# INFLATION REPORT / I

2012

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 9 February 2012 and contains the information available as of 20 January 2012. 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.

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", is available as a separate document on the CNB website. The document states that in the light of the fiscal problems in the euro area and the way these are being dealt with, and also given the persisting elevated global financial market volatility, the current situation does not seem conducive to euro adoption in the Czech Republic. As regards the preparedness of the Czech Republic itself to adopt the euro, the document states that it is necessary to complete the public budget consolidation process and increase the flexibility of the labour market.

CHART I.1

FULFILMENT OF THE INFLATION TARGET

**Headline inflation was just above the inflation target in 2011 Q4**
(annual percentage changes)

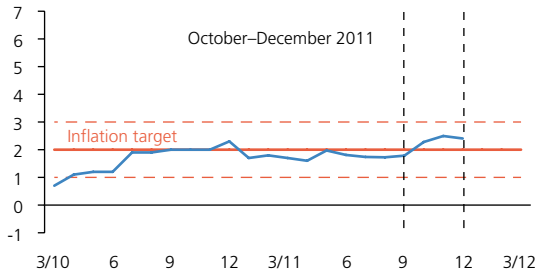



CHART I.2

HEADLINE INFLATION FORECAST

**Headline inflation will rise temporarily to just above 3% in 2012 owing to a VAT increase**
(annual percentage changes)

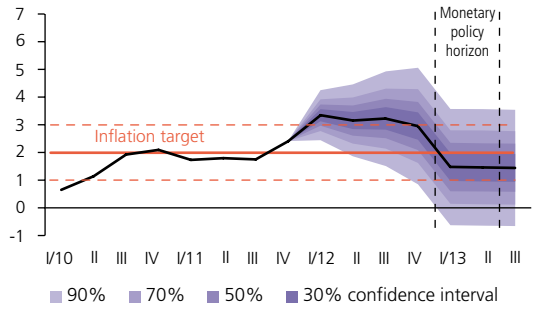
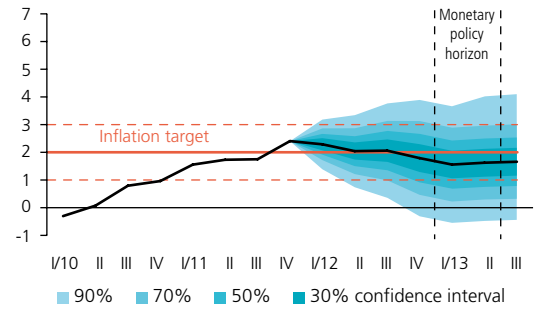



CHART I.3

MONETARY-POLICY RELEVANT INFLATION FORECAST

**Monetary-policy relevant inflation will be close to the target over the entire forecast horizon**
(annual percentage changes)




## I. SUMMARY

*In 2011 Q3, the annual growth of the Czech economy, which until then had been driven mainly by net exports, recorded a further noticeable slowdown. Headline inflation and monetary-policy relevant inflation are both just above the target. Administered prices, food prices and the gradual pass-through of the depreciated exchange rate to prices are the main sources of inflation. Domestic factors are conversely dampening inflation. GDP will be flat this year. Its stagnation will reflect a marked slowdown in external demand and the continuing fiscal consolidation. Real economic activity will not recover until 2013. Headline inflation will rise temporarily to just above 3% in 2012 owing to a VAT increase and will fall below the target at the start of 2013. Monetary-policy relevant inflation will be close to the target over the entire forecast horizon. The impacts of the VAT increase on inflation expectations and wages are not expected to be significant. Consistent with the forecast is stability of market interest rates in the near future and a modest decline thereafter.*

The **annual rate of growth of the Czech economy** slowed further to 1.2% in 2011 Q3. Net exports were the only source of growth. The contributions of the other components were negative, investment in inventories most of all. A further slowdown in annual GDP growth to 0.7% is expected in 2011 Q4.

In 2011 Q4, both **headline inflation and monetary-policy relevant inflation** were just above the CNB's target (see Chart I.1). The main sources of inflation are still administered prices and food prices, in which part of the impact of the VAT change implemented in January 2012 were reflected in advance. Adjusted inflation excluding fuels remains negative and continues to reflect weak domestic demand and subdued cost pressures. By contrast, import prices are inflationary owing to the recent koruna depreciation, while the high growth in prices abroad is now fading.

**Economic growth in the effective euro area** slowed further in 2011 Q3 and is expected to reach 2.6% for the year as a whole. Its growth rate is expected to be more than 2 percentage point lower this year. The low outlook for 3M EURIBOR rates takes into account the existing and expected steps taken by the ECB to ease monetary policy; this, together with the escalation of the euro area debt crisis, is reflected in a weaker euro-dollar exchange rate. Prices of oil and other commodities remain relatively high. A very gradual decrease in prices on the commodity markets is expected in the longer run.

**According to the forecast, headline inflation** will rise temporarily to just above 3% in 2012 owing to a VAT increase. It will then fall into the lower half of the tolerance band around the inflation target at the start of 2013 (see Chart I.2). **Monetary-policy relevant inflation**, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, will be close the inflation target over the entire forecast horizon, showing a slightly downward trend (see Chart I.3). In the near future it will be slightly above the target as a result of higher administered price inflation and the gradual pass-through of the weaker exchange rate. However, the inflationary effect

of import prices will fade gradually thanks to renewed gradual exchange rate appreciation. A downturn in economic activity will also help to push monetary-policy relevant inflation slightly below the target. Cost pressures from the domestic economy, which are anti-inflationary at the start of the forecast horizon, will start to resurge at the end of this year as both external and domestic activity recover. The impacts of the VAT increase on inflation expectations and wages are not expected to be significant. Adjusted inflation excluding fuels will gradually rise and turn positive in 2012 Q2. By contrast, food and fuel price growth will slow sharply.

