – THE DOMESTIC ECONOMY

The higher external demand causes faster GDP growth and appreciation of the exchange rate; with regard to inflation these two factors offset each other
(deviations from baseline scenario)

	CPI inflation (in p.p.)	3M PRIBOR (in p.p.)	GDP (in p.p.)	Nominal exchange rate (CZK/EUR)
I/11	0.0	0.0	0.7	0.0
II/11	0.0	-0.1	0.9	-0.2
III/11	0.0	-0.1	0.9	-0.3
IV/11	0.0	0.0	1.0	-0.3
I/12	0.0	0.2	0.4	-0.4
II/12	0.0	0.3	0.6	-0.4
III/12	0.0	0.4	1.1	-0.4
IV/12	0.0	0.4	1.7	-0.4

II.4.3 Alternative scenario – lower external economic growth ("escalation of the euro area debt crisis")

The third alternative scenario describes the situation where economic growth in the euro area is dampened by **fiscal restriction**. This stems either from potential problems in issuing government bonds or from governments' efforts to avoid such a situation by reducing budget deficits. Given the inelasticity of government consumption in NiGEM, a shock was also made to private consumption, which in reality would be dampened by lower social benefits and wages in the non-business sector and possibly by weaker consumer confidence. The scenario is simulated in such a way that full-year growth in external economic activity in 2011–2012 is 1 percentage point lower than in the baseline scenario. The weaker growth forces the ECB to keep rates lower. The exchange rate of the euro against the US dollar is slightly weaker, exerting moderate upward pressure on industrial producer price inflation in the euro area in the short run. However, this inflation falls in the longer run as a result of subdued economic activity (see Table II.4.5).

The contraction in effective external demand, accompanied by falling foreign rates, immediately spills over to the **domestic economy**. The 3M PRIBOR is strongly affected by the decline in the 3M EURIBOR. The positive interest rate differential exerts appreciation pressure on the koruna, while the weaker external demand fosters a weaker exchange rate via deteriorating net exports, with the latter effect prevailing. Therefore, domestic interest rates are also temporarily slightly higher and only later decrease by comparison with the baseline scenario. The fall in external demand has a negative impact on all GDP components (except government expenditure). The overall GDP growth rate declines substantially, mostly on account of the fall in net exports. Domestic inflation remains almost unchanged in this scenario (see Table II.4.6).

II.4.4 Exchange rate sensitivity scenario

The sensitivity scenario quantifies the impacts of a **different exchange rate path**. This sensitivity scenario assumes a deviation of the nominal exchange rate of ±3% from the baseline scenario in the first quarter of the forecast. Interest rates in the first quarter of the forecast are the same as in the baseline scenario. The exchange rate is thus CZK 23.8/25.2 to the euro, compared to CZK 24.5 in the baseline scenario.

The table shows the results of the appreciation scenario, expressed in deviations from the baseline scenario (see Table II.4.7). The scenario of a weaker nominal exchange rate leads to the same results but with the opposite sign.

TABLE II.4.5

ALTERNATIVE SCENARIO OF LOWER EXTERNAL GROWTH – EXTERNAL VARIABLES

The lower economic activity leads to a fall in foreign rates
(deviations from baseline scenario)

	External PPI inflation (in p.p.)	3M EURIBOR (in p.p.)	Effective GDP (in p.p.)	Exchange rate (USD/EUR)
I/11	0.1	-0.1	-1.2	-0.1
II/11	0.2	-0.2	-0.9	-0.1
III/11	0.2	-0.3	-0.7	-0.1
IV/11	0.2	-0.3	-0.6	-0.1
I/12	0.1	-0.4	-0.5	-0.1
II/12	-0.1	-0.5	-0.9	-0.1
III/12	-0.3	-0.6	-1.0	-0.1
IV/12	-0.4	-0.8	-1.1	-0.1

TABLE II.4.6

ALTERNATIVE SCENARIO OF LOWER EXTERNAL GROWTH – THE DOMESTIC ECONOMY

The lower external demand leads to slower export and GDP growth despite the weaker koruna exchange rate
(deviations from baseline scenario)

	CPI inflation (in p.p.)	3M PRIBOR (in p.p.)	GDP (in p.p.)	Nominal exchange rate (CZK/EUR)
I/11	0.0	0.1	-0.5	0.0
II/11	0.0	0.1	-1.0	0.3
III/11	0.0	0.1	-1.6	0.5
IV/11	0.0	-0.1	-2.0	0.5
I/12	0.0	-0.2	-2.0	0.6
II/12	0.0	-0.4	-1.7	0.6
III/12	0.0	-0.5	-1.4	0.7
IV/12	-0.1	-0.5	-1.0	0.7

TABLE II.4.7

EXCHANGE RATE SENSITIVITY SCENARIO

The exchange rate appreciation leads to temporarily lower inflation and slower GDP growth than in the baseline scenario; interest rates decrease
(deviations from baseline scenario)

	CPI inflation (in p.p.)	3M PRIBOR (in p.p.)	GDP (in p.p.)	Nominal exchange rate (CZK/EUR)
I/11	0.0	0.0	-0.2	-0.7
II/11	-0.1	-0.3	-0.2	-0.3
III/11	-0.1	-0.4	-0.2	-0.1
IV/11	-0.2	-0.3	-0.1	0.0
I/12	-0.2	-0.1	0.2	0.0
II/12	-0.1	0.0	0.3	-0.1
III/12	-0.1	0.0	0.2	-0.1
IV/12	0.0	0.1	0.1	-0.1

The exchange rate appreciation leads to a decline in import prices at the start of the forecast horizon and hence to lower inflation. The implied interest rate path is therefore lower than in the baseline scenario. The appreciation also reduces exporters' price competitiveness, leading to a decline in GDP growth in 2011 compared to the baseline scenario. However, GDP growth rises gradually in response to easier monetary policy and an exchange rate correction, and inflation also returns to the baseline scenario.

II.5 FORECASTS BY OTHER ENTITIES

Inflation expectations were broadly flat in 2010 Q4 at both the one-year and three-year horizon and are above the inflation target of 2% at both monitored horizons. The analysts expect GDP growth of just above 2% in 2011 and appreciation of the koruna exchange rate and an increase in the CNB's key rates in the following 12 months. All the analysts were expecting stable key rates before the CNB Bank Board meeting in February.

Inflation expected by financial market analysts[9] and business managers at the one-year horizon increased in 2010 Q4 and in January 2011 was broadly flat just above the CNB's 2% inflation target valid from January 2010 (see Table II.5.1). The analysts' inflation expectations at the three-year horizon were flat, while the business managers revised theirs upwards slightly. These longer-term expectations also remain above the CNB's inflation target.

The indicator of **inflation perceived by households** has long been negative despite increasing slightly at the end of 2010 (see Chart II.5.1).[10] This means that households on average felt that prices tended not to rise over the last 12 months. The indicator of expected inflation has been positive since early 2010 and it was little changed during 2010 Q4. This suggests that the number of respondents who expect prices to rise more rapidly over the next 12 months is slightly higher than the number of those who expect prices to stay the same or increase more slowly than in the past.

Both the FMIE and CF analysts expect GDP to grow by slightly more than 2% this year (see Tables II.5.1 and II.5.2). The planned government cuts and wage reductions in the public sector are reflected in the analysts' low wage growth predictions. Compared to the exchange rate of the koruna observed at the end of January, both the mostly domestic analysts participating in the FMIE and the mostly foreign analysts participating in the CF expect a stronger exchange rate at the one-year horizon (by around 2.3% and 1.5% respectively). Before the CNB Bank Board meeting in February, all twelve FMIE analysts were expecting no changes in key rates at this meeting. All the analysts expect rates to rise at the one-year horizon compared to the current level. Their estimates for the repo rate lie in the range of 1.00% to 1.75%. The interest rate forecasts have therefore recorded no major changes in recent months.

9 The CNB monitors the expectations of financial market analysts regarding key macroeconomic indicators and the inflation expectations of business managers by means of statistical surveys. Table II.5.1 shows average values from these surveys.

10 The CNB draws on the qualitative assessment of past and future inflation by households collected as part of the European Commission Business and Consumer Survey (see Box 2 in the July 2007 Inflation Report).

Table II.5.1

EXPECTED INDICATORS OF FMIE AND CORPORATIONS

Inflation expectations are above the CNB's target
(at 1Y; annual percentage changes unless otherwise indicated)

	9/10	10/10	11/10	12/10	1/11
FMIE:					
CPI	2.6	2.5	2.4	2.4	2.5
CPI, 3Y horizon	2.5	2.5	2.5	2.5	2.5
Real GDP in 2010	1.9	1.9	2.1	2.3	
Real GDP in 2011	2.2	2.1	2.0	2.0	2.1
Nominal wages in 2010	2.2	2.3	2.3	2.3	
Nominal wages in 2011	3.2	2.7	2.6	2.4	2.4
CZK/EUR exchange rate (level)	24.2	24.1	24.1	24.0	24.0
2W repo rate (in per cent)	1.3	1.3	1.4	1.4	1.4
1Y PRIBOR (in per cent)	2.2	2.3	2.3	2.3	2.4
Corporations:					
CPI	2.4			2.5	
CPI, 3Y horizon	2.3			2.5	

Chart II.5.1

PERCEIVED AND EXPECTED INFLATION

The inflation expectations of households were flat in 2010 H2
(source: European Commission Business and Consumer Survey)

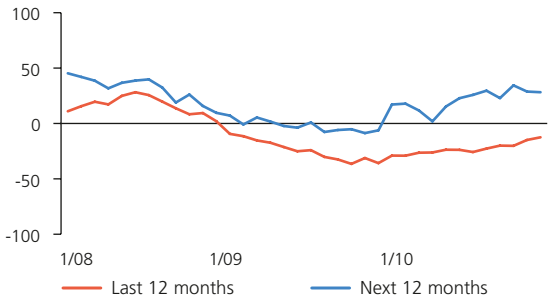


Table II.5.2

CF EXPECTED INDICATORS

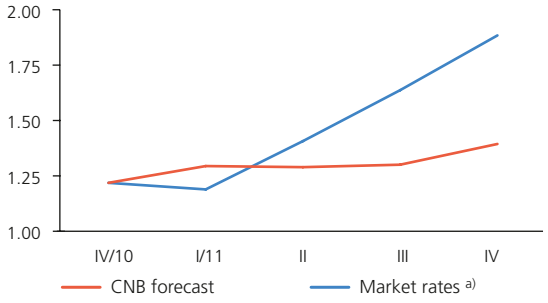
The CF analysts expect the economy to grow at a pace of just over 2%
(at 1Y; annual percentage changes unless otherwise indicated)

	9/10	10/10	11/10	12/10	1/11
Real GDP in 2010	1.8	1.8	2.0	2.3	
Real GDP in 2011	2.2	2.2	2.2	2.2	2.2
Nominal wages in 2010	2.3	2.4	2.4	2.3	
Nominal wages in 2011	3.4	3.3	3.1	3.0	2.9
CZK/EUR exchange rate (level)	24.5	24.4	24.1	24.2	24.2
3M PRIBOR (in per cent)	1.7	2.0	1.7	1.7	1.8

CHART II.5.2

FRA RATES VERSUS THE CNB FORECAST

The outlook for FRA rates is above the forecasted rates
(percentages)



a) for 2010 Q4 and 2011 Q1 the 3M PRIBOR and for 2011 Q2–2011 Q4 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 21 January 2011

Compared to the CNB's new forecast, the analysts expect real GDP growth to be roughly 0.5 percentage point higher. Inflation expected by the analysts at the one-year horizon is also higher. The exchange rate prediction at the one-year horizon is 0.4% weaker in the case of the FMIE analysts and 1.2% weaker according to CF analysts. The analysts' expectations regarding the 2W repo rate at the one-year horizon are slightly higher than the level implied by the 3M PRIBOR path consistent with the CNB forecast.

Chart II.5.2 provides a **comparison of expected 3M market rates** and the interest rate path consistent with the baseline scenario of the new CNB forecast. The outlook for FRA rates is above the forecasted rates (except at the shortest horizon), with the deviation rising as the horizon increases. This is probably due to the higher repo rate outlook expected by the market.

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 INFLATION

Headline CPI inflation stood at 2.3% in December 2010 and was thus slightly above the CNB's target. Monetary-policy relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, was 1.1% in December 2010. The increase in annual inflation in 2010 Q4 was chiefly a result of faster annual growth in both food and fuel prices. Administrative effects, i.e. changes to indirect taxes and administered prices, were still the biggest contributors to annual inflation. Market prices, as measured by net inflation, continued rising. However, in conditions of still weak consumer demand and mostly falling import prices of final products for the consumer market, their annual growth was still low, despite upward pressures from commodity prices.

III.1.1 Fulfilment of the inflation target

Headline inflation was roughly at the CNB's inflation target level in 2010 Q4 (see Chart III.1.1). This section of the Inflation Report briefly analyses the contribution of the CNB's monetary policy to this situation.

In order to assess the effect of monetary policy on the fulfilment of the inflation target one needs **to analyse retrospectively the forecasts** and the Bank Board's decisions based thereon in the past. To assess the fulfilment of the inflation target in 2010 Q4, we have to examine above all the period roughly from April 2009 to December 2009 (referred to as the "key period"), as monetary policy is focused on hitting the inflation target at the 12–18 month horizon. For the sake of clarity, the analysis of the accuracy of the forecasts is limited here to a comparison of the Inflation Report III/2009 forecast with subsequent inflation.

The **Inflation Report III/2009 forecast** expected headline inflation to decline until the end of 2009 and to be low but still positive. Inflation was expected to fall mainly as a result of slowing growth in administered prices and partly also because of a downturn in real economic activity. Inflation was expected to rise again in 2010 and reach the 2% inflation target at the end of 2010 (see Chart III.1.1), owing mainly to an expected modest recovery of economic activity and gradual renewed growth in almost all components of inflation.

Headline **inflation in reality** fell in 2009 H2 to an even lower level than forecasted. In 2010, by contrast, headline inflation was above the forecast, but the individual consumer price categories showed deviations in both directions. The biggest inflationary factor was the indirect tax changes valid since 1 January 2010, which were not decided on until 2009 H2 and so could not have been captured by the forecast. By contrast, adjusted inflation excluding fuels, which was affected by lower domestic inflation pressures and a persisting decline

CHART III.1.1

FORECAST VERSUS ACTUAL INFLATION

Inflation was just above the IR III/2009 forecast in 2010 Q4
(annual percentage changes)

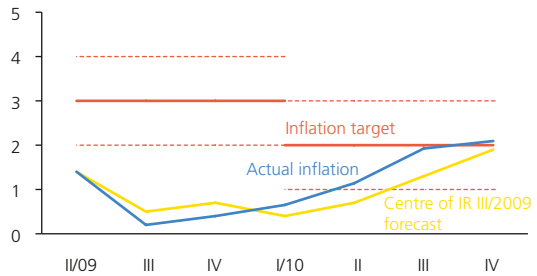


TABLE III.1.1

FULFILMENT OF THE INFLATION FORECAST

Changes to indirect taxes acted in the direction of higher inflation, while adjusted inflation excluding fuels was substantially lower than forecasted
(annual percentage changes; contributions in percentage points)

	IR III/2009 forecast	2010 Q4 outturn	Contribution to total difference
CONSUMER PRICES	1.9	2.1	0.2
Breakdown into contributions:			
administered prices	2.0	3.8	0.3
first-round impacts of changes to indirect taxes	0.0	1.0	1.0
food prices[a)]	1.8	2.8	0.3
fuel prices[a)]	4.7	8.7	0.2
adjusted inflation excl. fuels[a)]	1.7	-1.3	-1.6

a) excluding the first-round impacts of changes to indirect taxes

Table III.1.2

FULFILMENT OF THE EXTERNAL ASSUMPTIONS

External demand and the price of oil contributed to the higher inflation

(annual percentage changes unless otherwise indicated)

		III/09	IV/09	I/10	II/10	III/10	IV/10
GDP in euro area[a), b), c)]	p	-4.7	-3.2	0.9	0.3	0.1	0.3
	o	-4.2	-2.1	2.2	3.1	3.0	-
PPI in euro area[b), c)]	p	-6.0	-3.7	-0.7	1.3	2.2	2.3
	o	-7.6	-5.3	-1.2	2.1	3.8	4.4
3M EURIBOR	p	1.0	1.0	1.1	1.2	1.6	2.4
(percentages)	o	0.9	0.7	0.7	0.7	0.9	1.0
USD/EUR exchange rate	p	1.40	1.37	1.37	1.37	1.37	1.37
(levels)	o	1.43	1.48	1.38	1.27	1.29	1.36
Brent crude oil price	p	62.6	61.9	64.0	65.8	67.1	68.3
(USD/barrel)	o	68.3	75.0	76.8	78.6	76.4	86.9

p – prediction, o – outturn
a) at constant prices
b) seasonally adjusted
c) effective indicator as defined in the IR III/2009 forecast

Table III.1.3

FULFILMENT OF THE FORECAST FOR KEY VARIABLES

Domestic economic activity rose faster than forecasted in 2010

		III/09	IV/09	I/10	II/10	III/10	IV/10
3M PRIBOR	p	1.8	1.6	1.7	1.7	1.7	1.9
(percentages)	o	2.0	1.8	1.5	1.3	1.2	1.2
CZK/EUR exchange rate	p	26.1	25.9	25.8	25.7	25.7	25.6
(levels)	o	25.6	25.9	25.9	25.6	24.9	24.8
Real GDP [a)]	p	-4.6	-2.9	1.2	1.2	0.2	0.4
(annual perc. changes)	o	-4.4	-3.2	1.0	2.3	2.8	-
Nominal wages [b)]	p	1.4	0.3	0.4	1.8	3.1	3.7
(annual perc. changes)	o	4.6	5.2	2.3	2.4	2.0	-

p – prediction, o – outturn
a) seasonally adjusted
b) in the business sector

in import prices of commodities with a higher degree of processing, acted in the direction of lower inflation (see Table III.1.1).

External economic factors contributed significantly to domestic inflation. External demand recovered faster than forecasted and affected faster growth of domestic GDP. Higher oil prices led to higher domestic inflation. By contrast, foreign interest rates were lower over the entire forecast horizon. At first the decline in external inflation was deeper, but later on prices abroad grew faster (see Table III.1.2).

Interest rates and the exchange rate also differed from the assumptions of the forecast. The slightly tighter real interest rates in 2009 turned easier following the lowering of monetary policy rates and as inflation rose. The exchange rate was stronger than forecasted in particular in 2010 H2 (see Table III.1.3).

Based on the CNB's current knowledge of the workings of the Czech economy and its current knowledge of the actual economic situation, the **developments since the forecast under review was drawn up** can be summed up in the following way. The fall in external demand was not as sharp, and its faster recovery was reflected in the domestic economic situation via the export channel. The assumption of a continuing fall in inflation materialised at the end of 2009, but the rise in inflation was faster from the start of 2010. Thanks to a recovery in economic activity in 2010 and in particular to changes to indirect taxes, headline inflation was slightly above the inflation target at the end of 2010.

In addition to the forecast, an assessment of the risks associated with this forecast is important for the Bank Board's decisions on **monetary policy rates**. At its meetings between April 2009 and December 2009, the Bank Board assessed the risks of the forecasts first as being balanced, then as being on the downside, and in 2009 Q4 as being slightly on the upside. The Bank Board's decisions led to the following interest rate settings. At the start of the key period, interest rates were falling roughly in line with the forecasts. At the close of 2009, by contrast, rates were higher than implied by the forecast contained in the seventh situation report. This forecast revised the interest rate path downwards quite significantly. Overall, monetary policy did not prevent monetary-policy relevant inflation from staying quite far below the CNB's 2% inflation target. From this perspective, based on current knowledge, it seems that monetary policy should have been easier during 2009.

III.1.2 Current inflation

Annual inflation[11] increased slightly further in 2010 Q4. At 2.3%, inflation in December was 0.3 percentage point higher than in September (see Chart III.1.2). This increase was due mainly to rises in annual food price inflation and fuel price inflation. These changes were partially offset by a deepening year-on-year decline in prices within adjusted inflation excluding fuels. The contribution of the effects of tax changes remained at the Q3 level (see Chart III.1.4).

Turning to the **structure of annual inflation**, inflation continued to be affected mainly by administrative factors, i.e. the effects of changes to indirect taxes and administered prices, which contributed by 1.7 percentage points in December (see Chart III.1.4). At 0.6 percentage point, the contribution of market prices to annual inflation was considerably lower.

Administrative effects were dominated in Q4 again by the **changes to indirect taxes** implemented on 1 January 2010. These measures included rises in both VAT rates by 1 percentage point and a rise in excise duties on fuels, beer, spirits and cigarettes. Overall, roughly half of the annual inflation in December 2010 was due to the first-round effects of indirect taxes. **Monetary-policy relevant inflation** was therefore 1.1% (see Chart III.1.2). The following text assesses the evolution of the main components of inflation excluding the effect of tax changes.

Annual **administered price inflation** was more or less stable in 2010 Q4 (3.8% in December; see Chart III.1.3). More significant changes were recorded in prices of natural gas for households (a decline of 0.2% in October) and administered health care items. The annual growth in administered prices chiefly reflected rapid growth in regulated rents (of 16.8% in December), natural gas prices (of 6.7%) and prices of regulated health care items (of 7.8%) at the end of 2010.

In these circumstances, **market prices**, as measured by net inflation, contributed to the further rise in inflation in 2010 Q4. Compared to September, their annual growth rose by 0.4 percentage point to 0.7% in December. This change was due to faster growth in food and fuel prices, while adjusted inflation excluding fuels remained at strongly negative levels. Adjusted inflation thus continued to show a significant effect of the still very subdued consumer demand and the absence of cost-push inflationary pressures from the domestic economy. Also, the mostly falling import prices of final products for the consumer market, reflecting, among other things, the earlier appreciation of the exchange rate, helped to keep inflation low. The fast annual

11 Measured by annual growth in consumer prices.

CHART III.1.2

INFLATION

Annual inflation increased further in 2010 Q4
(annual percentage changes)

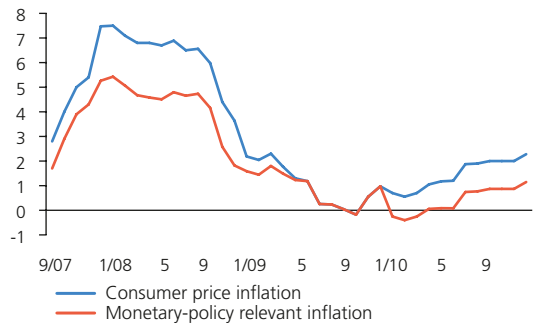


CHART III.1.3

INFLATION COMPONENTS

Food prices and fuel prices contributed to the increase in inflation
(annual percentage changes)

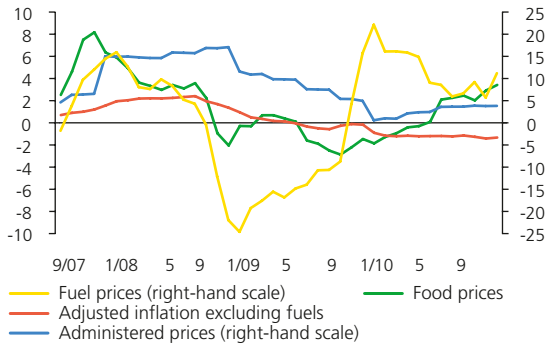


CHART III.1.4

STRUCTURE OF INFLATION

Indirect taxes, administered prices and food prices were the biggest contributors to inflation
(annual percentage changes; contributions in percentage points)

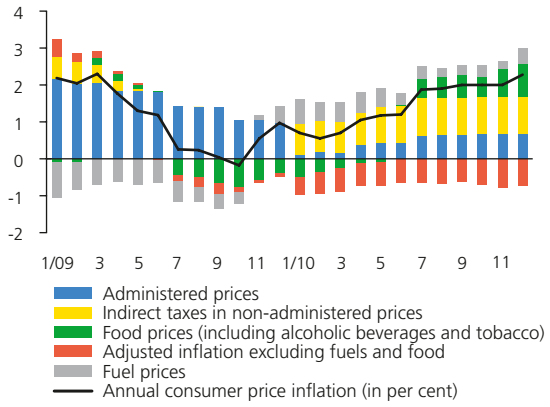


CHART III.1.5

FOOD PRICES

Food price inflation increased appreciably in 2010 Q4
(annual percentage changes)

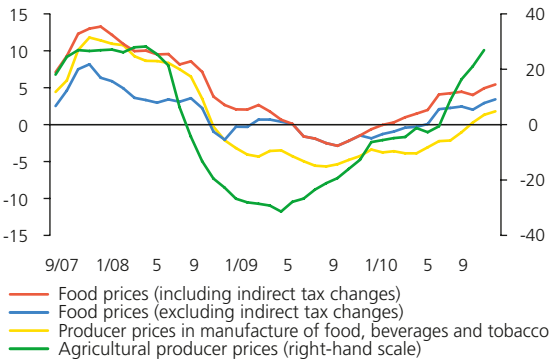


CHART III.1.6

ADJUSTED INFLATION EXCLUDING FUELS

The annual decline in prices within adjusted inflation deepened in 2010 Q4
(annual percentage changes)

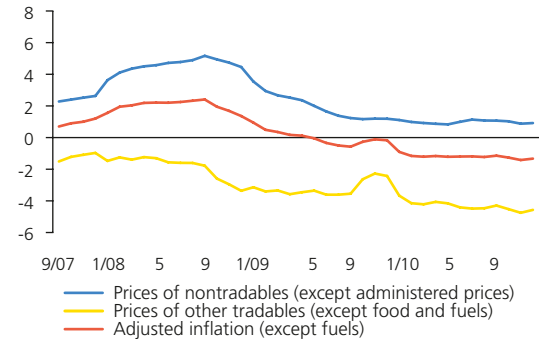
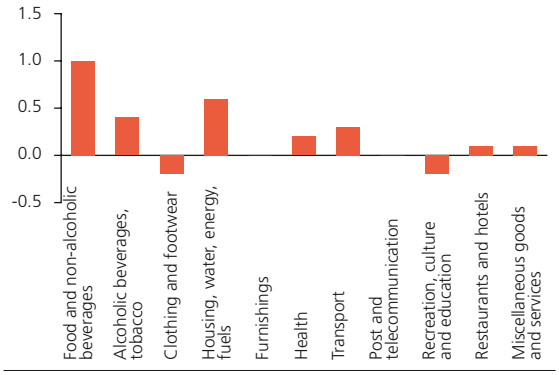


CHART III.1.7

CONSUMER BASKET PRICES

Prices in the food and non-alcoholic beverages and housing categories were the biggest contributors to annual inflation
(December 2010; contributions in percentage points, including changes to indirect taxes)



growth in world prices of raw materials and food has so far passed through only to consumer prices of fuels and, to a limited extent, to food prices.

The continuing rise in annual **food price inflation** in Q4 (from 2.5% in September to 3.4% in December; see Chart III.1.5) reflected lagged and limited pass-through of rising agricultural producer prices[12] to consumer prices on the retail market. The largest impacts of these growing cost pressures on domestic prices were observed for bread products and cereals, vegetables and fruit.[13]

Unlike food prices, annual **adjusted inflation excluding fuels** remained strongly negative in 2010 Q4. Its decline deepened from -1.1% in September to -1.3% in December (see Chart III.1.6). This was due mainly to prices of tradable commodities excluding fuels, whose marked annual decline strengthened further in Q4 (from -4.3% in September to -4.6% in December). This was the lowest level recorded since this time series started to be monitored. Prices in the categories of transport, recreation, culture and clothing and footwear contributed most to this situation. Renewed slower growth in prices of nontradable commodities, consisting mainly of services, helped to reduce adjusted inflation as well. Their annual growth of 0.9% in December was also one of the lowest values on record.

Annual growth in **fuel prices** rose in Q4 (from 6.6% in September to 11.2% in December; adjusted for tax effects). This pick-up was mostly due to a sharp increase in oil and petrol prices on European exchanges in late 2010. This effect was most apparent in December, when retail fuel prices increased by 4.6% month on month.

Consumer prices broken down by the major **categories of the consumer basket** rose the fastest in the health category (by 6.3% in December, including the effect of tax changes). However, the biggest contributors to annual inflation in 2010 Q4 were the categories of food and non-alcoholic beverages (owing to stronger growth in food prices and the increase in indirect taxes at the beginning of 2010) and housing (as a result of fast rent deregulation; see Chart III.1.7).

By international comparison, consumer prices as measured by the **HICP** continued to rise more slowly in the Czech Republic than on average in the EU countries in 2010 Q4. This difference, however, narrowed further, as according to Eurostat's latest estimate, HICP growth in the Czech Republic rose from 1.8% in September to 2.3% in December, while the average figure for the EU countries was 2.2% in September and, according to a preliminary estimate, 2.6% in December.

12 For more details see section III.2 *Import prices and producer prices*.
13 Prices of bread products and cereals rose by 5%, prices of vegetables by 34% and prices of fruit by roughly 12% year on year.

III.2 IMPORT PRICES AND PRODUCER PRICES

Import price inflation remained high amid a persisting pronounced upswing in prices of key commodities on world markets. Import prices were rising year on year in most categories. The high growth in prices of energy and non-energy commodities and semi-finished products was reflected most of all in prices of producers at the early stages of the production chain. Overall, annual industrial producer price inflation thus rose further in 2010 Q4; however, prices of higher-value-added products mostly kept falling or showed only a modest rise. Agricultural producer price inflation recorded a further sharp increase. Only prices of construction work and market services continued falling amid still low domestic demand.

III.2.1 Import prices

Import prices in the first two months of 2010 Q4 continued to record annual growth, observed since May 2010 (see Chart III.2.2). This was due mainly to persisting strong growth in prices of key commodities on world markets. However, the annual rate of growth of import prices slowed slightly compared to September (to 4.3% in November), mainly because of changes in the koruna exchange rate.

The overall annual rise in import prices was again due most of all to prices of imported **mineral fuels**. However, their contribution decreased significantly compared to September owing to a continuing slowdown in annual growth in world oil prices from over 60% in 2010 H1 to 11.2% in November (see Chart III.2.3). However, world prices of natural gas, which follow oil prices with a lag, continued showing rapid annual growth of over 30% in October and November. The impact of the high oil and natural gas prices on mineral fuel import prices was simultaneously dampened by a year-on-year moderation of the depreciation of the koruna-dollar exchange rate in the first two months of Q4 (see Chart III.2.3). Overall, annual growth in import prices of mineral fuels thus slowed compared to September, but stayed in double figures (20.3% in November).

Amid strong demand for raw materials (particularly metals) on world markets, prices of imported **semi-finished products** also continued to show high growth in Q4. Although their annual growth rate slowed slightly from the high figures recorded in September (from 6% to 5.1% in November) owing to movements of the koruna exchange rate, their contribution to annual import price inflation still exceeded 1 percentage point. By contrast, the contribution of growing import prices of **food** (by 4.1% in November), reflecting a sharp upswing in prices of these commodities on world markets, was insignificant. The **non-energy commodities** category also saw a continued rapid annual rise in import prices (of 34.2% in November). However, the previous year's very low base should be taken into account when assessing the annual growth rate.

CHART III.2.1

IMPORT PRICES AND PRODUCER PRICES

Pronounced growth in import prices and industrial and agricultural producer prices continued into 2010 Q4
(annual percentage changes)

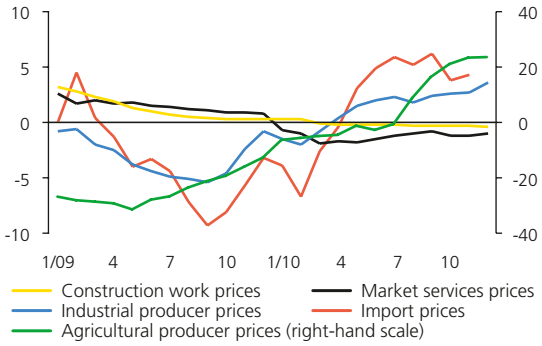


CHART III.2.2

IMPORT PRICES

Import price growth continued to be driven by prices of imported commodities and semi-finished products
(annual percentage changes; contributions in percentage points)

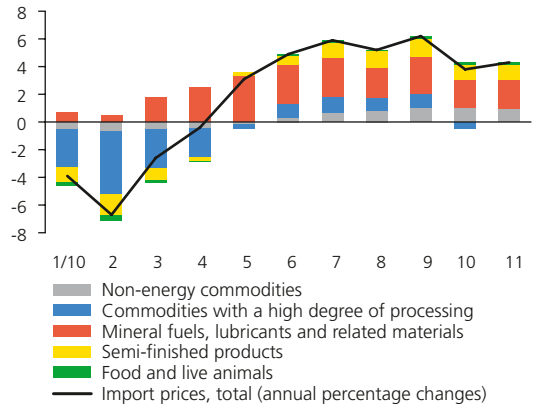


CHART III.2.3

MINERAL FUELS

The koruna-dollar exchange rate contributed to the weakening of the growth in import prices of energy-producing materials
(annual percentage changes)

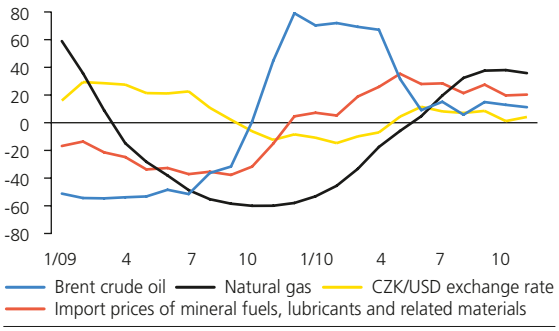


TABLE III.2.1

STRUCTURE OF IMPORT PRICE DEVELOPMENTS

Prices rose in most import categories, although they fell again for high-value-added commodities
(annual percentage changes)

	8/10	9/10	10/10	11/10
IMPORTS, TOTAL	5.2	6.2	3.8	4.3
of which:				
food and live animals	3.2	5.0	3.2	4.1
beverages and tobacco	-2.6	-2.9	-1.6	-2.0
crude materials inedible, except fuels	29.3	38.0	37.6	34.2
mineral fuels and related products	21.4	27.5	19.7	20.3
animal and vegetable oils	3.7	5.6	9.6	10.9
chemicals and related products	1.2	2.3	0.4	1.6
manufactured goods classified chiefly by material	5.3	6.0	4.9	5.1
machinery and transport equipment	2.0	1.6	-0.6	-0.1
miscellaneous manufactured articles	-0.1	0.5	-1.9	-1.5

CHART III.2.4

INDUSTRIAL PRODUCER PRICES

Growth in industrial producer prices accelerated further
(annual percentage changes; contributions in percentage points)

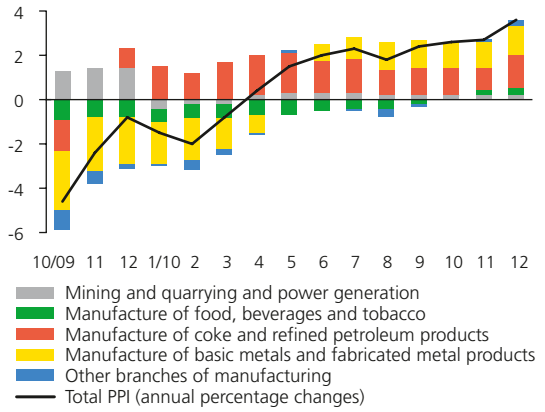
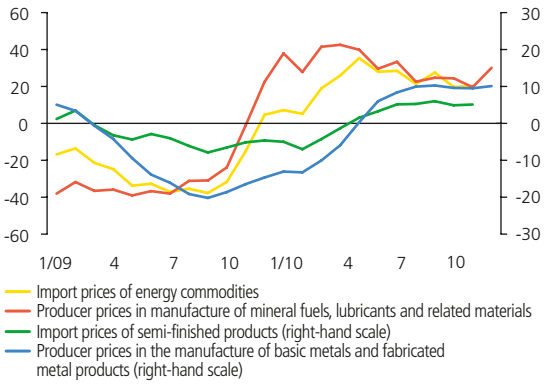


CHART III.2.5

PRICES OF REFINED PETROLEUM PRODUCTS

The high growth in prices of imported semi-finished products and mineral fuels passed through quickly to prices of producers at the early stages of the production chain
(annual percentage changes)



Only in the case of import prices of **commodities with a high degree of processing** did the contribution to overall annual import price inflation turn negative at the start of 2010 Q4 (see Chart III.2.2). This pronounced change was due mainly to a marked year-on-year appreciation of the koruna-euro exchange rate, which outweighed the effect of annual growth in production prices of miscellaneous manufactured articles and machinery and transport equipment in the Czech Republic's major trading partner countries.

III.2.2 Producer prices

Industrial producer prices

The annual growth in **industrial producer prices**, which started in April 2010, continued to show a gradual upward trend in 2010 Q4. According to the latest data for December, annual growth in these prices rose by 1.2 percentage points compared to September, to 3.6% (see Chart III.2.4).

The fundamental view of the causes and **structure of the growth in industrial producer prices** is unchanged from the previous report. The growth continued to be due mainly to rapidly rising prices of significant energy and non-energy inputs, which strongly affected prices of producers at the early stages of the production chain. By contrast, most higher-value-added branches of industry continued to see no major pass-through of the rapid growth of these input prices to producer prices in Q4.

Prices in the other branches of industry thus continued to record moderate annual growth or a decline. As in the previous quarter, they showed only very modest shifts towards a weaker decline or a stronger rise. This implies that producer prices in industry showed no major signs of inflationary pressures. Most businesses, therefore, were probably still creating room for profit generation by reducing their personnel cost-output ratios rather than by raising their prices.

The fastest price growth was again recorded in the **manufacture of coke and refined petroleum products**. The contribution of these prices to annual industrial producer price inflation was the highest as well (1.5 percentage points in December). Inflation also rose in the chemical industry, where many producers are dependent on oil products (see Chart III.2.6). The contribution of fast growing prices in the manufacture of **basic metals and fabricated metal products** (by 10.1% in December) to annual industrial producer price inflation also remained significant, reaching 1.3 percentage points. This was again due to rising prices of imported metal-based semi-finished products (see Chart III.2.5). Prices in **mining and quarrying** also rose quickly in Q4 (by 7.6% in December), but their contribution to industrial producer price inflation was still low.

One significant change was a renewal of annual growth in prices in the **food industry** (from -1% in September to 1.8% in December) in response to continuing growth in world and domestic prices of agricultural and food commodities.[14] Producer prices in the other branches of manufacturing, consisting mostly of producers of high-value-added products, continued to show mostly modest growth or an annual decline.[15] Prices also kept declining year on year in the **electricity, gas and steam industry** (by 1.3% in December).

Agricultural producer prices

The evolution of **agricultural producer prices** in 2010 Q4 suggested a continuation of the strong growth observed since August 2010 (see Chart III.2.7). According to the figures for December, domestic agricultural producer price inflation rose by almost 15 percentage points compared to August 2010, to 23.6%. This path was observed for crop product prices, which rose by a significant 39.4% year on year in December. By contrast, growth in livestock product prices had been renewed in February 2010 but was slower in subsequent months than in the case of crop products (8.6% in December).

The main causes of the growth in agricultural producer prices described above remained unchanged from the previous Inflation Report. The primary factor was the upswing in growth in **agricultural commodity prices on world markets** observed since 2009 H2, caused by the global economic recovery and easier global monetary conditions (see section III.7.4). Unfavourable weather conditions in the major world producers of crop products concurrently led to a reduction in global stocks of crop products. The aforementioned factors fostered a large increase in world prices of crop products, particularly cereals and oil crops, in 2010 H2. As regards domestic prices, the renewed growth in world prices of these commodities was only partly offset by the year-on-year appreciation of the koruna-euro exchange rate during 2010. The growth in agricultural producer prices was also due to a surge in prices of some traditionally volatile commodities (fruit, vegetables and potatoes).

CHART III.2.6

MANUFACTURING

High-value-added products showed mostly modest growth or a decline in prices

(annual percentage changes; selected branches)

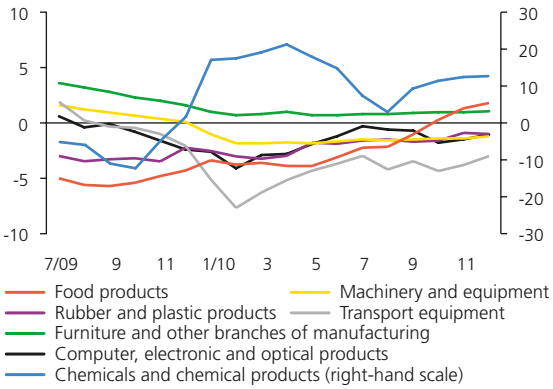
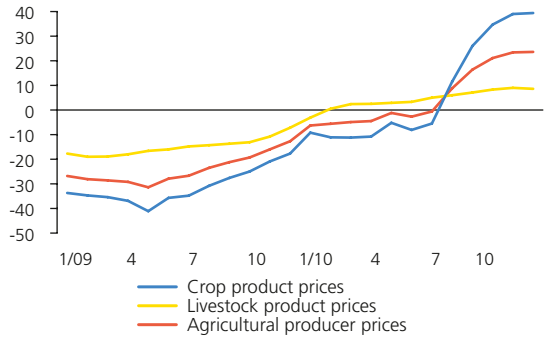


CHART III.2.7

AGRICULTURAL PRODUCER PRICES

Agricultural producer prices continued to rise sharply

(annual percentage changes)



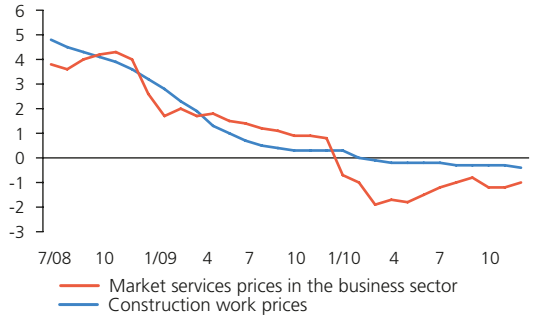
14 Prices showed very mixed trends within the food industry. In December, the highest growth in prices was recorded by grain mill and starch products (16.7%), vegetable and animal fats and oils (17.5%), dairy products (4.5%) and animal feeds (10.3%). An annual decline in producer prices was recorded in December in only three of the twelve monitored branches of this industry.

15 Producer prices fell year on year in the following branches: machinery and equipment, transport equipment, computer, electronic and optical products, rubber and plastic products, and pharmaceutical products.

CHART III.2.8

OTHER PRICE CATEGORIES

Prices of construction work and market prices kept declining year on year in 2010 Q4
(annual percentage changes)



Other producer prices

Amid persisting subdued construction investment demand, **prices of construction work** continued to show a modest annual decline in 2010 Q4, reaching 0.4% in December (see Chart III.2.8). However, growth in prices of materials and products consumed in construction rose further (to 2.7% in December). Their growth is probably still being affected by the rising prices of imported semi-finished products.

Prices of market services also continued falling year on year in 2010 Q4 (by 1% in December). Services with slightly rising prices and services with mostly moderately falling prices were both observed. Prices continued rising in freight transport services, postal and courier services, and legal and accounting services. On the other hand, prices of, for example, architectural services, real estate services, and advertising and market research services, which had recorded high growth before the crisis, declined.

III.3 DEMAND AND OUTPUT

Annual real GDP growth increased by 0.5 percentage point to 2.8% in 2010 Q3.[16] *Quarter-on-quarter output growth (1.0%) was also faster than in the previous quarter. The largest contributor to the annual GDP growth was gross capital formation and, within it, change in inventories. Final consumption expenditure also contributed partially to the GDP growth. Net exports made the only negative contribution in Q3. On the supply side, the continuing economic growth was due mainly to industry, and the contribution of the services sector was also positive.*

III.3.1 Domestic demand

The renewed growth in **domestic demand**, which, as in the previous quarter, was due most of all to a sharp year-on-year change in additions to inventories, continued into 2010 Q3 (see Chart III.3.2). The annual growth in domestic demand was also supported – to a much lesser extent – by household consumption and fixed capital formation, which had been declining year on year for the previous nine quarters.

Final consumption

Household consumption continued to recover in 2010 Q3, after having contracted noticeably in 2009 (see Chart III.3.3). According to seasonally adjusted CZSO data, annual growth in real household consumption expenditure strengthened to 1.2% in Q3, up by 0.5 percentage point on the previous quarter. Growing expenditure was recorded for semi-durable goods (5.8% year on year) and services, while in the other categories household expenditure declined.

The recovery occurred amid very low year-on-year growth in nominal **gross disposable income of households**, which moderated to 0.5%, and noticeably faster nominal growth in consumer spending (of 2.9%). Real gross disposable income fell by 1.6% year on year in Q3 as a result of higher inflation[17], but real household consumption maintained positive growth (see Chart III.3.3).

Households thus continued to offset the impact of their declining income on consumption expenditure primarily through lower gross **saving** from current income. This was reflected in a continuing downward trend in the saving rate (to 9%[18] in Q3; see Chart III.3.5).

16 The assessment of the evolution of GDP expenditure and GDP sources is based on seasonally adjusted data from the CZSO's national accounts.
17 Measured by the household consumption deflator.
18 Seasonally adjusted CNB figure.

CHART III.3.1

GROSS DOMESTIC PRODUCT

GDP growth increased further in 2010 Q3
(annual and quarterly percentage changes at constant prices; seasonally adjusted data)

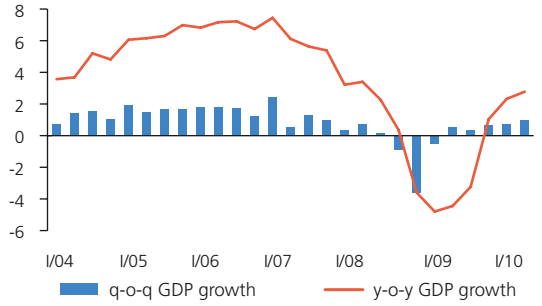


CHART III.3.2

STRUCTURE OF ANNUAL GDP GROWTH

Change in inventories made the largest contribution to the GDP growth
(contributions in percentage points; seasonally adjusted data)

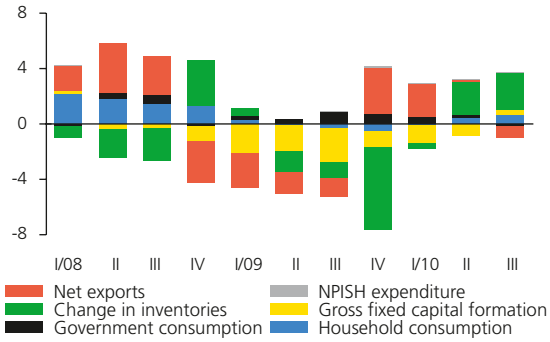


CHART III.3.3

HOUSEHOLD CONSUMPTION EXPENDITURE

Household consumption continued growing in 2010 Q3
(annual percentage changes)

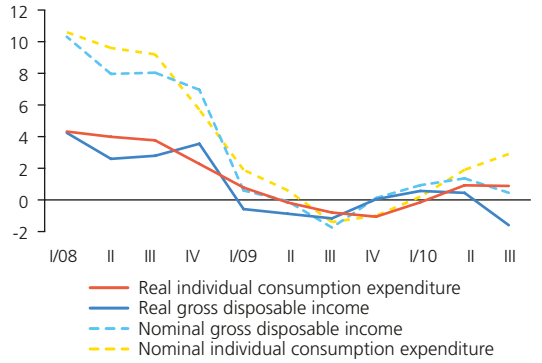


CHART III.3.4

DISPOSABLE INCOME

The growth rate of nominal household disposable income fell below 1%
(annual percentage changes; contributions in percentage points; current prices)

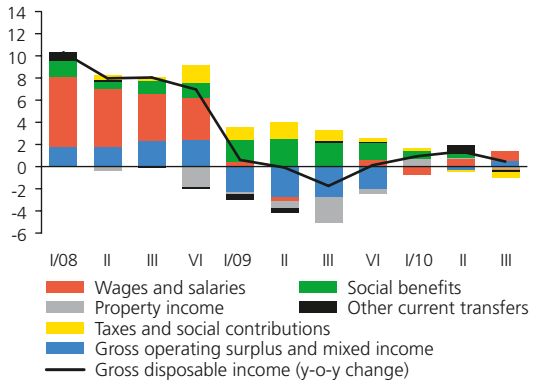


CHART III.3.5

GROSS SAVING RATE

The saving rate kept falling in 2010 Q3
(percentages; source: CZSO, seasonally adjusted CNB data)

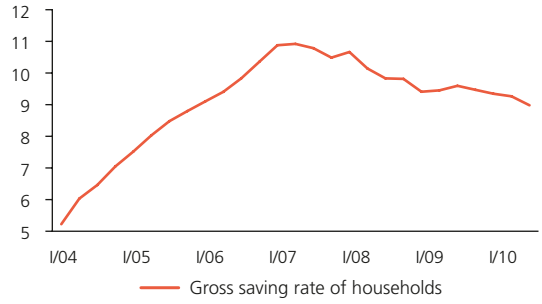
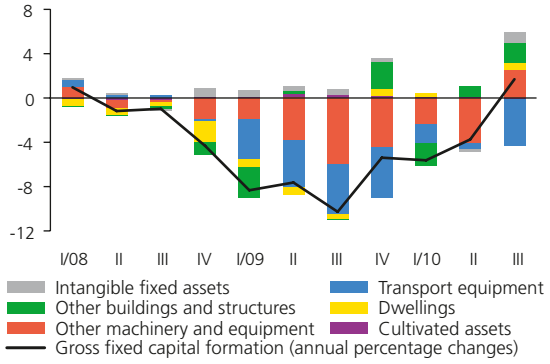


CHART III.3.6

FIXED CAPITAL FORMATION

Fixed investment saw renewed growth in 2010 Q3
(annual percentage changes; contributions in percentage points; constant 2000 prices)



A closer look at the **structure of gross disposable income growth** in 2010 Q3 reveals that the low growth was a result of various factors. The biggest contributor to the growth was a modest rise in **wages and salaries** (see Chart III.3.4), whose year-on-year growth rate increased to 1.6% in Q3 thanks to wages in the business sector. The second-biggest component of household income – gross operating surplus and mixed income – also made a positive contribution to gross disposable income growth. The other components of disposable income – in particular taxes and social contributions – slowed its annual growth in Q3, in line with the CNB's expectations.

Based on **leading indicators**, subdued annual growth in household consumption at the end of 2010 can still be expected. The seasonally adjusted November retail sales data reveal continuing real growth, although this growth is still being driven only by sales in the automotive segment. Subdued growth in household consumption is also suggested by the results of the CZSO consumer confidence survey, which indicates only a modest improvement in this indicator in Q4 (see Chart III.3.14).

General government expenditure on final consumption decreased by 0.5% year on year in real terms in 2010 Q3. Government expenditure thus fell for the first time since the end of 2008. This probably reflected the gradual implementation of government austerity measures.

Investment

Investment activity in the economy increased significantly in 2010 Q3. Following a two-year decline linked with the financial and economic crisis and uncertainties surrounding future economic developments, **fixed investment** grew by 1.7% year on year (see Chart III.3.6).[19] This change was due to all monitored components of fixed investment except investment in transport equipment.[20] The renewed growth in fixed investment was probably supported by investment in photovoltaic power stations and partly also by an improving outlook for external demand and gradually increasing capacity utilisation. However, banks' prudent approach to lending – another important factor for investment – persisted.

This significant change in trend was observed mainly in the **non-financial corporations** sector, which again accounted for more than one-half of total investment in Q3. Annual investment growth was high in this sector (9.0%),[21] but in light of the previous year's very low base it can be regarded more as a modest recovery.[22] The December 2010 results of the CNB business survey indicate no significant changes

19 This result was also due partly to a revision of the 2010 H1 data.
20 Investment in transport equipment fell by 30.1% year on year in 2010 Q3.
21 Constant prices; CNB calculation.
22 Investment in the non-financial corporations sector dropped by 18.4% year on year in 2009 Q3 and by 20% in 2009 Q4.

in the investment activity of the non-financial corporations sector in the period ahead, as only a small proportion of the respondents from some industries are signalling growing investment expenditure over the next twelve months.[23]

By contrast, investment in the **household sector** continued falling year on year in Q3. The decline deepened further to almost -10%. However, investment in dwellings, which accounts for a large proportion of total household investment, continued rising in Q3 (by 3.2%), after having been flat in Q2 (see Chart III.3.7). It seems likely, however, that no major strengthening of the upward tendencies in demand for investment in dwellings can be expected in the near future. This is indicated by a strong decrease in the number of housing completions and housing starts, reflecting uncertainty on this market from developers' point of view owing to a large "stock" of completed unsold apartments. At the same time, one must still take into account banks' prudent approach to providing new mortgage loans and the only slowly changing conditions on the labour market.

The annual decline in **general government investment** continued into 2010 Q3, reaching 3.3%. This was probably due chiefly to the government's austerity measures, which mainly affected investment in infrastructure development.

Inventories continued the trend of previous quarters. The real change in additions to inventories showed a further significant increase in 2010 Q3 and its contribution to GDP growth was the largest of all the GDP expenditure components (see Chart III.3.2). The sharp upswing in additions to inventories in 2010 was probably associated primarily with growth in external demand and the gradual replenishment of pre-crisis inventories in industry, particularly in its export-oriented branches.

III.3.2 Net external demand

The decline in **net exports of goods and services**,[24] visible in the previous quarter, intensified in 2010 Q3. Net exports switched to a deficit of CZK 3.6 billion, decreasing by CZK 16.5 billion year on year and by more than CZK 14 billion quarter on quarter (see Chart III.3.8). Unlike at the start of 2010, the contribution of net exports to GDP growth was therefore negative.

23 A total of 66% of respondents in manufacturing expect no change in investment expenditure in the next 12 months, while 16% of respondents expect investment expenditure to rise and 18% expect it to fall. Most respondents in construction and freight transport (53% and 46% respectively) expect investment expenditure to decrease, but 27% of respondents in freight transport expect it to rise. The main factors limiting future investment expenditure are again uncertainty regarding future demand and shortages of own funds (65% and 50% respectively for respondents in manufacturing).

24 At 2000 prices, seasonally adjusted.

CHART III.3.7

INVESTMENT IN DWELLINGS

Investment in dwellings increased in 2010 Q3, but housing construction continued to decline
(annual percentage changes)

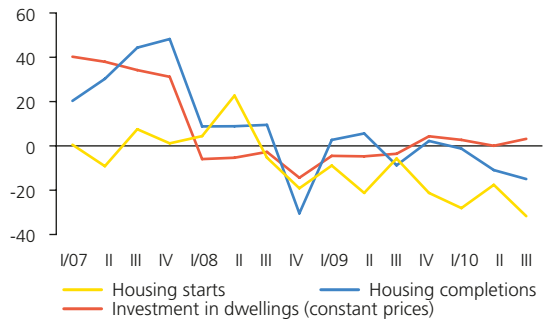


CHART III.3.8

NET EXTERNAL DEMAND

Net exports decreased sharply year on year in 2010 Q3
(CZK billions; constant 2000 prices; seasonally adjusted data)

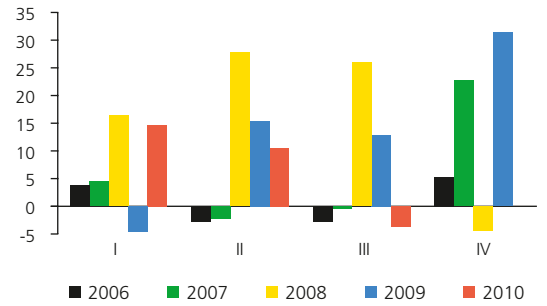


CHART III.3.9

EXPORTS AND IMPORTS

Foreign trade turnover continued to grow rapidly in 2010 Q3, with imports rising faster than exports
(annual percentage changes; percentage points; constant prices; seasonally adjusted data)

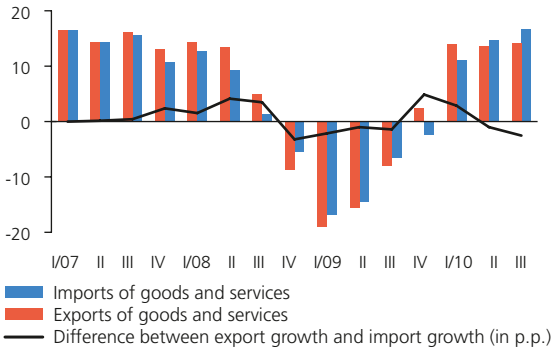


CHART III.3.10

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

Industry was the biggest contributor to the growth in value added, although the contribution of market services was also significant
(contributions in percentage points; annual percentage changes)

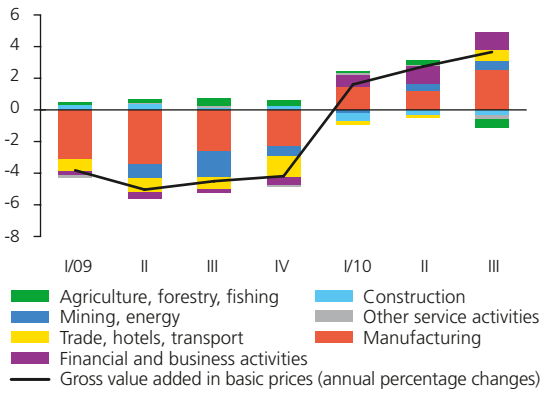


CHART III.3.11

INDUSTRIAL PRODUCTION AND CAPACITY UTILISATION

The rising production capacity utilisation is in line with the growth in industrial production
(basic index; year 2005 = 100; full capacity utilisation = 100)

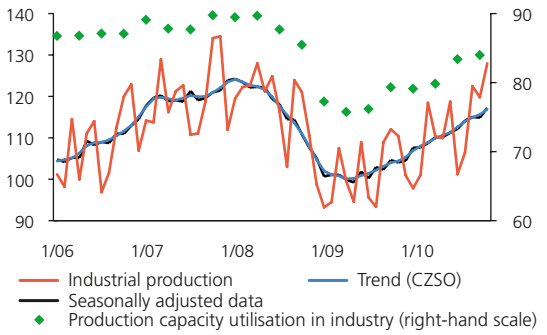
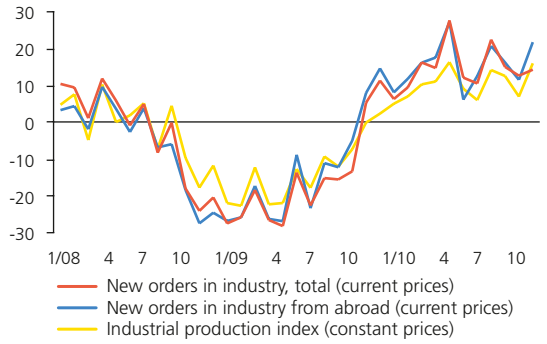


CHART III.3.12

NEW ORDERS IN INDUSTRY

Growth in new orders is continuing
(annual percentage changes)



Total exports maintained a high rate of growth, which, however, increased only moderately compared to the previous quarter (by 0.4 percentage point to 14.1%). The rapid growth in exports, particularly exports of goods, was linked with the continuing growth in external demand, reflecting the economic recovery in the Czech Republic's major trading partner countries. However, it was still partly affected by the previous year's low base resulting from the global economic crisis.

The fall in net exports in Q3 was linked with an increasing lead of annual growth in imports over growth in exports (see Chart III.3.9). A further rise in the rate of growth of **total imports** compared to the previous quarter (of 1.9 percentage points to 16.6%) was due to stronger growth in total domestic demand, mainly for imports of goods for investment purposes (among other things for the construction of photovoltaic power stations) and for intermediate goods for the production of export commodities. The import intensity of GDP thus increased significantly in Q3 – by more than 13 percentage points year on year.

III.3.3 Output

In quarter-on-quarter terms, **gross value added** at basic prices grew for the fifth consecutive quarter. Since 2010 Q1 it has also shown year-on-year growth (of 3.7% in Q3), although this is still due largely to a low base in the crisis year 2009 (see Chart III.3.10).

The strengthening growth in gross value added was due mainly to **industry**, whose contribution increased significantly in Q3 (to 3.1 percentage points) thanks to favourable developments in manufacturing. The contributions of the mining and energy supply sectors increased slightly as well (see Chart III.3.10). The growth in value added in industry was achieved amid fast overall annual growth in industrial production, supported by most branches of industry. Although the growth rate of industrial production continued to be affected significantly by the low base, the level of production also rose gradually (see Chart III.3.11). However, it was still below the pre-crisis level. Its growth was driven mainly by external demand, which was reflected in strong annual growth in real exports (of 14.7%).[25] In line with the continuing growth in production, there was also a steady rise in capacity utilisation in industry (see Chart III.3.11).

According to the latest available data, industrial production increased by 12.6% year on year in November.[26] This growth was again significantly supported by external demand, as indicated by fast growing direct export sales.[27] A continuation of this trend is also

25 i.e. real growth in exports of goods according to the CZSO's national accounts.
26 Seasonally adjusted data.
27 Direct export sales at current prices increased by 22.8% year on year in November, accounting for almost 50% of total sales of industrial corporations.

indicated by the latest available data on **new industrial orders**, according to which orders from abroad are showing the fastest growth (see Chart III.3.12). Nonetheless, insufficient demand is still perceived by businesses as being the largest barrier to production growth, although its effect is gradually weakening (see Chart III.3.13).

The contribution of **services and trade** to annual growth in total gross value added also increased in 2010 Q3 (to 1.5 percentage points; see Chart III.3.10). The continuing growth in value added in transport, storage and telecommunications and in business services was in line with the growth in industrial production. Value added in trade also rose year on year in Q3, with the retail sales data suggesting that growth was recorded mainly in car sales. The latest (November) retail sales figures are so far signalling no noticeable changes in consumer demand in the near future, instead suggesting continuing sales in the automotive segment and flat sales of other goods.

Value added in **construction** was held back by the evolution of demand for construction work again in Q3. The quarter-on-quarter growth in value added was very slight (0.1%). In year-on-year terms, value added continued declining (see Chart III.3.10). The only modest month-on-month growth and the weak year-on-year decline in construction output in November according to the latest data are signalling no major change in trend. Civil engineering contributed to this situation as a result of cuts in publicly funded transport construction. The higher-weight segment of building construction has been showing annual growth in output in recent months, but the data on the approximate value of buildings permitted give no reason for improving the outlook for construction growth in the near future. The expectations of construction businesses are deteriorating as well (see Chart III.3.14).

According to the results of the CZSO business survey, the overall business **confidence indicator** increased in November and December. The increase was most pronounced in industrial businesses, and some improvement was also seen in services. Business confidence in trade was fairly flat. Only in construction did negative expectations strengthen further in 2010 Q4 (see Chart III.3.14).

CHART III.3.13

BARRIERS TO GROWTH IN INDUSTRY

The effect of insufficient demand as the biggest barrier to growth in output is decreasing
(percentages; source: CZSO)

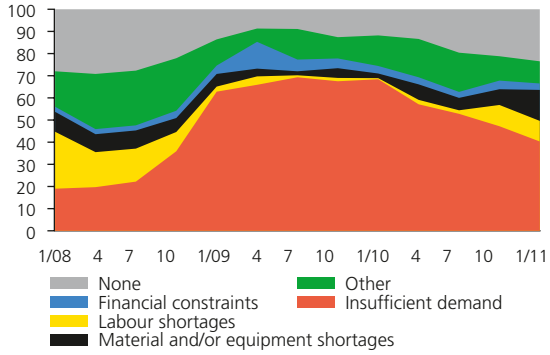


CHART III.3.14

CONFIDENCE INDICATORS

Business confidence in industry showed particularly strong growth in late 2010
(2005 average = 100; source: CZSO)

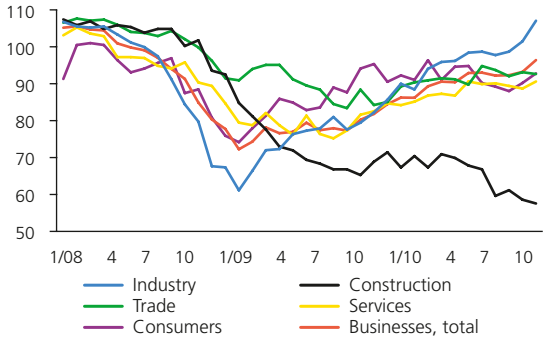


CHART III.3.15

POTENTIAL OUTPUT

The estimated rate of growth of potential output rose slightly in 2010 Q3
(annual percentage changes)

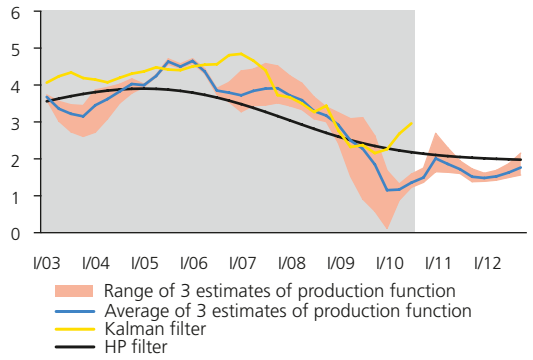


CHART III.3.16

OUTPUT GAP

The output gap narrowed slightly in 2010
(in % of potential output)

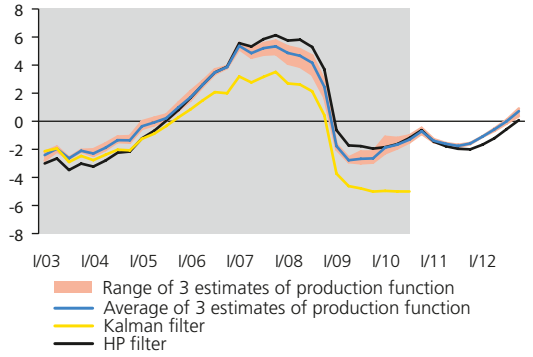
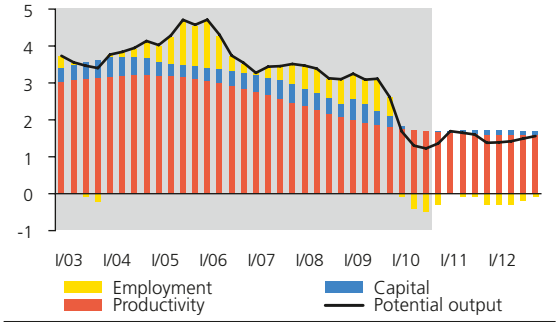


CHART III.3.17

CONTRIBUTIONS TO POTENTIAL OUTPUT GROWTH

The contribution of employment to potential output growth remains negative
(annual percentage changes)



III.3.4 Potential output and estimate of the cyclical position of the economy

According to the calculation of the **Cobb-Douglas production function**,[28] the annual growth rate of potential output increased slightly in 2010 Q3 to about 1.4% (see Chart III.3.15).[29] The corresponding output gap narrowed slightly further to -1.3% (from -1.7% in 2010 Q1).[29] The calculations suggest a further slight pick-up in potential output growth and a gradual narrowing of the output gap at the end of 2010. However, this will be replaced by a renewed slowdown in the growth rate of potential output and a slight opening of the output gap to negative values owing to the expected slowdown in GDP growth in 2011 (see Chart III.3.16). The situation is likely to improve again in 2012, and the output gap could turn positive at the end of 2012.

According to the baseline production function calculation, the annual growth rate of potential output continued to slow gradually in Q3, but it probably accelerated in Q4 in this calculation as well. The breakdown of the **contributions of the individual factors** entering the baseline production function reveals that the slowdown in annual potential output growth was due to a negative contribution of equilibrium employment (see Chart III.3.17), which, however, will moderate in the course of 2011. The contribution of capital remains almost zero. Potential output growth thus continues to be driven mainly by aggregate productivity.

An alternative estimate using the **HP filter**[30] still suggests slightly higher potential output growth (2.2% in 2010 Q3) and a less open output gap (-1.2%). By contrast, the estimate of potential output using the **Kalman filter** is affected by the low observed inflation, leading to a much greater opening of the negative output gap (-5.0% in 2010 Q3) amid faster growth in potential output (3.0% in 2010 Q3). The sizeable dispersion of the results of the individual methods continues to indicate a high degree of uncertainty surrounding the estimates of the current cyclical position of the economy.

28 The production function is computed in three ways using different input data. Coefficient λ = 10,000 is used to filter productivity in the HP filter. The estimates of future potential output and the output gap are based on the CNB's macroeconomic forecast. The inclusion of the forecast helps to moderate the deviation of the HP filter at the end of the data sample.
29 Average of the three calculations.
30 The HP filter estimate also used λ = 10,000.

III.4 THE LABOUR MARKET

A pronounced moderation of the year-on-year decline and quarter-on-quarter growth in employment in 2010 Q3 led to a further decrease in both the general and registered unemployment rate. However, the registered unemployment rate increased again in December, owing mainly to the adoption of stricter requirements for entitlement to unemployment benefits as from 2011. Year-on-year growth in the average wage moderated as a result of wage developments in the non-business sector. Whole-economy labour productivity also showed slower growth in Q3. Nominal unit wage costs decreased year on year in 2010 Q3 amid a further sizeable upswing in economic activity and only a slight increase in the volume of wages and salaries.

III.4.1 Employment and unemployment

The continuing recovery in economic growth was reflected in a further noticeable weakening of the year-on-year decline in **total employment** in 2010 Q3 compared to the previous quarter (from -1.2% in Q2 to -0.2% in Q3; see Chart III.4.1). In absolute terms this meant that the annual decline in the number of employed persons shrank by 51,000 compared to the previous quarter.[31] In quarter-on-quarter comparison,[32] employment recorded growth for the second consecutive quarter, reaching 0.5% in Q3.

A gradual overcoming of the adverse tendencies seen during the economic downturn was particularly apparent in the category of **employees**,[33] which accounts for about 80% of the total number of people employed in the economy (according to the LFS). In 2010 Q3, the annual decline in the number of employees (-1.3%) moderated to one-half of the 2010 Q2 level, confirming the change in trend that started in Q2. The effect of the still declining number of employees on total employment was partly offset in Q3 again by a rise in the number of entrepreneurs (of 5.2%).[34]

A marked change in employment occurred in Q3 in **industry**, the sector hit hardest by the fall in demand during the crisis. The contribution of industry to the total annual change in employment was positive in Q3, whereas in Q2 the number of people employed in industry had shown a noticeable decrease (see Chart III.4.2).[35] This positive contribution was achieved amid an annual increase in the number of employed persons of 1.8% (or 25,000 persons). In Q3, labour demand increased above all in manufacturing (annual growth of 29,500 persons), where was a clear link with the marked recovery in demand for Czech exports.

31 The number of employed persons fell by 60,300 year on year in 2010 Q2 and by only 9,600 in Q3.
32 Seasonally adjusted.
33 Including members of production cooperatives.
34 Employees often turn to full-time independent business activity if they lose their job.
35 According to the LFS.

CHART III.4.1

LABOUR MARKET INDICATORS

Amid a continuing economic recovery, the decline in employment slowed noticeably in 2010 Q3
(annual percentage changes; percentage points)

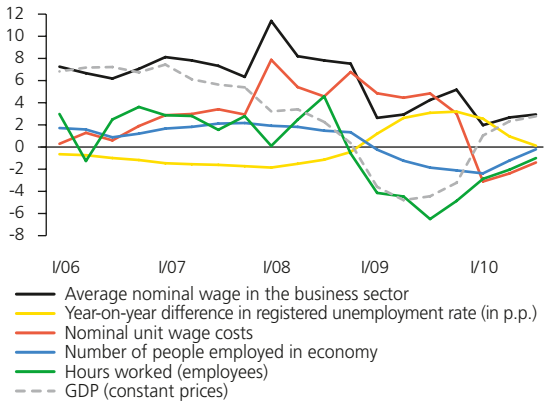


CHART III.4.2

EMPLOYMENT BREAKDOWN BY BRANCHES

Employment in industry started rising again in 2010 Q3
(contributions in percentage points to annual growth; selected branches)

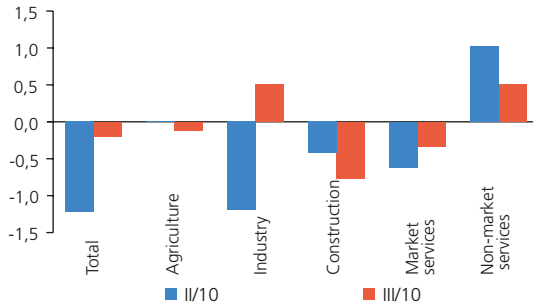


CHART III.4.3

UNEMPLOYMENT RATE

The increase in the unemployment rate at the end of 2010 was affected by tighter conditions for unemployment benefit with effect from 2011
(percentages; seasonally adjusted data; source: MLSA, CZSO, CNB calculation)

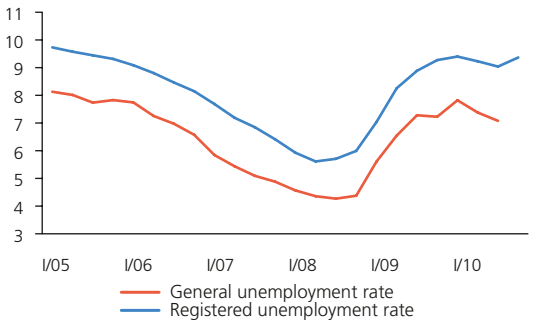
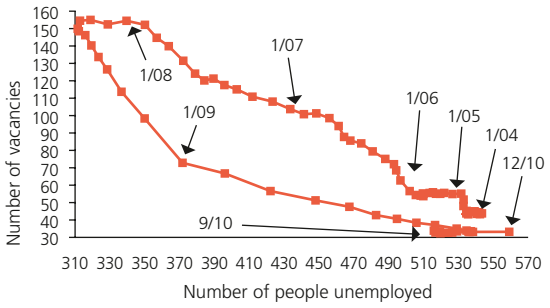


CHART III.4.4

BEVERIDGE CURVE

The number of registered unemployed people increased in December 2010 as a result of new administrative measures
(seasonally adjusted numbers in thousands)



Total employment in **services** grew for the second quarter in a row, but the year-on-year growth was still only moderate in Q3, reaching 0.3% (i.e. less than 9,000 persons). In quarter-on-quarter terms, the increase was higher, reaching 0.5%. The biggest rises in employment were recorded in health and social care and in information and communication activities (11,500 and 10,300 persons respectively).

In these circumstances, the **general unemployment rate**[36] showed another quarter-on-quarter decrease in 2010 Q3, to 7.1%. This was largely due to a quarter-on-quarter increase in employment. The **rate of registered unemployment** (MLSA) showed a similar trend in Q3, but increased again by 0.4 percentage point to 9.4% in Q4 (see Chart III.4.3). This increase was probably a result of amendments to the Employment Act[37] requiring job applicants to register with labour offices before the end of 2010.

The new tighter conditions for obtaining unemployment benefit introduced at the start of 2011 also affected the **Beveridge curve** at the end of 2010 (see Chart III.4.4). While in previous months the number of unemployed people had fluctuated close to a single point amid only marginal changes in the number of vacancies, at the end of the year the Beveridge curve jumped to the right.

III.4.2 Wages and productivity

TABLE III.4.1

WAGES, PRODUCTIVITY, UNIT WAGE COSTS

Nominal unit wage costs kept falling in 2010 Q3
(annual percentage changes)

	IV/09	I/10	II/10	III/10
Average wage in monitored organisations				
nominal	5.2	2.2	2.4	2.0
real	4.8	1.5	1.2	0.1
Average wage in business sector				
nominal	5.2	2.0	2.7	2.9
real	4.8	1.3	1.5	1.0
Average wage in non-business sector				
nominal	4.4	3.2	1.0	-1.8
real	4.0	2.3	-0.1	-3.6
Whole-economy labour productivity	-1.0	3.2	4.0	2.6
Nominal unit wage costs	3.0	-3.1	-2.4	-1.4

Following a slight pick-up in 2010 Q2, annual **average nominal wage growth** slowed again in Q3 to 2%, the lowest figure since the comparable time series began. Average real wage growth was close to zero (0.1%). The slowdown in average nominal wage growth in the economy was due to wage developments in the non-business sector, where the average wage fell by 1.8% in Q3 (see Table III.4.1). In the business sector, by contrast, annual growth in the average wage rose slightly to 2.9% in nominal terms while slowing to 1% in real terms owing to inflation.

The subdued growth in the average nominal wage in the current phase of the business cycle was a result of various factors, most notably low demand in most sectors, a sizeable lead of labour supply over labour demand, and the implementation of austerity measures in the public sector. In addition, a number of businesses faced cost shocks arising from the strong upswing in prices of key commodities on world markets. In this environment, employers raised wages to only a small extent, and, by contrast, average wages decreased in some sectors (education, public administration, defence, and banking and insurance).

36 Measured by the ILO methodology according to the LFS; seasonally adjusted by the CNB.
37 These amendments mainly involved a reduction in unemployment benefit to 45% over the whole benefit period in the case of voluntary severance. In addition, job seekers registered after 1 January 2011 can no longer earn up to 50% of the minimum wage (i.e. CZK 4,000) while on benefit, and job seekers who receive a severance payment from their employer are entitled to unemployment benefit only after the severance payment period has expired.

Whole-economy labour productivity growth slowed to 2.6% in Q3.[38] As in the previous quarter, it was mostly driven by GDP growth; the contribution of falling employment was by now insignificant (see Chart III.4.5). As regards individual sectors, there were still considerable differences in productivity, mainly due to different developments in demand in individual branches. Productivity in industry increased very fast in Q3 (by 11.8% year on year), while productivity in construction declined for the third quarter in a row owing to subdued demand in building construction and civil engineering. In the other sectors, with the exception of non-market services, productivity recorded marked growth.

In these circumstances, **unit wage costs** continued falling. The 1.4% annual decline in nominal unit wage costs in Q3 was again due to continuing annual GDP growth (see Chart III.4.6). Its effect was only partly offset by slight growth in the volume of wages and salaries,[39] which occurred amid a further pronounced weakening of the decline in employment and slowing average wage growth. Unit wage costs declined most of all in industry (by 6.7%), where rapid growth in value added was accompanied by much slower growth in wages and salaries. Nominal unit wage costs also decreased in several other sectors (trade, restaurants and transport, and market and financial services). Only in non-market services did they increase slightly.

CHART III.4.5

WHOLE-ECONOMY PRODUCTIVITY

Productivity growth slowed in 2010 Q3
(contributions in percentage points; annual percentage changes)

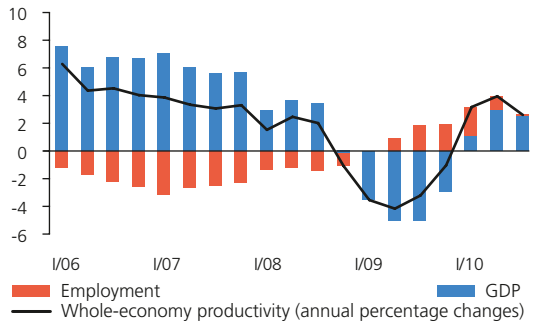
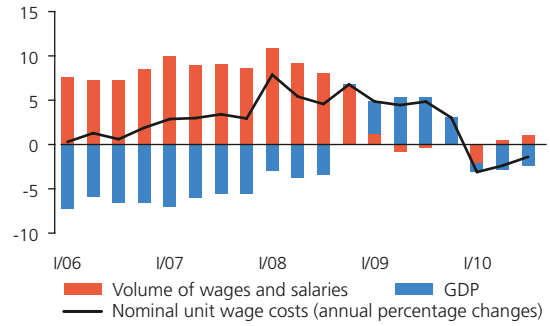


CHART III.4.6

NOMINAL UNIT WAGE COSTS

Continuing GDP growth contributed to the annual decline in nominal unit wage costs
(contributions in percentage points; annual percentage changes)



38 Productivity and nominal unit wage costs are calculated on the basis of seasonally unadjusted data.
39 Annual growth in the volume of wages and salaries was 1.1% in 2010 Q3 compared to 0.5% in 2010 Q2.

CHART III.5.1

MONETARY AGGREGATES

M2 growth decreased
(annual percentage changes)

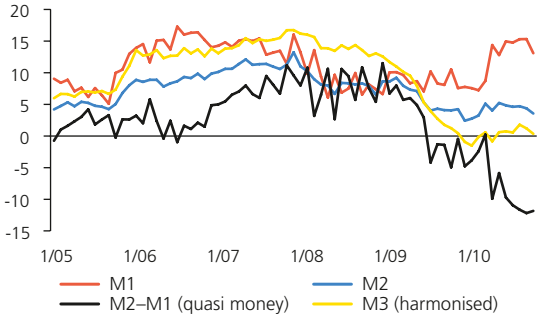


TABLE III.5.1

MONETARY AGGREGATE STRUCTURE

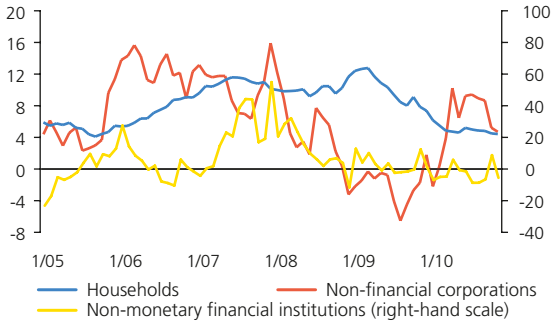
The rate of growth of transaction money remains high
(quarterly averages and end-of-month stocks; annual percentage changes)

	II/10	III/10	10/10	11/10	Share in M2, % 11/10
M1	12.0	15.0	15.3	13.1	67.5
Currency in circulation	-0.9	0.7	1.0	0.7	12.9
Overnight deposits	15.8	19.1	19.4	16.5	54.6
M2–M1 (quasi money)	-5.2	-10.7	-12.2	-11.8	32.5
Deposits with agreed maturity	-3.6	-0.6	-2.7	-1.2	19.2
up to two years	-17.3	-15.9	-18.3	-17.0	12.2
over two years	57.3	55.6	51.1	47.9	7.0
Deposits redeemable at notice	-6.9	-22.4	-23.9	-24.7	12.8
up to three months	-7.9	-18.8	-19.3	-20.2	11.0
over to three months	-1.4	-39.1	-44.1	-44.3	1.8
Repurchase agreements	-13.4	-25.6	-2.2	9.7	0.5
M2	4.8	4.7	4.4	3.6	100.0

CHART III.5.2

DEPOSITS BY SECTOR WITHIN M2

Corporate and household deposits are steadily rising
(annual percentage changes)



III.5 FINANCIAL AND MONETARY DEVELOPMENTS

Annual money supply growth slowed slightly further, so the inflationary pressures stemming from money supply developments remain weak. Total loans are gradually recovering. This reflects a further moderation of the decline in loans to non-financial corporations. The decrease in new loans for house purchase slowed owing to growth in loans with fixations of over one year and up to five years recorded in large banks. Client interest rates were mostly flat, with the exception of interest rates on loans for house purchase, which fell. This probably reflected a decrease in the perception of risk by banks amid flat money market rates and the previous decline in yields on ten-year government bonds. Client risk premia are still higher than in the pre-crisis period. The financial indicators of corporations are continuing to improve year on year. The solvency of both corporations and households is increasing in year-on-year terms.

III.5.1 Money

Annual **M2** growth declined slightly further in Q4, reaching 3.6% in November (see Chart III.5.1).[40] The persisting subdued money growth implies weak inflationary pressures stemming from money supply developments.

Turning to the **structure of M2**, the relatively high growth rate of transaction money included in M1 continued, although the growth slowed in year-on-year terms to 13.1% in November owing to base effects. Time deposits – especially those with maturities of up to two years – continued to be moved into overnight deposits. Currency in circulation continued to grow slightly year on year. Demand for transaction money is being affected by the modest economic growth and low interest rate levels. The high growth rate of time deposits with an agreed maturity of over two years gradually slowed further owing to declining interest income on such deposits. The annual decline in deposits redeemable at notice intensified (see Table III.5.1).

The growth rate of the total volume of bank **deposits** increased to 2.7% year on year in November 2010. The ratio of bank deposits to loans was almost 140%. The annual growth rate of deposits of non-financial corporations decreased to 4.7%.[41] Deposits of corporations can be expected to be favourably affected by economic growth, although this growth will slow temporarily in 2011. Annual growth in deposits of households also decreased gradually to 4.4% in November. This reflected lower nominal income growth in Q3 amid a persisting increased unemployment rate and a falling saving rate. Deposits of non-monetary financial institutions have remained broadly unchanged since 2008 despite showing some short-term volatility (see Chart III.5.2).

40 Following a recent modest pick-up, the annual growth of the harmonised monetary aggregate M3 slowed as well, to 0.3%. The lead of the national aggregate M2 growth over M3 growth is due to higher demand for long-term time deposits in 2009. In contrast to the national M2, such deposits are not included in the harmonised M3.

41 The slowdown in growth of corporate deposits was chiefly due to base effects; the monthly flow of corporate deposits was quite strongly positive in November 2010.

III.5.2 Credit

Loans to corporations and households are gradually recovering. Annual growth in loans edged up to 2.4% in November, or 3.1% when adjusted for non-transaction factors (see Chart III.5.3). New loans are showing a similar trend. Gradual growth in loans was also recorded in the euro area, where it was similarly low at 2.0%.

Loans to non-financial corporations continued to decline year on year, albeit at a slower rate (1.2% in November). The fall in short-term loans with a maturity of up to one year continued to moderate amid persisting growth in long-term loans. As regards individual sectors, the fastest growth in the volume of loans was recorded in the energy sector (see Chart III.5.4), with loans to wholesale and retail trade and real estate activities also showing a slight increase. The total volume of loans to the energy sector rose by about CZK 12 billion in 2009 and CZK 19 billion in 2010, representing around 0.3% and 0.5% of GDP respectively. This was probably related to the financing of photovoltaic power stations. Loans to manufacturing continue to decline, albeit at a slower rate than in the previous period. The contraction in loans to construction is also continuing. New corporate loans showed similar growth rates as stocks of loans.

The December **business survey** reveals that the percentage of industrial corporations that expect loans to increase in the near future is 7%, while 43% expect no change and 20% expect a decrease (30% of corporations expect to have no loans). Renewed gradual annual growth in loans to corporations can be expected at the start of 2011.

Annual growth in **loans to households** slowed slightly in November, reaching 7.9%. Loans for house purchase grew more slowly, while consumer credit growth was flat. The persisting subdued demand of households for loans is due to a relatively high unemployment rate and weaker nominal and real income growth (see Chart III.5.5). However, the continuing gradual fall in interest rates is fostering a slower decline in new loans for house purchase (see Chart III.5.6). New loans for house purchase are now rising in large banks, but are still declining in the other bank groups. This is being reflected in growth in mortgage loans, whereas building society loans are continuing to decline. Growth is being recorded particularly for new loans for house purchase with fixations of over one year and up to five years. According to Hypoindex, the volume and number of mortgage loans rose considerably year on year in December 2010. For the first time since 2007, new mortgages recorded an annual increase of around 13% for 2010 as whole. The decline in new consumer credit, which is probably related to growth in sales of non-food retail goods, has also slowed over recent months. The recovery in loans to households is still being suppressed by higher client risk premia (see below).

The ratio of **non-performing loans** to total loans remains elevated. The NPL ratio for loans to non-financial corporations is 8.8%, while

CHART III.5.3

LOANS TO CORPORATIONS AND HOUSEHOLDS

Loans to corporations and households are steadily rising overall
(annual percentage changes)

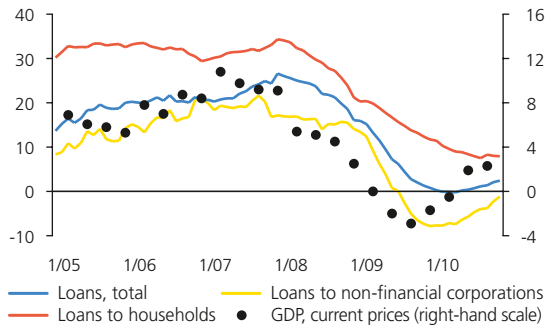
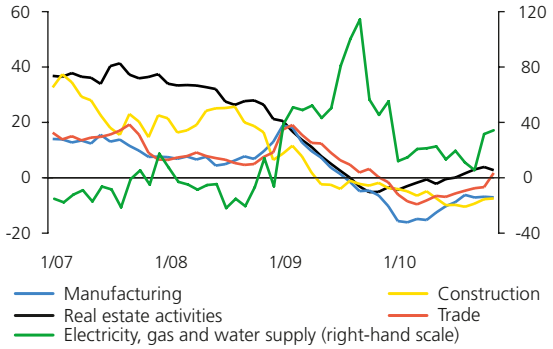


CHART III.5.4

LOANS TO CORPORATIONS BY ECONOMIC ACTIVITY

Loans to the energy industry are rising most strongly
(annual percentage changes)



Note: The construction and real estate activities time series were revised in 2009 because of a change in methodology.

CHART III.5.5

LOANS TO HOUSEHOLDS

Growth in loans to households slowed slightly further
(real annual percentage changes)

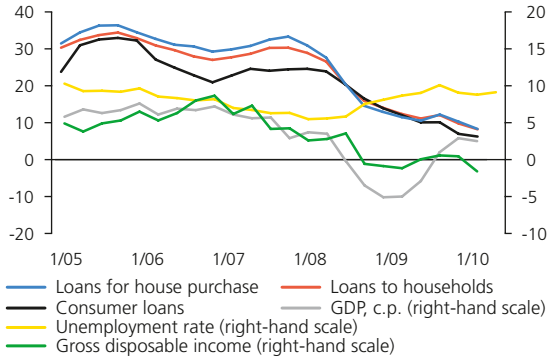


CHART III.5.6

LOANS TO HOUSEHOLDS FOR HOUSE PURCHASE

The decline in new loans for house purchase decreased mainly thanks to growth in mortgage loans
(new business; contributions in p.p., annual percentage changes, interest rate in %)

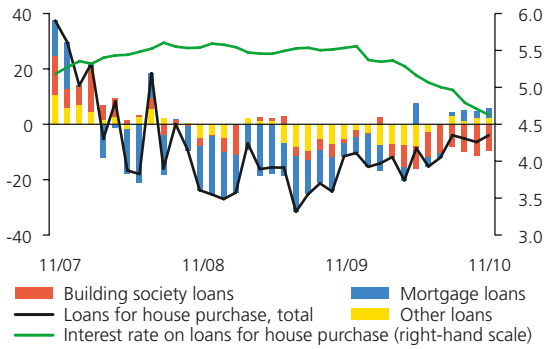


CHART III.5.7

CNB KEY RATES

The CNB left key rates unchanged in 2010 Q4
(percentages)

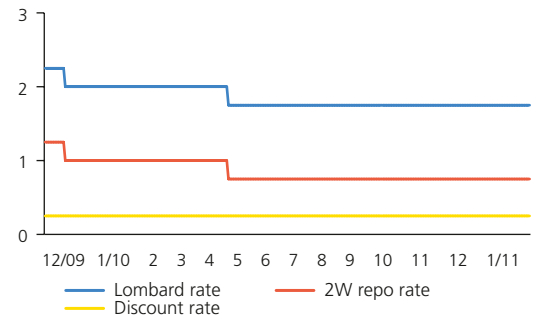
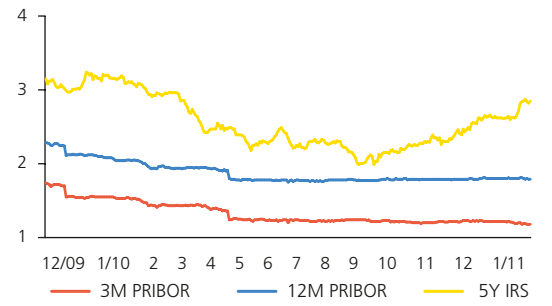


CHART III.5.8

MARKET INTEREST RATES

Money market interest rates were virtually unchanged, but IRS rates rose
(percentages)



that for consumer credit increased to 12.2% and that for loans for house purchase was flat at 3.2%. However, due to the economic recovery, non-performing loans are recording significantly slower annual growth than during the recent economic crisis. Non-performing loans totalled CZK 124 billion in November.

III.5.3 Interest rates

Monetary policy interest rates

The monetary policy decision-making of the CNB Bank Board in 2010 Q4 was based on the macroeconomic forecast published in the previous Inflation Report. Consistent with this forecast and its assumptions was stability of market interest rates close to their current levels initially, followed by a gradual rise in rates at the longer end of the forecast. The balance of risks of the baseline scenario of the previous forecast was perceived as being balanced at both the November and December Bank Board meetings. Accordingly, the Bank Board decided to leave the **key interest rates** unchanged at its meetings in November and December. The two-week repo rate was set at 0.75%, the discount rate at 0.25% and the Lombard rate at 1.75% with effect from 7 May 2010 (see Chart III.5.7).

At its monetary policy meeting on 3 February 2011, the Bank Board decided by a majority vote to leave the interest rates unchanged. The risks to the new forecast were assessed as significant, associated with external developments, heading in both directions and being balanced overall. Higher commodity prices imply an upside risk to inflation, while the current appreciation of the koruna´s exchange rate implies a downside risk.

Financial market interest rates

Money market interest rates have been flat or falling slightly since the start of May, when they declined after the repo rate was lowered. Rates with longer maturities (IRS and bond yields) rose in 2010 Q4. Yields on Czech government bonds followed the increase in German government bonds, which continued into January 2011 owing mainly to concerns about future inflation pressures and to increased confidence in the economic recovery. Growth in domestic bond yields was also fostered by favourable domestic macro data. The current marked increase in IRS is a response to growth in foreign rates with longer maturities. After declining in response to the November monetary policy meeting (postponement of monetary policy tightening), FRA derivative rates are rising and correcting their previous decline. Their current growth is due mainly to increases in European FRA rates. The market outlook for 3M rates according to FRA quotations is rising in the near future. Overall, this outlook is above the path consistent with the baseline scenario of the new forecast (see sections I and II) over the entire horizon (the longer the horizon, the wider the deviation).

The average **3M PRIBOR** was 1.2% in 2010 Q4 and was consistent with the previous forecast. Money market interest rates continued to be influenced by the credit premium. The average spread between the 3M PRIBOR and 2W repo rate was 0.46 percentage point in 2010 Q4 and was in line with the assumptions of the previous forecast. This spread stabilised at this level after the aforementioned May lowering of the repo rate. It currently stands just below 0.45 percentage point.

Overall, PRIBOR interest rates fell by 0.3 percentage point at all maturities in 2010. This is in line with the sole change in the repo rate (0.25 percentage point in May). The decline is more pronounced for IRS interest rates, reaching 0.8 percentage point for the longest maturities.

The **PRIBOR yield curve** did not change during 2010 Q4 and its slope remained positive. The spread between the 1Y PRIBOR and 2W PRIBOR was around 0.9 percentage point in December 2010. The money market yield curve was flat during January. By contrast, the **IRS yield curve** steepened in 2010 Q4 and at the start of 2011, shifting upwards over its entire length. In December, the average 5Y–1Y spread was 1.1 percentage points and the 10Y–1Y spread 1.6 percentage points.

Short-term **interest rate differentials** vis-à-vis both the main world currencies (PRIBOR/CZK – EURIBOR/EUR or LIBOR/USD) remained positive (see Chart III.5.9). Vis-à-vis euro rates they continued to decrease initially but were broadly flat afterwards, while vis-à-vis dollar rates they were broadly unchanged over the whole reference period. The 3M PRIBOR – 3M EURIBOR interest rate differential was 0.2 percentage point on average in 2010 Q4. On 21 January, it was also 0.2 percentage point.

Six bond auctions were held on the primary **government bond market** in the period under review. The total volume of bonds issued was CZK 33.4 billion. Most auctions met with strong demand. A successful auction of variable-coupon bonds maturing in 2016 took place in January. The difference vis-à-vis the 6M PRIBOR compared to the auction of a comparable bond at the start of 2009 was significantly lower, and the spread between the lowest and highest price decreased as well. The government bond yield curve shifted upwards (except at its shortest end) and its positive slope increased (see Chart III.5.10).

Client interest rates

Client **interest rates on new loans** were mostly flat in the first two months of Q4, with the exception of rates on loans for house purchase, which recorded a decline. Client risk premia remained higher than in the pre-crisis period, most of all in the case of households, but there are visible signs of a fall in the perception of risk by banks. The evolution of risk margins in the period ahead will depend on the unemployment rate and the strength of economic growth. Client interest rates in the Czech Republic remain below the level of euro area interest rates.

CHART III.5.9

INTEREST RATE DIFFERENTIALS

Interest rate differentials vis-à-vis the euro declined further initially and then were flat
(percentage points)

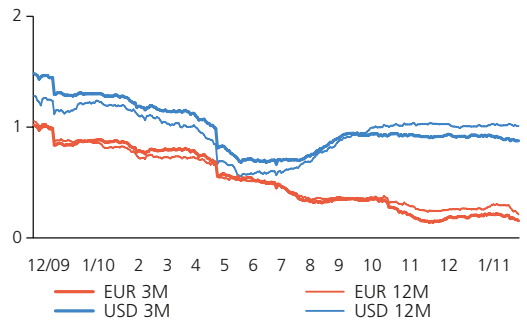


CHART III.5.10

GOVERNMENT BOND YIELD CURVE

The yield curve shifted upwards starting in October 2010
(percentages)

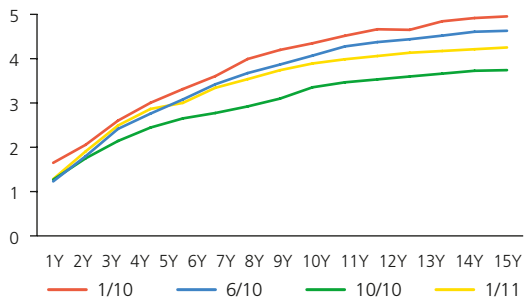


CHART III.5.11

INTEREST RATES ON LOANS TO CORPORATIONS

Interest rates on loans to non-financial corporations are mostly flat after declining recently
(new business; percentages)

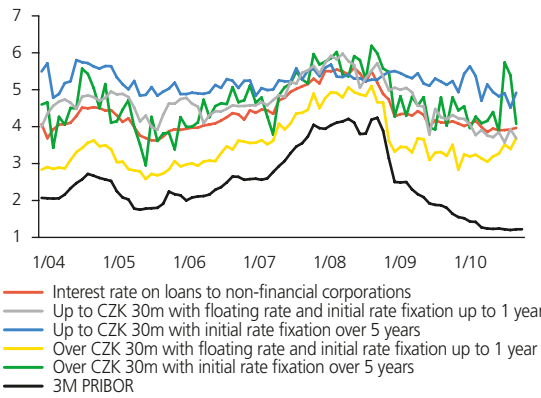


CHART III.5.12

INTEREST RATES ON LOANS FOR HOUSE PURCHASE

Interest rates on loans for house purchase continued to fall modestly
(new business; percentages)

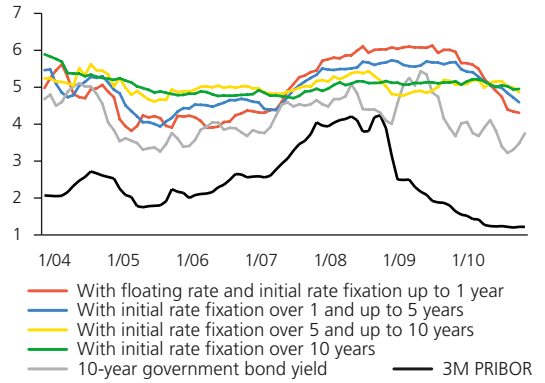


CHART III.5.13

SPREADS OF INTEREST RATES ON LOANS

The spreads between client and market rates remain at elevated levels
(percentage points; percentages)

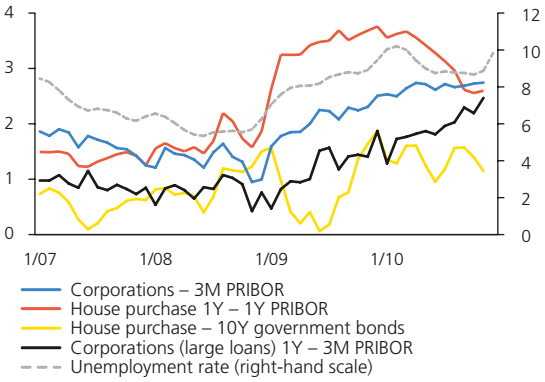
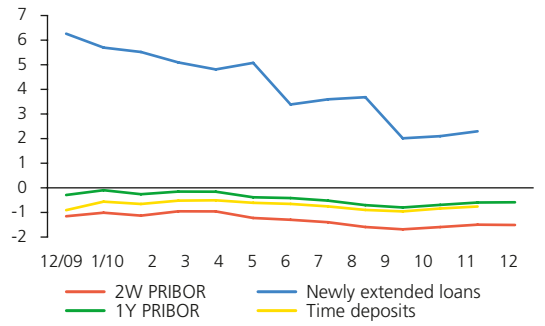


CHART III.5.14

EX ANTE REAL RATES

Ex ante real interest rates on new loans were flat in 2010 Q4
(percentages)



The **interest rate on loans to non-financial corporations** was fluctuating around 4% at the end of 2010 (see Chart III.5.11). These rates therefore remained at their lowest level since 2004. A halting decline was recorded for rates with all fixations except the long-term rate on large loans, which, however, is a relatively narrow category of loans associated with loan contracts of some large corporations in respect of which banks usually apply an individual approach. The rate on current account overdrafts was flat. The evolution of corporate rates reflects flat money market rates and gradually increasing yields on government bonds with longer maturities. The spread of overall corporate and market rates remained elevated. The interest rate on corporate loans in the euro area is currently rising because of growth in money market rates and therefore reflects the rising cost of obtaining short-term funds for bank financing.

By contrast, the **interest rate on loans for house purchase** for households continued to fall gradually, reaching 4.6% in November 2010. The biggest decline was recorded by rates with fixations of over one year and up to five years. The decrease in the rate with a fixation of up to one year slowed and the rate with a fixation of over ten years rose somewhat due to growth in long-term financial market interest rates (see Chart III.5.12).[42] According to Hypoindex, the downward trend in interest rates on house purchase loans continued into December 2010. Following a previous decline, the spread between the rate on house purchase loans with a short fixation and the 1Y PRIBOR market rate was flat. The spread between the overall rate on loans for house purchase and the ten-year government bond yield decreased as a result of growth in the government bond yield (see Chart III.5.13). Rates on loans for house purchase were roughly at the 2006 level. In the euro area, house purchase loan rates rose slightly for one-year fixations, but continued to decline to historical lows for other fixations.

Interest rates on consumer credit and current account overdrafts stayed at 14.7% and 18.7% respectively in November 2010. This continues to reflect the high risk perceived by banks.

The average interest rate on **deposits** remained at 0.9% at the end of 2010. It was 1.1% for households and around 0.5% for non-financial corporations.

After increasing in September, the **margin** between loan and deposit interest rates on new business, which affects bank profitability, is 6.2 percentage points. The margin for corporate loans and deposits remains at 3.5 percentage points, that for loans for house purchase and household deposits is down slightly to 3.6 percentage points, and that for consumer credit is 13.6 percentage points.

42 This is reflected in further growth in new loans with a fixation of over one year and up to five years, recorded mainly for large banks. The share of these loans in total new loans thus rose to 51.5%, amid a slight rise in the share of new loans with a fixation of up to one year to 21.1%. By contrast, the share of new loans with longer fixations fell.

Real client interest rates[43] were mostly flat in Q4. Real rates on new loans fell sharply to 2.3% in November compared to August, while real rates on time deposits are broadly flat around -0.8% (see Chart III.5.14).

III.5.4 The exchange rate

The average **exchange rate of the koruna against the euro** was CZK 24.8 in 2010 Q4, which represents a year-on-year appreciation of 4.5%. The rate was around CZK 24.6 to the euro in October but depreciated to CZK 25.4 between mid-November and the year-end (see Chart III.5.15). However, the start of 2011 brought a fast appreciation of the domestic currency. In mid-January the rate was fluctuating around CZK 24.3 to the euro.

The koruna is still being affected by foreign investors' sentiment, which changes depending on the risks in the USA and Europe. While data on economic developments and their implications for quantitative easing of monetary policy are being closely observed in the USA, the debt crisis in some EU Member States remains the main factor in Europe. In December, Moody's downgraded Ireland's rating by five notches from Aa1 to Baa1 with a negative outlook and started revising the rating of Spain's liabilities with the possibility of downgrading it. However, the ECB is continuing to purchase bonds and the January auction of Portuguese government bonds was also successful.[44]

The average **exchange rate of the koruna against the dollar** was CZK 18.3 in 2010 Q4, which represents a quarter-on-quarter appreciation of 5.4% but a year-on-year depreciation of 4.1%. The dollar began appreciating on world markets at the start of November. Moreover, its movements against the koruna were amplified by the koruna's depreciation against the euro. During the quarter, the koruna depreciated from around CZK 17 to the dollar at the start of November to about CZK 19 at the end of 2010. News of the government debt crisis in Europe was the main factor. The rate firmed to CZK 18.3 to the dollar in January 2011 after the successful Portuguese bond auction.

III.5.5 Economic results of non-financial corporations

In 2010 Q3, the segment of **non-financial corporations with 50 employees or more**[45] saw no major changes in the main performance indicators compared to the previous quarter. Although their annual growth rate moderated, it remained relatively high thanks to persisting

43 Ex ante real interest rates: nominal interest rates on loans are deflated by the industrial producer price inflation forecasted by the CNB; nominal interest rates on deposits and PRIBOR rates are deflated by the consumer price inflation expected by financial market analysts.
44 Auctions of Spanish and Italian bonds were also successful, but they were not watched so closely and did not cause such a big reaction.
45 The segment of corporations with 50 employees or more consisted of more than 9,200 non-financial corporations at the end of 2010 Q3.

Chart III.5.15

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna depreciated against the euro and the dollar in 2010 Q4 but appreciated quickly in January

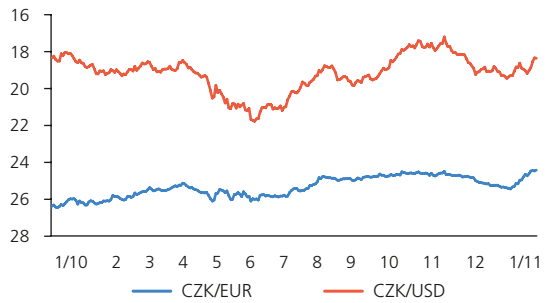


Chart III.5.16

KEY FINANCIAL INDICATORS

Book value added and gross operating surplus continued to rise in 2010 Q3
(annual percentage changes)

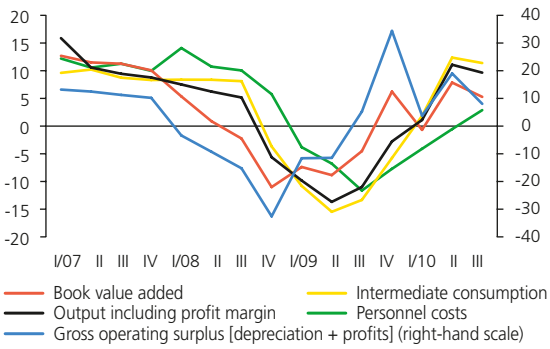


Table III.5.2

PERFORMANCE INDICATORS OF CORPORATIONS

The material cost-output ratio continued to rise, but the wage cost-output ratio kept falling
(CZK billions; percentages; annual changes in percentage points and percentages)

	2009 Q3	2010 Q3	Annual percentage changes
Output incl. profit margin (CZK billions)[a]	1,161.7	1,273.8	9.7
Personnel costs (CZK billions)	176.8	181.9	2.9
Intermediate consumption (CZK billions)	831.6	926.3	11.4
Book value added (CZK billions)	330.1	347.5	5.3
Sales (CZK billions)	1,510.6	1,647.0	9.0
	Percentages	**Percentages**	**Annual changes in p.p.**
Ratio of personnel costs to value added[a]	53.6	52.3	-1.2
Material cost-output ratio[a]	71.6	72.7	1.1
Personnel cost-output ratio[a]	15.2	14.3	-0.9
Ratio of book value added to output[a]	28.4	27.3	-1.1

a) CNB calculation

CHART III.5.17

FINANCING OF NON-FINANCIAL CORPORATIONS

Total financing of corporations fell slightly
(contributions to external financing in percentage points; annual percentage changes)

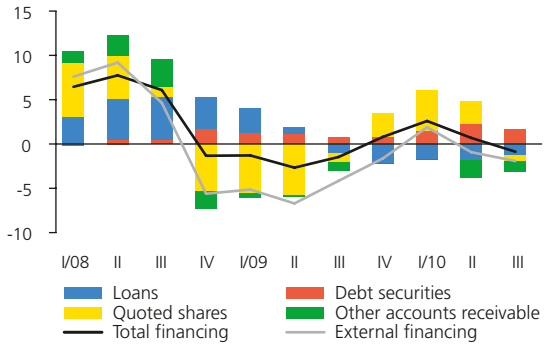


CHART III.5.18

DOMESTIC AND FOREIGN CORPORATE LOANS

Loans from domestic banks and from abroad are falling, but their decline is moderating
(annual percentage changes)

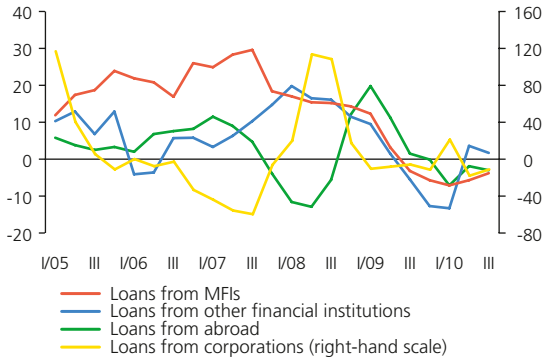
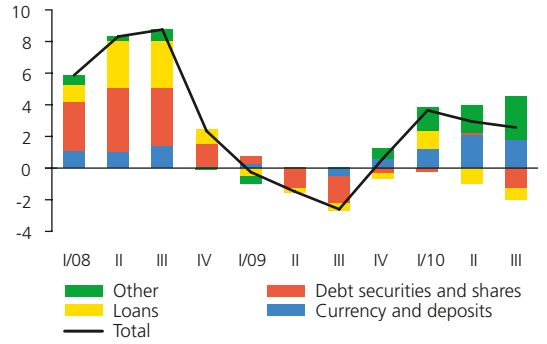


CHART III.5.19

FINANCIAL INVESTMENT OF NON-FINANCIAL CORPORATIONS

Growth in liquid financial assets in the form of currency and deposits decreased slightly
(contributions in percentage points; annual percentage changes)



base effects. As in the previous quarter, the levels of these indicators signalled an improving economic situation of the monitored set of corporations. In year-on-year comparison, sales and output increased particularly quickly, but were accompanied by even more pronounced growth in intermediate consumption. Book value added thus grew more slowly than in the previous quarter (see Chart III.5.16). After six months of decline, personnel costs recorded a year-on-year increase, fostering slower annual growth in the gross operating surplus according to CNB calculations.

In 2010 Q3, the **material cost-output ratio** was influenced mainly by continued buoyant growth in import prices of energy and non-energy commodities and metal-based semi-finished products. The rising prices of these inputs were the main source of upward pressure on producers' costs, which contributed to a year-on-year rise in the material cost-output ratio of 1.1 percentage points in Q3 (see Table III.5.2). Producer costs continued to increase most of all at the early stages of the production chain.

By contrast, the **wage cost-output ratio** continued to fall year on year in 2010 Q3 (by 0.9 percentage point) even though personnel costs rose year on year after quite a long period of decline. However, this rise was only moderate compared to the buoyant growth in output (2.9%; see Table III.5.2).

Data for the narrower segment of **large corporations** (with 250 employees or more[46]) in 2010 Q3 again indicate faster growth in sales, output, book value added and gross operating surplus in large corporations than in the wider segment of corporations.

III.5.6 Financial position of corporations and households

In Q3, overall **corporate financing** recorded an annual decrease of 0.9%, while external corporate financing fell by 1.9%.[47] This decrease was due to a decline in transactions as well as to non-transaction factors (associated mainly with the revaluation). The year-on-year decline in loans moderated further and the growth rate of debt security issuance slowed. Other accounts receivable declined (see Chart III.5.17). The upward trend in the use of market financing consequently slowed. As regards corporate loans, the decline in domestic bank loans, foreign loans and loans from other corporations moderated, and growth in loans from non-banks was negligible (see Chart III.5.18). Despite that, corporations' debt-to-equity ratio increased slightly in Q3, mainly because of a decline in equity (reflecting restructuring of the ownership structures of some major corporations).

46 The segment of corporations with 250 employees or more consisted of almost 1,700 non-financial corporations at the end of 2010 Q3.
47 Revised financial accounts data for 2010 Q2 were released simultaneously with the data for 2010 Q3. External financing comprises loans, debt securities, quoted shares and other accounts receivable. Total financing comprises all financial liabilities of corporations.

Annual growth in **financial investment by corporations** declined to 2.6% in Q3. Corporations held more free funds in the form of other assets (associated usually with trade payments, but also with some non-transaction effects) amid slightly lower growth in currency and deposits. The contributions of the other components of financial assets were negative (see Chart III.5.19). The share of financial investment by corporations in total financial investment in the economy thus fell further to 22.4%.[48]

The **debt of non-financial corporations**, as expressed by the ratio of loans and debt security issuance to GDP, edged down to 46.5%[49] in Q3 (see Chart III.5.20). Following a recent decline, the interest burden on corporations increased as a result of a slight annual slowdown in growth in the gross operating surplus.

The **financial indicators of non-financial corporations** are signalling that the gradual annual improvement in the solvency and the acid-test ratio of corporations observed since the end of 2009 moderated somewhat in Q3 compared to the previous quarter (see Table III.5.3). The financing gap of corporations (i.e. net borrowing), representing the difference between internal funds (i.e. gross savings) and real investment expenditure (i.e. gross capital formation) turned negative in Q3, mainly because of a decline in gross savings. Overall, the financial position of corporations was little changed in Q3. This mainly reflects the modest growth of the economy.

Household debt was broadly flat in Q3 at 30.3% of GDP and 55.6% of gross disposable income (see Chart III.5.20). Net interest payments (i.e. the difference between interest paid and received on bank loans and deposits) remained at 2.1% of gross disposable income, with interest expenses at 3.1% and interest income at 1%. Annual growth in interest payments moderated, as did growth in gross disposable income, while interest income declined. Annual growth in overall household financing slowed to 4.8%, mainly as a result of a further reduction in the positive contribution of loans for house purchase (see Chart III.5.21).

After having risen in the previous quarter, annual growth in **financial investment by households** declined again to 5.4%. The contribution of investment by households in currency and deposits edged down, while that in debt securities and shares fell more significantly, amid an unchanged contribution of investment in insurance technical reserves.

48 Non-financial corporations account for 22%, households 16%, financial institutions 32%, general government 11% and rest of the world 19% of financial investment in the economy as a whole. In Q3, financial institutions and general government recorded quarter-on-quarter increases in their shares of financial investment.

49 When other accounts payable (relating mainly to trade liabilities) are included, the ratio of corporate debt to GDP is 109%.

Table III.5.3

FINANCIAL INDICATORS OF CORPORATIONS

Corporate solvency increased year on year

	I/2010	II/2010	III/2010	III/2010
Corporations total [a]	Annual percentage changes			CZK billions
Equity (shares issued)	6.1	3.5	-0.9	3,691.5
Loans	-4.8	-5.4	-3.7	1,441.3
Debt securities issued	38.9	58.1	44.0	261.8
Quoted shares	18.0	4.7	-8.3	649.4
Other accounts payable	-0.4	-4.1	-2.4	2,292.8
Total financing [1]	2.6	0.7	-0.9	7,687.4
Financial assets	3.6	2.9	2.6	4,575.8
Corporations total [a]	Annual changes in percentage points			Indicators in %
Acid-test ratio [2]	33.2	32.2	24.5	150.7
Solvency indicator [3]	4.5	5.3	3.7	114.5
Financial leverage [4]	-2.8	-0.7	4.3	124.0

a) CNB calculation
1) Total financial liabilities
2) Short-term fin.assets / short-term fin. liabilities - debt securities issued and loans
3) Total financial assets / liabilities excluding shares and other equity
4) Total financial assets / shares and other equity issued

Chart III.5.20

DEBT AND NET INTEREST PAYMENTS

Net interest payments of households are fluctuating around 2% of income while those of corporations stand at 4% of gross operating surplus
(percentages)

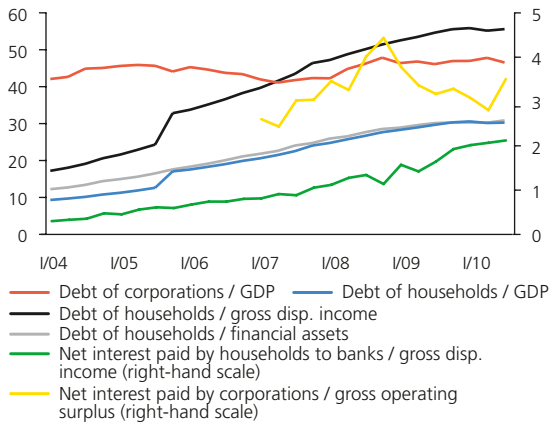


CHART III.5.21

FINANCING OF HOUSEHOLDS

The rate of growth of household debt decreased slightly further
(contributions in percentage points; annual percentage changes)

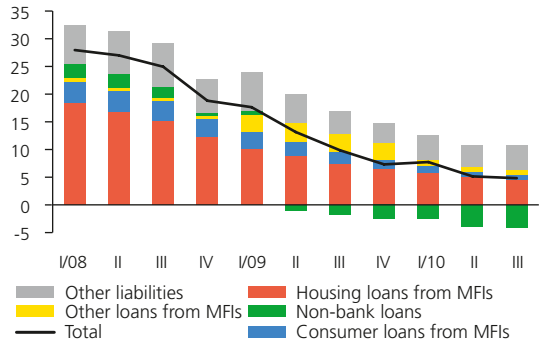


CHART III.5.22

TRANSFER AND SUPPLY PRICES OF APARTMENTS

The annual decline in prices of apartments continued into 2010 Q4
(annual percentage changes; source: CZSO, Institute of Regional Information)

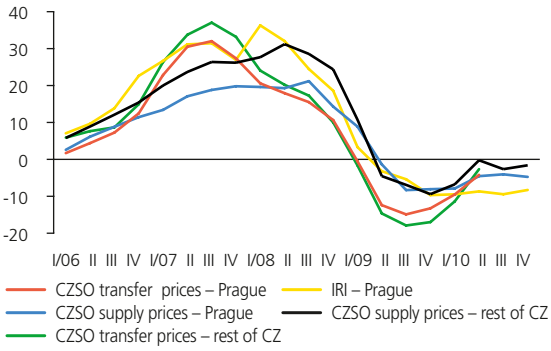
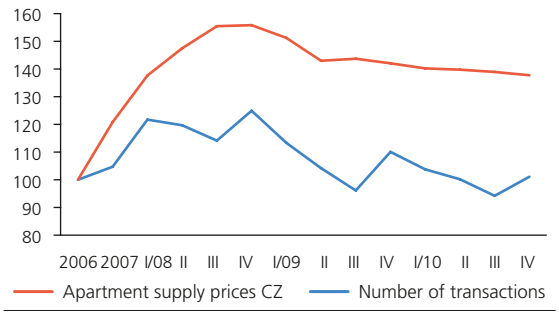


CHART III.5.23

NUMBERS OF TRANSACTIONS IN THE PROPERTY MARKET

The fall in prices in 2010 was accompanied by a falling number of transactions in the property market
(2006 average = 100; quarterly data on number of transactions for 2008–2010 are annualised; source: CZSO, COSMC)



The financial indicators of households are indicating that households' solvency (the ratio of total financial assets to total liabilities) fell slightly in Q3 to 264%. Households' financial assets thus still significantly exceed their financial liabilities. In 2010, the financial position of households was negatively affected by a persisting high unemployment rate and lower income growth.

III.5.7 The property market

Supply **prices of apartments** continued to decline in Prague in 2010 Q4 (by 2.2% quarter on quarter according to the CZSO), but rose modestly in the rest of the Czech Republic (by 0.2% quarter on quarter). In year-on-year terms, **supply prices of apartments** fell both in Prague and in the rest of the Czech Republic, albeit more moderately than in 2009 H2, when their annual decline peaked (see Chart III.5.22). Data on **transfer prices of apartments** in 2009 were revised upwards (by 0.9% in Prague and 1.5% in the rest of the Czech Republic). At the same time, their estimate for 2010 H1 was published, indicating that the annual decline in apartment transfer prices had slowed sharply and was now in line with the fall in supply prices.

The decline in property prices, linked with falling demand on the housing market, was accompanied by a decrease in the number of transactions on the property market. The number of proceedings on entry of ownership rights in the cadastre (published by the Czech Office for Surveying, Mapping and Cadastre, COSMC) fell by 8.2% year on year in Q4. The lower demand on the property market was met by lower supply. The **number of housing completions** fell by 3.2% and the **number of housing starts** by 26.1% year on year in January–November. The decline in construction pertained mainly to apartment blocks (a drop in the number of apartment completions of 13.7% and in the number of apartment starts of 50.2%). On the other hand, supply partly recovered towards the end of the year, with apartment completions rising by 11.5% and 24.4% respectively in October and November.

The property price sustainability indicators decreased again owing to the decline in prices (see Chart III.5.24). The **price-to-income ratio** fell by 0.9% between Q3 and Q4 (and is now down by 22.9% from the peak recorded in 2009 Q1). The **price-to-rent ratio** fell by 4.1% (and is now 10.1% down from its 2008 Q3 peak). The property price sustainability indicators, together with the results of a regression analysis using the macroeconomic and demographic determinants of property prices, indicate that the apartment market has probably reached its trough. Therefore, we still believe that the most probable scenario is that apartment prices will be flat for the rest of 2010 and start rising gradually in 2011 H2. In addition to the gradually improving macroeconomic situation in the Czech Republic, a moderate recovery of the apartment market could be aided by the mooted increase in the reduced VAT rate, which could be preceded by a short-term rise in sales of apartments under construction in property development projects.

The beginnings of a property market recovery are also suggested by renewed growth in new **mortgage loans** (Fincentrum Hypoindex data; see Chart III.5.25). The annual growth of these loans according to Fincentrum Hypoindex data is much higher than that of total new loans for house purchase according to CNB statistics[50] and is approaching the values observed in 2007.

However, in contrast to this period, when one-third of the mortgage loan growth was due to growth in the average size of loans and two-thirds was due to growth in the number of loans, the increase in the average size of loans is now negligible. This is linked also with the fall in apartment prices discussed above.

In 2010 Q4, the situation in the **commercial property sector** was similar to that observed earlier in 2010, i.e. a gradual recovery of the market following the sizeable declines recorded in 2009. The recovery in demand is being driven mainly by the industrial property segment, in which gross take-up increased by 78% year on year in 2010 Q3 (King Sturge data). The vacancy rate in the industrial property sector is also falling. At the end of Q3 it was down by a considerable 5.7 percentage points from the end of 2009, at 11.9%. New construction of warehouse and logistics space also resumed after a hiatus of more than a year (74,000 sq. m; CB Richard Ellis data).

Gross take-up in the **office property sector** is still falling (down by around 5% year on year in Q3). Net take-up,[51] which had been negative in H1 (-23,800 sq. m), turned positive in Q3 (+10,528 sq. m). This change was due mainly to a sizeable drop in the share of renegotiations. The supply of new office buildings remains very low (the lowest since 1995). This is reflected in unchanged total office floor area (see Chart III.5.26). The office property vacancy rate fell slightly to 13.2% in H2, but remains relatively high by international comparison.

CHART III.5.24

APARTMENT PRICE SUSTAINABILITY INDICATORS

The apartment price sustainability index decreased
(2000–2007 average = 100)

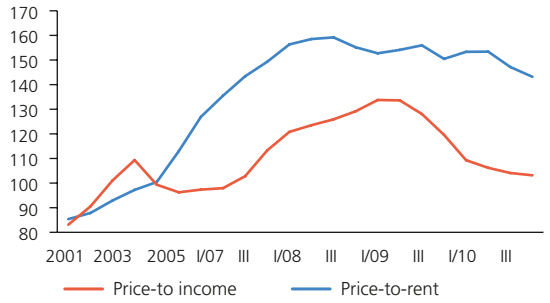


CHART III.5.25

GROWTH OF NEW LOANS FOR HOUSE PURCHASE

Mortgage loans saw renewed growth
(annual percentage changes; source: CNB – loans for house purchase, hypoindex.cz – mortgage loans)

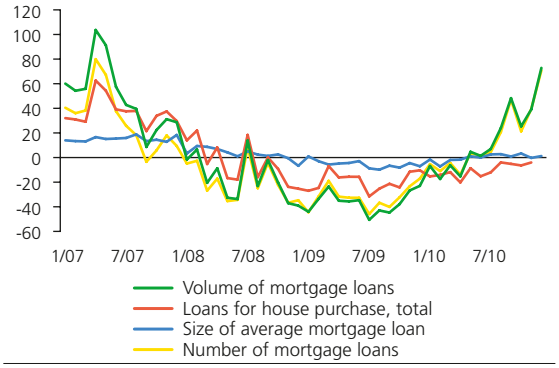
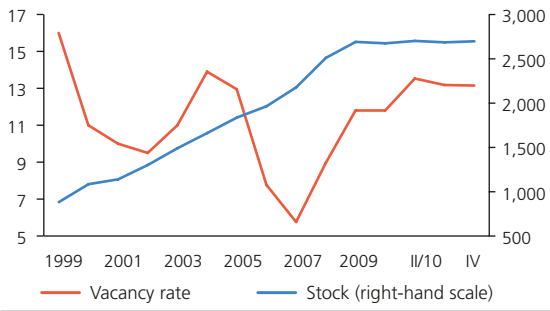


CHART III.5.26

SITUATION IN THE OFFICE MARKET

The vacancy rate in the office market remains high despite stagnant new supply
(vacancy rate in per cent; stock in thous. m²; source: King Sturge, Prague Research Forum)



50 Unlike the Fincentrum Hypoindex data, which cover only new mortgage loans to natural persons, the CNB statistics on new loans for house purchase also cover NPISHs and additionally include building society loans. The higher growth of mortgage loans according to Hypoindex may therefore reflect substitution between mortgage loans and building society loans.

51 Unlike in the case of gross take-up, renegotiations of existing contracts are subtracted from net take-up.

III.6 THE BALANCE OF PAYMENTS

In the first three quarters of 2010, the balance of payments was characterised by a significant year-on-year widening of the current account deficit (to 3.3% of GDP from 1.1% in the same period of 2009)[52] associated with a year-on-year decrease in the goods and services surplus and a rise in the income deficit. The current account deficit widened mainly because of rapid growth in prices of commodities (especially fuel) on world markets and a rise in dividends paid on foreign direct investment to non-residents. A decrease in the current transfers deficit (higher drawdown of EU funds) fostered slower growth in the current account deficit. On the financial account, there was a significant year-on-year increase in the direct investment balance (from a slight deficit in 2009 to a surplus of almost CZK 100 billion) and a rise in the portfolio investment surplus (due to a year-on-year rise in purchases of domestic bonds by non-residents).

III.6.1 The current account

The **current account** recorded a deficit of CZK 90.8 billion in the first three quarters of 2010.[53] The deficit widened by CZK 61.3 billion year on year, owing to a shift of the services balance from surplus to deficit (see Chart III.6.1) and an increase in the income deficit.

The **trade surplus** rose slightly in year-on-year terms to CZK 152.2 billion in the period under review. The trade balance was strongly affected by price developments associated mainly with strongly negative terms of trade for mineral fuels. This effect alone had a negative impact on the trade balance of around CZK 50 billion. Relatively rapid economic growth in the Czech Republic's main trading partner economies was reflected in annual nominal growth in goods exports, which rose to 16.2% year on year despite a slight appreciation of the koruna. However, the growth rate of imports (16.8%) slightly exceeded that of exports owing chiefly to growth in most commodity prices on world markets (and partly also to imports for photovoltaic power stations). The price growth was reflected in year-on-year deteriorations mainly for mineral fuels (SITC 3) and chemicals (SITC 5). Conversely, the biggest annual improvement was visible in miscellaneous manufactured articles (SITC 8; see Chart III.6.2).

CHART III.6.1

CURRENT ACCOUNT

The annual current account deficit increased significantly in 2010 Q3, owing mainly to the evolution of the income balance
(annual moving total in CZK billions)

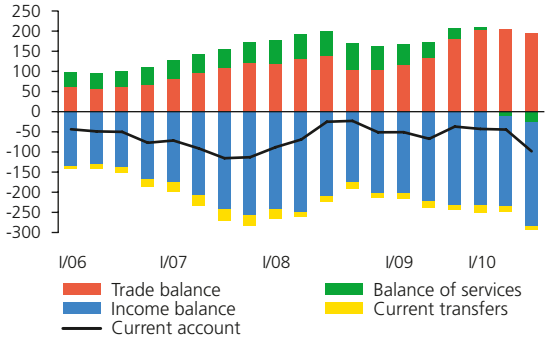
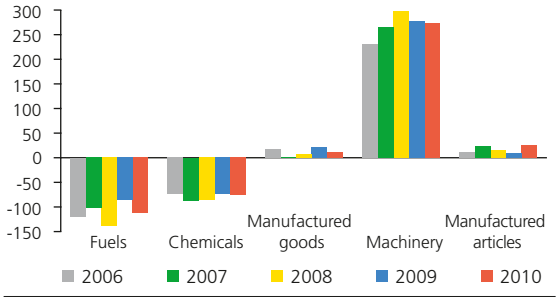


CHART III.6.2

TRADE BALANCE

The trade surplus for January–October 2010 was affected most strongly by growth in the mineral fuels deficit
(accumulation since start of year in CZK billions)



52 As indicated earlier, however, the current account data for 2009 and 2010 may be revised significantly to capture the transactions of multinational companies registered in the Czech Republic for VAT payment purposes only.
53 All figures in section III.6 relate to this period unless stated otherwise.

The **balance of services** showed a deficit of CZK 25.4 billion, representing a year-on-year deterioration of CZK 52.2 billion (see Chart III.6.3). The overall deficit was due to rapid growth in the other services deficit, linked with a rise in other business services debits.[54] The surplus on transportation recorded a smaller decrease, owing to faster growth in debits than in credits. By contrast, the surplus on travel increased slightly as a result of a modest rise in credits and a decline in debits.

The **income balance** showed a deficit of CZK 215.8 billion, a year-on-year increase of almost CZK 30 billion. Roughly three-quarters of this deterioration was caused by a direct investment income balance of CZK -202.4 billion (see Chart III.6.4), due solely to a rise in dividends paid to non-residents. A worsening of the portfolio investment income balance – linked chiefly with larger holdings of domestic securities by non-residents and to a lesser extent by smaller holdings of foreign securities by residents – also widened the income balance. A drop in the deficit on compensation of employees due to lower wage expenditure on foreign workers in the Czech Republic helped to moderate the annual increase in the income deficit.

Current transfers recorded a deficit of CZK 1.8 billion. This represented a year-on-year improvement of CZK 5.7 billion, due exclusively to a year-on-year improvement in net financial flows between the Czech Republic and the EU budget. By contrast, the private transfers deficit widened significantly again.

III.6.2 The capital account

The **capital account** showed a surplus of CZK 26.3 billion, which was only slightly (CZK 0.9 billion) higher than in the same period of 2009. Its biggest component was net government revenues from EU funds, which, however, decreased slightly, unlike the part of revenues recorded on the current account. The year-on-year rise in the overall balance was due to higher sales of emission allowances in the private sector.

CHART III.6.3

BALANCE OF SERVICES

The services deficit in 2010 Q3 was due to other services, in particular branding
(CZK billions)

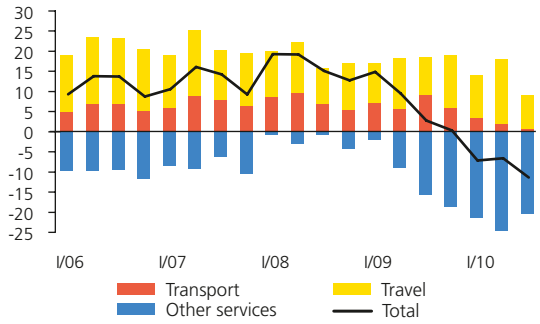
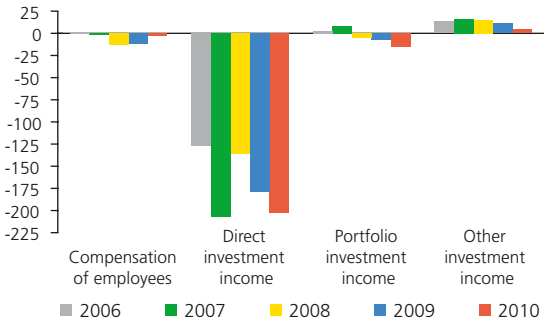


CHART III.6.4

INCOME BALANCE

The income deficit was most strongly affected in 2010 Q1–3 by an increase in the direct investment income deficit
(accumulation since start of year in CZK billions)



54 The strong decline in the services balance is offsetting the growth in the trade surplus relating to operations affected by economic globalisation, which are fostering stronger growth in its surplus and volume without reflecting domestic economic output. The adjustment of the goods balance for value added reported in the trade balance that pertains to non-residents is captured by the branding item under expenditure on other services. Its size in the first three quarters of 2010 was estimated at roughly CZK 65 billion. Adjusted for this item, therefore, the services balance would still be in surplus. The CNB and CZSO are currently preparing a revision of the goods and services balance time series (above all this will involve contrary adjustments in the balances of goods and services and elimination of growth in the services deficit). The revised data for 2009–2010 will be published in March 2011 together with the data for 2010 Q4.

CHART III.6.5

FINANCIAL ACCOUNT

The annual financial account surplus increased significantly in 2010 Q3, owing to the evolution of direct and portfolio investment
(annual moving total in CZK billions)

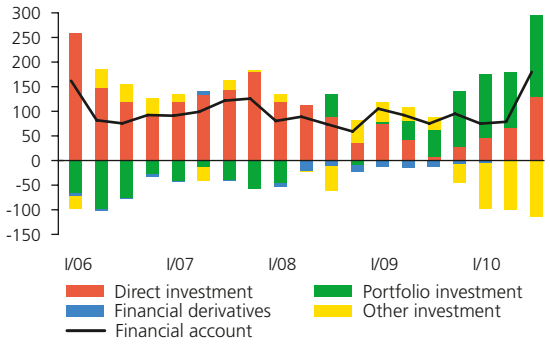


CHART III.6.6

DIRECT INVESTMENT

The direct investment surplus in 2010 Q3 was affected most strongly by a net inflow of equity capital and reinvested earnings
(CZK billions)

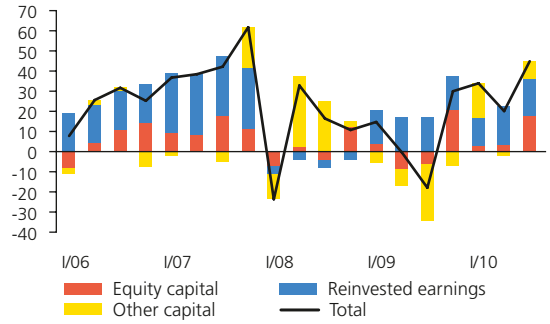
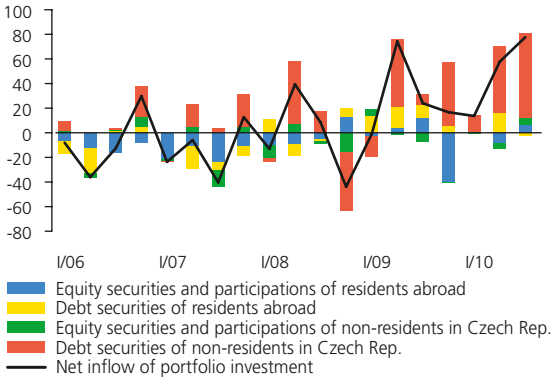


CHART III.6.7

PORTFOLIO INVESTMENT

Portfolio investment recorded a sizeable net inflow in 2010 Q3 owing mainly to purchases of bonds by non-residents
(CZK billions)



III.6.3 The financial account

The **financial account** ended in a surplus of CZK 129.5 billion (see Chart III.6.5). Its biggest component was a net inflow of portfolio investment, concentrated almost exclusively in bonds, followed by a net inflow of direct investment. The financial account surplus was moderated by an outflow of capital in the form of other investment of the banking sector and other sectors. The financial account surplus more than doubled in year-on-year terms, mainly because of a shift of direct investment from a modest deficit to a surplus of almost CZK 100 billion.

The net inflow of **direct investment** reached CZK 98.9 billion (see Chart III.6.6), a year-on-year increase of CZK 102.5 billion due mostly to a rise in the inflow of foreign capital into the Czech Republic and to a lesser extent to a decline in the outflow. The increased inflow was primarily a result of a significant change in the flows of other capital of non-residents into the Czech Republic (loans provided and repaid), with quite a strong outflow (loan repayments to foreign parent companies) being replaced by a modest inflow. The direct investment inflow into the Czech Republic totalled CZK 117.4 billion. Reinvested earnings accounted for more than one-half of the inflow.

The sectoral breakdown of the inflow differs considerably from the period 1998–2008; the investment is going mainly into real estate, the financial sector and the electricity, gas and water supply sector. For the second consecutive year, no major investments (or reinvestments) were made in manufacturing. Direct investment by domestic corporations abroad (CZK 18.5 billion) was also affected most of all by reinvested earnings. The outflow of capital abroad went mainly into the electricity, gas and water supply sector. The year-on-year decrease in the outflow of capital was supported by a change in the investment strategy of power company ČEZ (a preference for domestic investments) and a delay to its large investment in Romania.

The net inflow of **portfolio investment** amounted to CZK 149 billion (see Chart III.6.7), representing a year-on-year rise of roughly one-half. This was due mainly to investment by non-residents in domestic debt securities (mostly government bonds and bonds of government-controlled companies and institutions), which amounted to CZK 136.9 billion, up by around CZK 90 billion year on year. On the asset side, holdings of foreign securities (bonds) by residents continued to fall, although to a much smaller extent than in the same period of 2009.

The net outflow of capital in the form of **financial derivatives** was CZK 1.9 billion. It moderated by more than CZK 6 billion year on year.

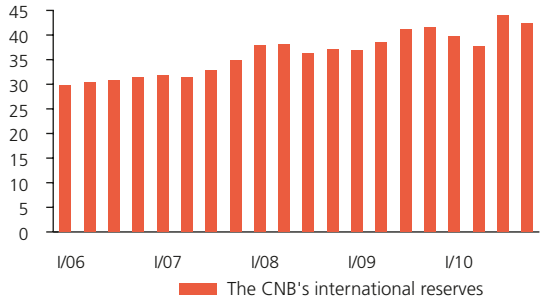
Other investment recorded a net capital outflow of CZK 116.5 billion, which almost tripled by year-on-year comparison. The outflow of capital was concentrated in the business and banking sectors. Government transactions were negligible and led to a very small reduction in the total outflow. The significant annual increase in the outflow was due above all to growth in long-term external assets of domestic banks and short-term (trade) credits and deposits of other sectors abroad.

The CNB's **international reserves** totalled CZK 793.9 billion at the end of 2010, up by CZK 29.6 billion year on year. In dollar terms, the reserves increased by USD 0.7 billion to USD 42.3 billion in the same period (see Chart III.6.8). The CNB's international reserves covered 47.4% of all external debt liabilities of domestic entities at the end of Q3.

CHART III.6.8

CNB INTERNATIONAL RESERVES

The CNB's international reserves decreased in dollar terms in 2010 Q4 compared to the previous quarter
(USD billions)



III.7 THE EXTERNAL ENVIRONMENT

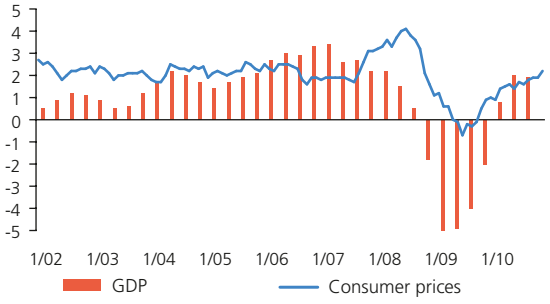
The quarterly rate of economic growth in the euro area fell in 2010 Q3 because German GDP as expected did not maintain the unusually strong momentum observed in Q2. A further gradual slowdown in economic growth is expected in most euro area countries due to fiscal austerity measures. By contrast, the economic recovery in the USA picked up pace. This was reflected in a better outlook for the next two years. Consumer and producer price inflation rose in both the euro area and the USA towards the end of 2010. This was due mainly to rapid growth in world prices of commodities (especially energy-producing ones) in 2010 Q4. The euro depreciated in this period owing to the fiscal problems in some euro area countries, aggravating the impact of the high commodity prices on the euro area.

III.7.1 The euro area

CHART III.7.1

GDP AND INFLATION IN THE EURO AREA

Annual GDP growth in the euro area weakened in 2010 Q3; inflation increased further during 2010 Q4
(annual percentage changes; source: Eurostat)



The quarterly rate of **GDP growth** in the euro area fell sharply to 0.3% in 2010 Q3 from 1% in the previous quarter. Household consumption and investment growth slowed, while government consumption growth accelerated and net exports increased. The annual rate of economic growth dropped by 0.1 percentage point to 1.9% in Q3 (see Chart III.7.1). Industrial production growth edged up to 7.4% in November; so far the average in Q4 remains roughly the same as in the previous three months. Retail turnover growth weakened slightly in November and the unemployment rate increased by 0.1 percentage point in October and November compared to Q3, to 10.1%.

According to the **January Consensus Forecasts** (CF) estimates, quarterly and annual growth will be at the same level in Q4 as in Q3. CF increased its economic growth estimates by 0.1 percentage point compared to October to 1.7% for 2010 as a whole and to 1.5% for 2011. The forced fiscal restrictions in many euro area countries and the contraction or very low growth in some countries on its periphery (especially Greece, Ireland and Portugal) will be the main factors hindering stronger economic growth. Similar growth estimates for 2011 were also published by the ECB, the European Commission, the IMF and the OECD.

Annual inflation in the euro area (HICP) increased by 0.3 percentage point month on month to 2.2% in December 2010. Higher energy prices were the main cause of the increase. They also led to faster growth in producer prices, whose annual growth increased to 4.5% in November. By comparison with October, the January CF increased the inflation estimate for 2011 by 0.2 percentage point to 1.8%. The ECB's prediction is identical.

On 13 January 2011, the **ECB** Governing Council left its key interest rate at 1% (unchanged since May 2009). Given the increase in inflation above 2%, however, its comments were assessed as rather "hawkish" by the market. However, the Council also agreed that this increase

was due to higher energy prices and that it was a temporary factor that would abate during 2011 and therefore would not jeopardise price stability in the medium term. This conclusion was also supported by the monetary aggregates, which continued to show weak growth. The annual growth rate of M3 rose to 1.9% in November (from 0.9% in October) and the growth rate of loans to the private sector increased to 2% (from 1.5%). Inflation expectations also remained anchored in line with the definition of price stability.

Quarterly **economic growth in Germany** declined to 0.7% in 2010 Q3 from 2.3% in the previous quarter. Investment growth decreased and household consumption growth also slowed. By contrast, government consumption picked up pace. Export and import growth slowed considerably and the positive net exports rose only slightly. Annual economic growth remained at 3.9% in Q3 (see Chart III.7.2), the second highest level in the euro area behind Slovakia. The rate of economic growth can be expected to remain roughly the same in 2010 Q4 as in Q3. Average month-on-month industrial production growth in October and November was higher than in Q3 (1.1% versus 0.5%) and employment rose in November in both month-on-month and year-on-year terms (by 0.1% and 1.1% respectively), but the exceptionally cold weather in December probably slowed economic growth.

The Federal Statistical Office published its first economic growth estimate for 2010 as a whole. According to this estimate, GDP was up by 3.6%, household consumption by 0.5% and government consumption by 2.2% on 2009. Exports rose by 14.5% and imports by 13%, hence external demand was the most important factor underlying the strong economic growth. The general government deficit was 3.5% of GDP. The **January CF** expects economic growth in Germany to slow to 2.5% in 2011 (an increase of 0.5 percentage point compared to the October CF) and 1.8% in 2012. The same estimate was presented by the OECD, whereas the German government and the European Commission expect GDP growth in 2011 to be 0.5 percentage point lower. Consumer price inflation increased from 1.6% in November to 1.9% in December. The higher inflation was due chiefly to high prices of energy and other commodities. These were also the cause of higher industrial producer price inflation (4.4% in December).

The quarterly **growth rate of Slovak GDP** remained unchanged at 1% in 2010 Q3. All components of domestic demand saw higher growth, but this was offset by worse net exports. Annual economic growth weakened slightly, by 0.2 percentage point to 4.2% (see Chart III.7.3), but this growth rate remains the highest in the euro area. It is a result of strong growth in investment and government consumption. A slight slowdown in quarterly and annual growth can be expected in Q4. Industrial production growth eased somewhat in October compared to the average for Q3. Retail turnover shrank in year-on-year and quarter-on-quarter terms. However, industrial order growth remained at the Q3 level in October, and for the first time in many months construction output achieved positive quarterly and annual figures in October and November. At 14.5% in November, unemployment was flat for the third consecutive month.

CHART III.7.2

GDP AND INFLATION IN GERMANY

German annual GDP growth stayed at the high level of 3.9% in 2010 Q3; inflation rose in Q4
(annual percentage changes; source: Eurostat)

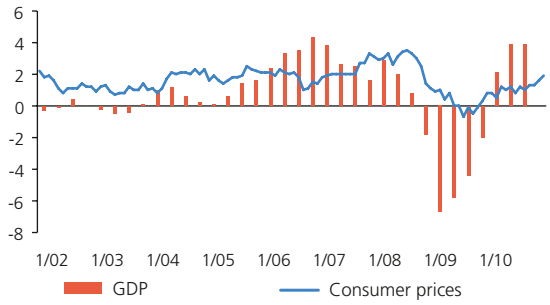
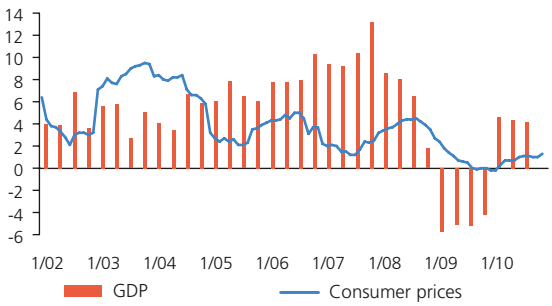


CHART III.7.3

GDP AND INFLATION IN SLOVAKIA

The Slovak economy was the fastest-growing economy in the euro area in 2010 Q3; the annual inflation rate increased in Q4
(annual percentage changes; source: Eurostat)



The **December CF** expects Slovakia's GDP to grow by 4% in 2010 as a whole and predicts a slight moderation to 3.4% in 2011 owing to slower growth of the German economy, with which Slovakia has strong economic links. Inflation rose by 0.2 percentage point year on year to 1.3% in December. In this case too, the main cause was accelerating prices of energy and other commodities.

III.7.2 The United States

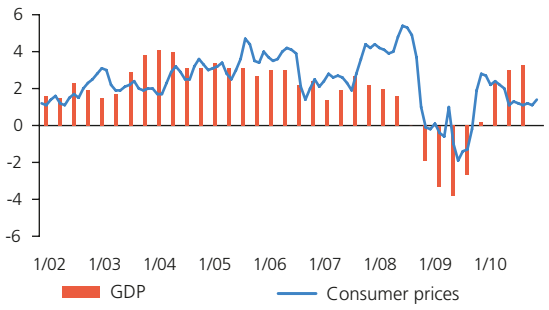
In 2010 Q3, the **quarterly GDP growth rate** in the USA increased by 0.2 percentage point to 0.6%. All components of domestic demand continued to rise. A decline in import growth relative to export growth and to the value of imports in the previous quarter led to a significant improvement in net exports by comparison with the previous quarter. The annual growth rate of GDP also increased, to 3.3% (see Chart III.7.4). Positive results can also be expected for Q4, as indicated by a pick-up in industrial production growth (the month-on-month growth rate rose from 0.2% to 0.8% in December) and a lower average monthly trade deficit. An increase in household consumption is expected as a result of a slight drop in the high unemployment rate (to 9.4% in December), the creation of more jobs than expected in December (297,000) and more favourable consumer sentiment. A pick-up in economic growth is also suggested by the December leading indicators, which are signalling increasing industrial production and consumer confidence.

Chart III.7.4

GDP AND INFLATION IN THE USA

Annual US GDP growth increased further in 2010 Q3; inflation rose slightly in 2010 Q4

(annual percentage changes; source: BEA, BLS)



Compared to October, the **January CF** increased its estimate of US economic growth for 2011 as a whole by 0.8 percentage point to 3.2%. It estimates the growth rate for 2012 at 3.3%. For 2011 it increased the estimates for both corporate investment and household consumption. However, the IMF's October forecast is less optimistic.

Inflation rose by 0.3 percentage point to 1.4% in December. The main source of the inflation was an increase in energy prices. Core inflation remained at 0.8%, the lowest figure since 1966. At its meeting on 14 December 2010, the FOMC left the Fed's key rate unchanged at 0%–0.25%. Given the high unemployment and the absence of inflation pressures, it hinted again that it would leave the rate at this level for an extended period. Attention was focused on returning to quantitative easing and approving the continuation of securities purchases until the end of 2011 Q2. The approved volume of purchases is USD 600 billion.

The January CF expects average US inflation to stand at 1.7% in 2011 and 1.8% in 2012.

III.7.3 The USD/EUR exchange rate

In 2010 Q4, the euro-dollar exchange rate initially appreciated slightly (see Chart III.7.5). This trend reversed in November and the euro weakened sharply. In December the USD/EUR rate fluctuated between 1.30 and 1.34. A similar trend was recorded for the euro-pound exchange rate. Overall, the euro weakened from USD 1.37 to around USD 1.34 (i.e. by roughly 2.2%) during Q4. The euro depreciated by 1.5% vis-à-vis the pound sterling. Its exchange rate against the Japanese yen recorded the biggest depreciation (around 5%), although its fluctuations against the yen were the least intensive in Q4.

The euro weakened from USD 1.34 to USD 1.29 in the **first ten days of January 2011**. This was due to investors' concerns that another troubled European country would ask for international financial assistance. However, the situation changed following the ECB's decision to purchase Portuguese bonds. The favourable sentiment vis-à-vis the euro was also bolstered by news of the strongest increase in German GDP in 20 years, a successful auction of new Portuguese bonds, and comments from China and Japan regarding the possibility of buying European bonds. In mid-January the euro exchange rate rebounded to the levels seen at the start of the year.

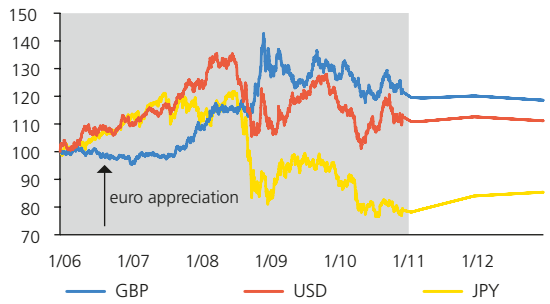
The **January CF** expects the exchange rate to remain slightly above USD 1.3 to the euro throughout the forecast period.

CHART III.7.5

EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

The euro-dollar exchange rate is currently volatile; the forecast shows no trend

(2 January 2006 = 100; source: Datastream; outlook from CF)



III.7.4 Prices of oil and other commodities

The **price of Brent crude oil** has been showing an upward trend since September (see Chart III.7.6). The fluctuations around the trend reflect mainly the evolution of the USD exchange rate, with a strengthening (weakening) dollar meaning a temporary drop (rise) in oil prices. The Brent crude oil price exceeded USD 90 a barrel in early December and fluctuated between USD 93 and USD 95 a barrel in the first third of January. The high prices were due to fundamentals as well as to increased interest among financial investors. The global economy seems to have bottomed out and investors and speculators therefore do not have to fear a sudden "collapse" of oil prices and are returning to the market. A price drop stemming from sudden appreciation of the dollar is not very likely either.

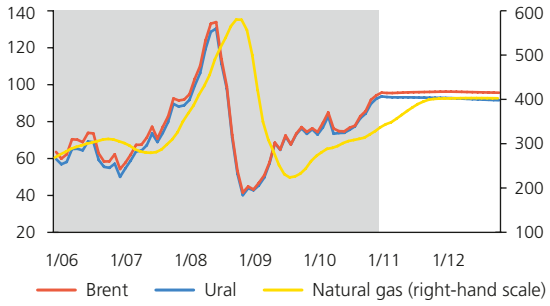
In its latest report, the International Energy Agency (IEA) revised the **expected oil consumption in 2011** upwards again. Consumption should rise by 1.4 million barrels a day (the OPEC estimate is more conservative at 1.2 million barrels a day). In 2010, oil consumption rose by 2.7 million barrels a day owing to robust economic growth in Asia, higher demand in OECD countries and cold weather in the northern hemisphere. That is also more than was expected until recently. By contrast, global oil supply edged down at the end of 2010, owing chiefly to a fall in supplies from non-OPEC countries (e.g. as a result of a temporary closure of a pipeline in Alaska or a fire in a factory processing Canadian oil sands).

CHART III.7.6

OIL AND NATURAL GAS PRICES IN USD

According to market outlooks, the price of Brent crude oil should be flat at the January levels over the entire forecast horizon

(oil in USD/barrel; gas in USD/1000 m³ – right-hand scale; source: IMF, Bloomberg)



Conversely, supplies from OPEC countries continued to rise in December, although the cartel left its extraction quotas, which have been valid for more than two years, unchanged at its December meeting. As a result of higher extraction, OPEC's effective reserve capacity declined below 5 million barrels a day for the first time in two years. However, that is still well above values observed in the period when the oil price was at an all-time high and reserve capacity was below 1 million barrels a day. Inventories of oil and oil products in OECD countries fell slightly in November but remained high at almost 59 days of consumption. According to the IEA, however, preliminary data show a sizeable fall in December.

Market outlooks based on Brent oil futures were about 9% higher than in the previous forecast, but indicate broad stability of prices between USD 95 and USD 100 a barrel until the end of 2012. Similar conclusions result from the January CF survey on WTI oil prices, taking into account that oil prices in the USA are now considerably lower than Brent oil prices due to abundant US inventories.[55] In koruna terms, oil prices could decline slightly thanks to the strengthening koruna (see Chart III.7.7).

Prices of **non-energy commodities** have been recording month-on-month growth since July 2010 (see Chart III.7.8). Prices of **energy commodities** started to rise in October 2010 and accelerated substantially at the close of the year. In December, the month-on-month increase in energy commodities was 8.6%, while prices of food commodities rose by 6.5% and prices of industrial metals by 5.0%. As regards food commodities, wheat prices showed the highest growth in December, and somewhat lower growth was observed for coffee and sugar prices. Within industrial metals, copper – and to a smaller extent nickel – showed the highest growth. Prices of other metals rose only slightly. Turning to the outlook, prices of industrial metals and energy commodities should remain flat at their January levels. Food prices are expected to start coming down in mid-2011 with the new harvest.

The currently high commodity prices are partly due to easy monetary policy in advanced countries. Investors are taking advantage of low interest rates and investing in the commodity markets. This speculative demand is reinforcing the effects of fundamentals. Higher real demand is stemming from the (expected) global recovery, with the outlook for this year improving significantly in the USA in particular. By contrast, the floods in Australia have seriously disrupted the global supply of cokeable coal, which is a very important commodity for steel production.

CHART III.7.7

OIL AND NATURAL GAS PRICES IN CZK

As a result of the appreciating koruna, the koruna prices of oil should gradually fall

(oil in CZK/litre; gas in CZK/m^3; source: IMF, Bloomberg)

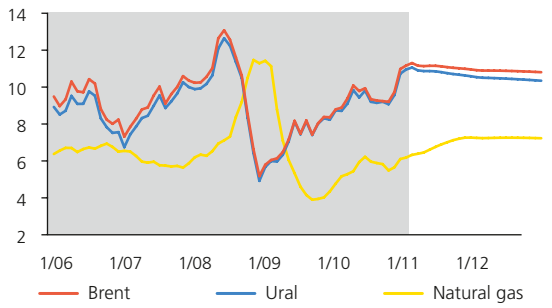
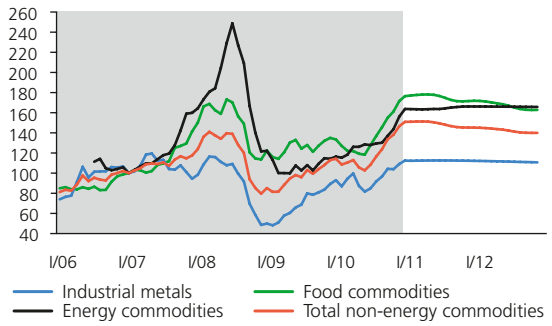


CHART III.7.8

COMMODITY PRICES

Commodity prices were rising quickly at the end of last year, but further growth is not expected

(January 2007 = 100; source: Bloomberg)



55 By contrast, Goldman Sachs in early December increased its estimate of the average oil price to USD 100 a barrel in 2011 and USD 110 a barrel in 2012. JPMorgan analysts expect the price to reach "only" USD 93 a barrel this year but to increase to USD 120 a barrel in 2012.

CHARTS IN THE TEXT

ABBREVIATIONS

BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
ČEZ	České energetické závody
CF	Consensus Forecasts
CNB	Czech National Bank
COSMC	Czech Office for Surveying, Mapping and Cadastre
CPI	consumer price index
CZK	Czech koruna
CZSO	Czech Statistical Office
ECB	European Central Bank
EDP	Excessive Deficit Procedure
EIB	European Investment Bank
ERM II	Exchange Rate Mechanism
ESCB	European System of Central Banks EU European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
Fed	US central bank
FMIE	Financial Market Inflation Expectations
FOMC	Federal Open Market Committee
FRA	forward rate agreement
GBP	pound sterling
GDP	gross domestic product
GVA	gross value added
HICP	Harmonised Index of Consumer Prices
HP filter	Hodrick-Prescott filter
IEA	International Energy Agency
ILO	International Labour Organization
IMF	International Monetary Fund
IRS	interest rate swap
JPY	Japanese yen
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
M1, M2	monetary aggregates
MLSA	Ministry of Labour and Social Affairs
NiGEM	National Institute Global Econometric Model
NPISHs	non-profit institutions serving households
OECD	Organisation for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
PPI	producer price index
PRIBOR	Prague Interbank Offered Rate
(1W, 1M, 1Y)	(one-week, one-month, one-year)
repo rate	repurchase agreement rate
SFA	stock-flow adjustment
SITC	Standard International Trade Classification
USD	US dollar
VAT	value added tax
WTI	West Texas Intermediate

Price indices used for the evaluation of inflation	(Box)	April 1998
Analysis of the money supply trend	(Box)	July 1999
Revisions to the statistical data on GDP	(Box)	July 1999
Measuring the inflation expectations of the financial market	(Annex)	October 1999
Oil prices and their impact on inflation	(Box)	July 2000
The effect of oil price changes on the balance of trade	(Box)	October 2000
The methodological framework for evaluating wage developments relative to inflation	(Box)	January 2001
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This glossary explains some terms frequently used in the Inflation Report. A more detailed glossary can be found on the CNB website (www.cnb.cz/en/general/glossary/index.html).

Adjusted inflation excluding fuels: The increase in prices of non-food items of the consumer basket excluding items with administered prices, indirect tax changes and fuels.

Administered prices: A sub-category of the consumer basket consisting of items with price ceilings (set at either central or local level), prices regulated on a cost-plus basis (items whose prices may only reflect economically justified costs and a reasonable profit) and administratively fixed fees. The selection of these items is based on the Price Bulletin of the Czech Ministry of Finance.

Balance of payments: Records economic transactions with other countries (i.e. between residents and non-residents) over a particular period. The basic structure of the balance of payments includes the current account, the capital and financial accounts and the change in CNB international reserves.

Consensus Forecasts: A regular monthly publication issued by Consensus Economics bringing together the forecasts of hundreds of prominent economists and analytical teams regarding future world developments. The CNB uses these predictions in its macroeconomic forecast when forming assumptions regarding the future development of the external environment.

Covered bond: A bond collateralised (backed) by long-term assets, usually mortgage loans or public sector loans. The issuers are mostly banks and the issuance of covered bonds is subject to strict legislative rules. Compared to standard bonds, this type of bond has lower credit risk thanks to higher coverage (known as dual recourse), which gives the covered bond holder a preferential claim on the issuer's receivables underlying the mortgage loans or public sector loans and likewise a claim on the issuer. If the issuer defaults, the holder therefore has a preferential right to the assets backing the covered bond.

Current account: Records exports and imports of goods and services, income from capital, investment and labour and unrequited transfers.

Cyclical component of the general government balance: Expresses the effect of the business cycle on the general government fiscal balance.

Discount rate: A monetary policy rate which as a rule represents the floor for short-term money market interest rates. The CNB applies it to the excess liquidity which banks deposit with the CNB overnight under the deposit facility.

Disinflation: A decline in inflation.

Effective euro area indicators: Proxy for the effect of economic activity (effective GDP) and inflation (effective producer prices and consumer prices) in the euro area on the Czech economy. The weights used in the calculation are the shares of the individual euro area economies in the foreign trade turnover of the Czech Republic.

Effective exchange rate: Shows the appreciation (index > 100) or depreciation (index < 100) of the national currency against a basket of selected currencies for a certain time period relative to a base period. The weights applied in the basket are the shares of major trading partners in foreign trade turnover.

Escape clause: Excuses the central bank from its obligation to hit the inflation target. In the flexible inflation targeting regime, it is applied in the event of large shock changes in exogenous factors (particularly supply-side shocks, e.g. indirect tax changes) that are completely or largely outside the purview of central bank monetary policy.

Euro area: The territory of all Member States of the European Union that have adopted the euro as a single currency pursuant to the Treaty Establishing the European Community.

Financial account: Records transactions connected with the creation, liquidation and change in ownership of the financial assets and liabilities of the government, the banking and corporate sectors and other entities vis-à-vis the rest of the world. It consist of direct investment, portfolio investment, other investment and financial derivatives transactions.

Fiscal position: The annual change in the general government structural balance (in percentage points). A positive figure indicates fiscal restriction and a negative figure indicates fiscal expansion.

Food prices: In CNB documents, the term food prices refers to the consolidated category of prices of food and non-alcoholic beverages and prices of alcoholic beverages and tobacco.

General government balance: Revenues minus expenditures of the general government sector. A negative government balance is called a general government deficit and a positive government balance is called a general government surplus.

General government primary balance: The general government balance net of interest payments (i.e. debt service).

General government structural balance: The cyclically adjusted general government balance adjusted for extraordinary one-off operations. It captures the structural configuration of fiscal policy.

Gross Domestic Product (GDP): The key indicator of economic development. It represents the sum of the value added by all economic sectors. In terms of use it consists of expenditure on final consumption (consumption of households, the government and non-profit institutions), gross capital formation (fixed investment and changes in inventories) and foreign trade (net exports of goods and services).

Inflation: Commonly, inflation is considered to be recurring growth of most prices in the economy. It means a decrease in the real value (i.e. purchasing power) of a given currency relative to the goods and services which consumers buy – if there is inflation in the economy, consumers need ever more currency units of the given country to buy the same basket of goods and services. In practice, inflation is measured by the increment of the consumer price index.

Inflation pressures: Proxied in the CNB's modelling system by the real marginal cost gap in the consumer goods sector. Total inflation pressures are divided into domestic inflation pressures (in the intermediate goods sector) and imported inflation pressures (in the import price sector).

Inflation rate: The increase in the average (basic) consumer price index for the last 12 months relative to the average for the previous 12 months.

Inflation target: The level of consumer price inflation that the CNB endeavours to achieve, set publicly and well in advance.

Lombard rate: A monetary policy interest rate which provides a ceiling for short-term interest rates on the money market. The CNB applies it to the liquidity which it provides to banks overnight under the lending facility.

Monetary aggregates: Represent the amount of money in the economy covered in the monetary survey. According to the national definition, they are calculated from the monetary liabilities of resident monetary financial institutions to other resident sectors in the Czech Republic (households, non-financial corporations and financial institutions excluding the general government). Monetary aggregates differ according to the degree of liquidity of the individual components. The narrow monetary aggregate M1 comprises currency in circulation and overnight deposits. The broad monetary aggregate M2 comprises M1 plus deposits with agreed maturity, deposits redeemable at notice and repurchase agreements.

Monetary conditions: Represent the combined effect of interest rates (the interest rate component of the monetary conditions) and the exchange rate (the exchange rate component) on the economy. These are the key variables through which monetary policy can affect economic activity and, through it, inflation. Interest rates and the exchange rate do not necessarily affect the economy in the same direction.

Monetary policy horizon: The time horizon which monetary policy-makers focus on when making decisions and which takes into account the monetary policy transmission lag. This horizon is about 12–18 months ahead.

Monetary policy interest rates: Short-term interest rates associated with monetary policy-making. They comprise the two-week repo rate, the discount rate and the Lombard rate.

Monetary-policy relevant inflation: Inflation to which monetary policy reacts. It is defined as headline inflation adjusted for the first-round effects of changes to indirect taxes.

Money market: The part of the financial markets which is used to obtain short-term loans and where debt instruments maturing in less than one year are traded. T-bills are typical securities traded on this market. Within this market the CNB carries out its repo operations.

Net inflation: Consumer price inflation net of administered prices and adjusted for the first-round effects of changes to indirect taxes. Net inflation consists of food price inflation, fuel price inflation and adjusted inflation excluding fuels. Until the end of 2001, the CNB's inflation targets were set in terms of net inflation. Since 2002, the CNB has targeted headline inflation, using net inflation for analytical purposes only.

Nominal costs in the consumption sector: These comprise output prices in the intermediate goods sector and import sector, as final consumption goods are produced using inputs from these sectors. They also include "export-specific technology", which approximates the productivity differential between the tradables sector and the non-tradables sector and its price effect, known as an analogy to the Balassa-Samuelson effect.

Nominal costs in the intermediate goods sector: Co-determined by prices of production factors, i.e. labour costs and the price of capital. In addition to these components, they are determined by "labour-augmenting technology". This technology can be understood as a concept similar to total factor productivity, e.g. in the Cobb-Douglas production function.

Nominal unit labour costs: The labour costs needed to produce a unit of output. Nominal unit labour costs are calculated as the ratio of the nominal volume of wages and salaries to GDP at constant prices.

Goods and service balance: The sum of the trade balance and the services balance.

Price-to-income ratio: The ratio of the price of an apartment (68 m^2) to the sum of the annual wage in a given region over the last four quarters. Higher values of this indicator usually mean that apartments are overpriced.

Price-to-rent ratio: Indicator of sustainability of apartment prices, calculated as the ratio of the price of the apartment to the annual rent. The price-to-rent ratio is the inverse of the rent return. Higher values of this indicator usually mean that apartments are overpriced.

Producers' margins: The inverse of producers' real marginal costs in the relevant sector. Growth in producers' nominal costs without corresponding growth in the price of production causes a decline in the profit margin, i.e. an increase in real marginal costs. If prices in the sector were perfectly flexible, the price at any given moment would comprise a constant margin over marginal nominal costs. In the consumer sector, a gap in profit mark-ups represents a deviation from the long-term margin level.

Property transfer prices: 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, but are published with a time delay. See also *Property supply prices*.

Property supply prices: Property sale supply prices in estate agencies. Supply prices should be higher than transfer prices. Property supply prices in the Czech Republic are published, for example, by the CZSO and the Institute for Regional Information (IRI). See also *Property transfer prices*.

Repo rate: The CNB's key monetary policy rate, paid on commercial banks' excess liquidity as withdrawn by the CNB in two-week repo tenders.

Unemployment rate: The ratio of the number of unemployed persons to the total labour force. We distinguish between the general unemployment rate, as determined by the CZSO according to International Labour Organisation methodology, and the registered unemployment rate, as determined by the Ministry of Labour and Social Affairs.

KEY MACROECONOMIC INDICATORS

		years										
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p., seas. adjusted	2,286.0	2,368.4	2,470.8	2,628.5	2,812.2	2,984.7	3,053.3	2,930.6	**3,001.3**	**3,048.5**	**3,139.8**
GDP	%, y-o-y, real terms, seas. adjusted	1.8	3.6	4.3	6.4	7.0	6.1	2.3	-4.0	**2.4**	**1.6**	**3.0**
Household consumption	%, y-o-y, real terms, seas. adjusted	2.2	5.9	2.8	2.6	5.2	4.9	3.4	-0.2	**0.8**	**0.6**	**1.5**
Government consumption	%, y-o-y, real terms, seas. adjusted	6.7	7.1	-3.5	2.9	1.2	0.5	1.1	2.6	**1.1**	**-0.6**	**0.5**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	4.5	-1.4	8.4	-0.6	10.2	9.4	-3.2	-15.5	**8.6**	**2.1**	**3.2**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	2.0	7.2	20.3	11.8	16.2	15.0	5.7	-10.5	**14.3**	**9.1**	**9.4**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	4.9	8.0	17.5	5.2	14.7	14.2	4.3	-10.4	**15.8**	**9.7**	**8.2**
Net exports	CZK bn, constant p., seas. adjusted	-146.4	-170.7	-152.5	-26.1	3.6	24.5	65.8	55.1	**20.1**	**2.8**	**47.2**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	4.1	1.6	10.4	3.9	8.3	10.6	-1.8	-13.6	-	-	-
Construction output	%, y-o-y, real terms	3.0	9.3	8.8	5.2	6.0	7.1	0.0	-0.9	-	-	-
Receipts in retail sales	%, y-o-y, real terms	1.7	7.3	3.9	8.1	10.9	9.9	2.7	-4.7	-	-	-
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	1.8	0.1	2.8	1.9	2.5	2.8	6.3	1.0	1.5	-	-
Consumer Price Index	%, y-o-y, average	1.8	0.1	2.8	1.9	2.5	2.8	6.4	1.1	1.5	**2.0**	**2.1**
Administered prices (17.15%)*	%, y-o-y, average	5.7	0.6	3.5	5.7	9.3	4.8	15.6	8.4	2.7	**4.1**	**3.8**
Net inflation (82.85%)*	%, y-o-y, average	0.8	0.0	1.8	0.7	0.4	1.7	2.4	-0.9	0.0	**1.5**	**1.7**
Food prices (including alcoholic beverages and tobacco) (25.63%)*	%, y-o-y, average	-0.9	-1.2	2.8	0.0	-0.2	3.8	3.0	-0.9	0.9	**3.8**	**1.5**
Adjusted inflation excluding fuels (53.52%)*	%, y-o-y, average	2.4	0.6	1.2	0.7	0.6	0.7	2.0	0.0	-1.2	**-0.1**	**1.7**
Fuel prices (3.70%)*	%, y-o-y, average	-9.3	1.5	4.5	7.8	3.7	-0.3	4.3	-11.1	11.8	**7.9**	**2.6**
Monetary-policy inflation (excluding tax changes)	%, y-o-y, average	1.8	0.1	2.0	1.8	2.3	2.2	4.4	0.9	0.4	**2.0**	**2.0**
GDP deflator	%, y-o-y, seas. adjusted	2.8	0.9	4.5	-0.3	1.1	3.4	1.8	2.5	**-0.6**	**1.8**	**1.7**
Partial price indicators												
Producer prices	%, y-o-y, average	-0.5	-0.3	5.6	3.1	1.4	4.1	4.5	-3.1	1.2	**4.6**	**2.3**
Agricultural prices	%, y-o-y, average	-7.5	-4.5	9.6	-9.8	1.3	16.4	10.8	-24.3	5.6	**15.1**	**0.4**
Construction work prices	%, y-o-y, average	2.7	2.2	3.7	3.0	2.9	3.9	4.5	1.2	-0.2	-	-
Brent crude oil	%, y-o-y, average	2.2	15.5	32.7	42.3	20.0	11.1	34.5	-36.7	28.7	**20.1**	**0.3**
LABOUR MARKET												
Average monthly wages in monitored organisations	%, y-o-y, nominal terms	8.0	5.8	6.3	5.0	6.6	7.2	7.8	4.0	**2.2**	**2.7**	**4.2**
Average monthly wages in monitored organisations	%, y-o-y, real terms	6.1	5.7	3.4	3.0	4.0	4.3	1.4	3.0	**0.8**	**0.6**	**2.0**
Number of employees	%, y-o-y	-0.8	-2.0	-0.2	2.2	1.2	1.9	1.7	-2.1	**-2.0**	**0.2**	**0.3**
Nominal unit wage costs	%, y-o-y	4.6	2.3	1.8	0.6	1.0	3.0	6.1	4.3	**-2.2**	**1.3**	**1.4**
Nominal unit wage costs in industry	%, y-o-y	0.5	3.4	-4.5	-4.0	-5.6	0.9	0.3	4.5	-	-	-
Aggregate labour productivity	%, y-o-y	1.9	3.6	4.1	5.2	4.8	3.4	1.2	-3.0	**3.3**	**1.0**	**2.9**
ILO general unemployment rate	%, average	-	7.8	8.3	7.9	7.1	5.3	4.4	6.7	**7.3**	**6.9**	**6.7**
Registered unemployment rate	%, average	-	-	10.0	9.5	8.6	7.0	5.8	8.3	9.3	**8.8**	**8.0**
PUBLIC FINANCE												
Public finance deficit (ESA95)	CZK bn, current p.	-166.8	-170.0	-82.7	-106.6	-84.5	-23.2	-98.6	-209.0	**-188.9**	**-165.7**	**-168.4**
Public finance deficit / GDP**	%, nominal terms	-6.8	-6.6	-2.9	-3.6	-2.6	-0.7	-2.7	-5.8	**-5.1**	**-4.3**	**-4.2**
Public debt (ESA95)	CZK bn, current p.	695.0	768.3	847.8	885.4	948.3	1,023.8	1,104.9	1,280.4	**1,452.2**	**1,601.7**	**1,759.1**
Public debt / GDP**	%, nominal terms	28.2	29.8	30.1	29.7	29.4	29.0	30.0	35.3	**39.3**	**41.9**	**44.0**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current p.	-71.3	-69.8	-13.4	59.4	65.1	120.6	102.7	180.6	**200.2**	**220.0**	**240.0**
Trade balance / GDP	%, nominal terms	-2.9	-2.7	-0.5	2.0	2.0	3.4	2.8	5.0	**5.4**	**5.8**	**6.0**
Balance of services	CZK bn, current p.	21.9	13.2	16.6	36.9	45.1	49.7	65.9	27.0	**-35.4**	**-40.0**	**-40.0**
Current account	CZK bn, current p.	-136.4	-160.6	-147.5	-39.8	-77.2	-113.1	-22.9	-37.0	**-104.8**	**-110.0**	**-110.0**
Current account / GDP	%, nominal terms	-5.5	-6.2	-5.2	-1.3	-2.4	-3.2	-0.6	-1.0	**-2.8**	**-2.9**	**-2.7**
Foreign direct investment												
Direct investment	CZK bn, current p.	270.9	53.5	101.8	279.6	90.3	179.1	36.3	26.5	**125.0**	**90.0**	**105.0**
Exchange rates												
CZK/USD	average	32.7	28.2	25.7	24.0	22.6	20.3	17.1	19.1	19.1	**18.5**	**18.0**
CZK/EUR	average	30.8	31.8	31.9	29.8	28.3	27.8	25.0	26.5	25.3	**24.2**	**23.7**
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-	-	0.0	-6.3	-5.1	-2.2	-12.5	5.6	-4.5	**-3.9**	**-1.7**
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-	-	-3.1	-5.5	-1.3	-3.9	-8.9	4.3	-3.4	**-5.7**	**-2.2**
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	-6.6	0.8	3.6	-1.5	-1.2	1.4	-4.6	0.2	**-1.0**	**-0.4**	**0.3**
Prices of imports of goods	%, y-o-y, average	-8.5	-0.3	1.6	-0.5	0.3	-1.0	-3.3	-3.5	**2.0**	**1.8**	**-0.1**
MONEY AND INTEREST RATES												
M2	%, y-o-y, average	7.0	4.1	7.7	5.3	8.9	11.2	8.4	6.2	**4.0**	**6.4**	**7.7**
2W repo rate	%, end-of-period	2.75	2.00	2.50	2.00	2.50	3.50	2.25	1.00	0.75	-	-
3M PRIBOR	%, average	3.5	2.3	2.3	2.0	2.3	3.1	4.0	2.2	1.3	**1.3**	**2.0**

* in brackets are constant weights in actual consumer basket
** CNB calculation
– data are not available / forecasted / released
data in bold = CNB forecast

2008				2009				2010				2011				2012			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
760.2	765.8	767.0	760.2	732.9	729.1	732.9	735.7	740.5	746.1	753.3	**761.5**	**759.1**	**760.4**	**762.8**	**766.3**	**772.6**	**780.1**	**789.1**	**798.0**
3.2	3.4	2.3	0.4	-3.6	-4.8	-4.4	-3.2	1.0	2.3	2.8	**3.5**	**2.5**	**1.9**	**1.3**	**0.6**	**1.8**	**2.6**	**3.4**	**4.1**
4.5	3.7	2.9	2.7	0.6	-0.1	-0.5	-0.9	-0.1	0.7	1.2	**1.6**	**1.1**	**0.3**	**0.4**	**0.6**	**1.0**	**1.3**	**1.6**	**1.9**
-0.6	2.4	3.3	-0.7	1.4	1.5	4.0	3.4	2.3	1.2	-0.5	**1.6**	**1.9**	**0.7**	**-1.5**	**-3.5**	**-1.8**	**-0.4**	**1.3**	**3.1**
-2.4	-8.8	-9.5	9.0	-6.1	-13.9	-14.8	-26.5	-7.3	7.1	14.4	**22.8**	**6.2**	**4.9**	**-0.9**	**-1.2**	**3.8**	**3.3**	**3.0**	**2.8**
14.3	13.4	4.9	-8.7	-19.0	-15.6	-8.0	2.4	14.0	13.7	14.1	**15.2**	**11.4**	**11.6**	**7.4**	**6.3**	**7.9**	**9.0**	**10.0**	**10.5**
12.8	9.2	1.4	-5.5	-16.8	-14.5	-6.6	-2.4	11.1	14.7	16.6	**20.5**	**13.5**	**13.0**	**6.9**	**5.9**	**7.3**	**7.9**	**8.5**	**8.8**
16.4	27.8	26.0	-4.3	-4.5	15.4	12.9	31.4	14.6	10.6	-3.6	**-1.5**	**0.5**	**0.5**	**0.4**	**1.4**	**5.6**	**10.0**	**14.1**	**17.5**
2.1	3.9	0.8	-13.2	-19.0	-19.0	-13.2	-2.1	7.5	11.9	10.9	-	-	-	-	-	-	-	-	-
0.7	-2.3	6.4	-4.2	-10.8	1.2	0.3	2.0	-21.4	-7.2	-3.9	-	-	-	-	-	-	-	-	-
5.3	4.7	4.5	-2.7	-4.3	-5.1	-5.4	-4.0	-0.8	1.9	1.6	-	-	-	-	-	-	-	-	-
4.3	5.4	6.4	6.3	5.0	3.7	2.1	1.0	0.7	0.6	1.1	1.5	-	-	-	-	-	-	-	-
7.4	6.8	6.6	4.7	2.2	1.4	0.2	0.4	0.7	1.1	1.9	2.1	**2.0**	**1.8**	**2.0**	**2.3**	**2.0**	**2.1**	**2.1**	**2.2**
15.0	14.7	15.8	16.9	11.2	9.8	7.5	5.2	0.8	2.3	3.6	3.8	**4.6**	**3.7**	**3.9**	**4.2**	**4.1**	**4.1**	**3.6**	**3.5**
3.6	2.9	2.9	0.4	-0.6	-0.6	-1.5	-0.7	-0.5	-0.3	0.3	0.4	**1.2**	**1.3**	**1.6**	**1.9**	**1.6**	**1.6**	**1.7**	**1.8**
5.7	3.3	3.4	-0.3	0.0	0.4	-2.0	-2.2	-1.4	-0.2	2.3	2.8	**3.9**	**4.2**	**3.6**	**3.4**	**1.8**	**1.4**	**1.3**	**1.6**
1.8	2.2	2.3	1.7	0.6	0.1	-0.5	-0.2	-1.1	-1.2	-1.2	-1.3	**-0.8**	**-0.5**	**0.1**	**0.7**	**1.4**	**1.7**	**1.8**	**1.9**
14.4	8.5	5.9	-11.5	-20.5	-15.7	-11.8	3.7	18.1	13.3	7.0	8.7	**10.4**	**5.6**	**7.5**	**8.2**	**3.6**	**2.8**	**2.0**	**2.0**
5.3	4.6	4.7	2.9	1.6	1.3	0.2	0.4	-0.3	0.1	0.8	1.0	**1.8**	**1.7**	**2.0**	**2.3**	**2.0**	**2.1**	**2.0**	**2.1**
2.3	1.4	1.1	2.5	3.7	3.3	2.1	1.2	-1.5	-0.9	-0.3	**0.2**	**1.1**	**1.7**	**2.4**	**2.0**	**2.4**	**1.8**	**1.4**	**1.1**
5.6	5.1	5.5	1.7	-1.1	-3.6	-5.2	-2.6	-1.4	1.3	2.2	3.0	**5.2**	**4.5**	**4.4**	**4.2**	**2.3**	**2.2**	**2.4**	**2.3**
26.7	27.2	7.7	-18.5	-27.8	-29.5	-23.8	-16.0	-5.6	-2.8	8.2	22.7	**22.4**	**20.7**	**13.1**	**4.2**	**-0.6**	**-0.8**	**0.6**	**2.4**
4.7	5.0	4.5	3.9	2.8	1.4	0.5	0.3	0.1	-0.2	-0.3	-0.3	-	-	-	-	-	-	-	-
66.1	77.8	54.7	-36.7	-53.3	-51.5	-41.1	33.3	70.5	33.1	11.8	15.8	**24.2**	**21.9**	**25.6**	**10.9**	**1.2**	**0.5**	**0.0**	**-0.4**
9.9	7.3	7.1	7.4	2.9	3.2	4.6	5.2	2.3	2.4	2.0	**2.2**	**2.0**	**2.3**	**2.9**	**3.4**	**4.1**	**4.2**	**4.2**	**4.2**
2.3	0.5	0.5	2.6	0.8	1.8	4.5	4.8	1.6	1.2	0.1	**0.2**	**0.0**	**0.5**	**0.9**	**1.1**	**2.0**	**2.0**	**2.1**	**2.0**
2.1	1.9	1.7	1.2	-0.9	-1.8	-2.8	-2.9	-3.2	-2.6	-1.3	**-0.8**	**0.6**	**0.5**	**0.3**	**-0.4**	**0.2**	**-0.1**	**0.0**	**0.9**
7.9	5.4	4.6	6.8	4.9	4.5	4.8	3.0	-3.1	-2.4	-1.4	**-2.1**	**0.1**	**0.9**	**1.9**	**2.3**	**2.5**	**1.5**	**0.8**	**1.0**
3.1	-0.3	-2.3	1.7	5.5	5.1	5.9	1.2	-8.7	-6.4	-6.7	-	-	-	-	-	-	-	-	-
1.5	2.5	2.0	-1.1	-3.5	-4.2	-3.2	-1.0	3.2	4.0	2.6	**3.5**	**1.2**	**1.1**	**1.0**	**0.6**	**2.0**	**2.6**	**3.2**	**3.5**
4.7	4.2	4.3	4.4	5.8	6.3	7.3	7.2	8.0	7.1	7.1	**7.1**	**7.1**	**6.6**	**7.0**	**6.9**	**7.1**	**6.5**	**6.7**	**6.3**
6.3	5.5	5.6	5.8	7.5	8.1	8.7	9.0	10.1	9.1	8.8	9.1	**9.5**	**8.9**	**8.6**	**8.4**	**9.0**	**8.1**	**7.6**	**7.3**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42.9	39.3	27.0	-6.6	41.7	52.4	44.2	42.2	64.2	52.6	35.5	**48.0**	**66.0**	**59.0**	**53.0**	**42.0**	**71.0**	**64.0**	**57.0**	**48.0**
4.9	4.2	2.9	-0.7	4.8	5.7	4.9	4.6	7.4	5.6	3.8	**5.0**	**7.3**	**6.1**	**5.5**	**4.3**	**7.5**	**6.3**	**5.6**	**4.6**
19.2	19.1	15.0	12.6	14.7	9.4	2.7	0.2	-7.2	-6.7	-11.5	**-10.0**	**-9.0**	**-9.0**	**-11.0**	**-11.0**	**-10.0**	**-10.0**	**-10.0**	**-10.0**
53.3	-31.1	-7.3	-37.8	25.0	-30.7	-23.7	-7.5	19.1	-32.3	-77.6	**-14.0**	**19.0**	**-49.0**	**-60.0**	**-20.0**	**21.0**	**-53.0**	**-62.0**	**-16.0**
6.1	-3.3	-0.8	-4.0	2.9	-3.3	-2.6	-0.8	2.2	-3.4	-8.4	**-1.5**	**2.1**	**-5.0**	**-6.2**	**-2.0**	**2.2**	**-5.2**	**-6.1**	**-1.5**
-23.6	32.8	16.4	10.7	14.7	-0.3	-17.9	30.0	33.9	20.1	44.9	-	-	-	-	-	-	-	-	-
17.1	15.9	16.1	19.3	21.2	19.6	17.9	17.5	18.7	20.1	19.3	18.2	**18.8**	**18.5**	**18.4**	**18.2**	**18.0**	**18.0**	**18.0**	**18.0**
25.5	24.8	24.1	25.4	27.6	26.7	25.6	25.9	25.9	25.6	24.9	24.8	**24.5**	**24.3**	**24.1**	**24.0**	**23.9**	**23.8**	**23.7**	**23.6**
-12.2	-14.7	-15.9	-7.2	7.4	6.7	6.1	2.2	-6.0	-4.0	-3.1	-4.8	**-5.5**	**-4.9**	**-2.6**	**-2.6**	**-1.7**	**-1.6**	**-1.7**	**-1.7**
-9.9	-11.1	-11.4	-3.0	8.6	6.1	3.4	-0.6	-6.1	-3.3	-1.1	-3.1	**-6.4**	**-6.6**	**-4.9**	**-4.9**	**-2.7**	**-2.1**	**-2.1**	**-1.8**
-4.3	-6.2	-6.5	-1.2	5.2	1.3	-2.2	-3.5	-6.5	-0.3	2.2	**0.7**	**0.1**	**-1.8**	**-0.3**	**0.3**	**0.0**	**0.3**	**0.4**	**0.5**
-3.0	-4.4	-4.0	-1.6	1.6	-2.9	-7.0	-5.7	-4.4	2.5	5.8	**4.3**	**3.6**	**0.7**	**1.5**	**1.6**	**-0.1**	**0.0**	**-0.1**	**0.0**
10.1	7.6	8.3	7.6	8.8	7.5	4.6	4.1	2.8	4.8	4.7	**3.7**	**6.0**	**5.8**	**6.5**	**6.9**	**7.7**	**7.5**	**7.5**	**7.8**
3.75	3.75	3.50	2.25	1.75	1.50	1.25	1.00	1.00	0.75	0.75	0.75	-	-	-	-	-	-	-	-
4.0	4.2	3.9	4.1	2.7	2.3	2.0	1.8	1.5	1.3	1.2	1.2	**1.3**	**1.3**	**1.3**	**1.4**	**1.6**	**1.9**	**2.1**	**2.4**

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