Consistent with the forecast is stability of market **interest rates** in the near future and a modest decline thereafter (see Chart I.4). The stability of 3M PRIBOR rates at the start of the forecast horizon is due to the contrary effects of elevated inflation (including the outlook for administered prices) and depreciation of the exchange rate on the one hand, and low foreign interest rates together with subdued domestic inflationary pressures on the other. Interest rates do not react to the expected temporary rise in inflation above the target caused by the first-round effects of the changes to indirect taxes. As the effects of the depreciated exchange rate and the increases in administered prices subside, interest rates will decrease slightly. The forecast expects the **koruna-euro exchange rate** to appreciate gradually from its currently weakened level, reflecting the impacts of the euro area debt crisis. However, the pace of appreciation will be reduced by the outlook for foreign variables, with the effect of low euro rates being outweighed by a worse outlook for external demand and net exports (see Chart I.5). By contrast, a renewed recovery of external demand and the gradual renewal of long-term real convergence will foster appreciation of the koruna in the longer run.

The **Czech economy** will stagnate overall this year (see Chart I.6). Subdued domestic demand will be apparent in all expenditure components, reflecting the sizeable slowdown in external demand and continuing public budget consolidation. Net exports and investment in inventories will hinder GDP growth and the other components of demand will show only modest growth. GDP will grow again in 2013 (by 1.9%) thanks to a recovery in external demand. All components except government consumption will be sources of growth. On the **labour market**, the aforementioned developments will cause total employment to decrease in the second half of this year. Total employment will return to growth, albeit modest, in 2013 H2 and the unemployment rate will react accordingly. The slackening wage growth in the business sector this year will reflect the downturn in the Czech economy. Wage growth next year will copy the recovery in economic activity. Wages in the non-business sector will rise at a subdued rate.

At its monetary policy meeting on 2 February 2012, the Bank Board decided unanimously **to leave interest rates unchanged**. The risks of the new forecast were assessed as being balanced. The downside risks to inflation include additional fiscal consolidation measures beyond those included in the forecast. By contrast, potential faster food price growth would foster higher inflation. In addition, there exist also two-sided risks, namely external developments and the exchange rate of the koruna.

CHART I.4

INTEREST RATE FORECAST

**Consistent with the forecast is stability of market interest rates in the near future and a modest decline thereafter**
(3M PRIBOR in %)

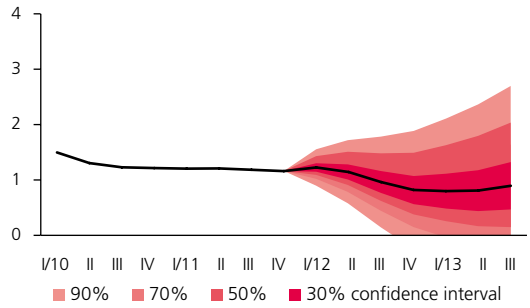



CHART I.5

EXCHANGE RATE FORECAST

**The nominal exchange rate will gradually appreciate from its currently weakened level**
(CZK/EUR)

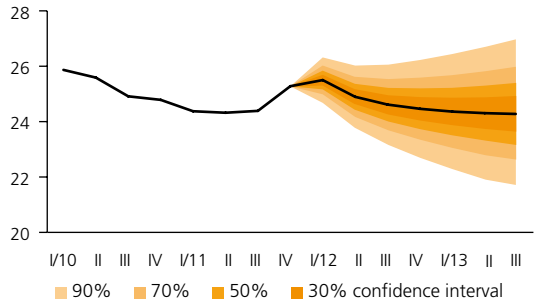



CHART I.6

GDP GROWTH FORECAST

**GDP will stagnate overall this year**
(annual percentage changes; seasonally adjusted)

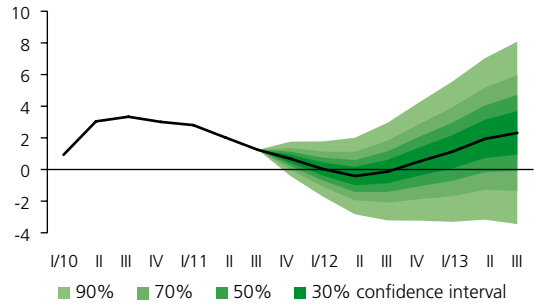


CHART II.1.1

EFFECTIVE GDP IN THE EURO AREA

**Economic growth in the euro area is expected to slow sharply this year**

(annual percentage changes; differences in percentage points – right-hand scale)

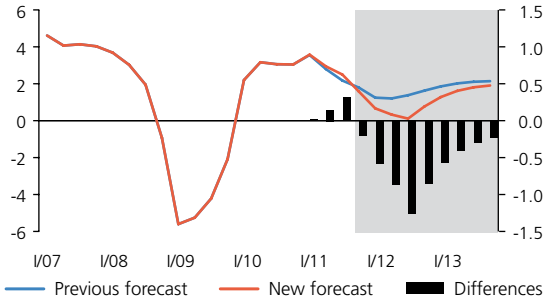



CHART II.1.2

EFFECTIVE PPI IN THE EURO AREA

**The falling outlook for producer prices reflects the unwinding of the high commodity prices and an expected downturn in industrial production**

(annual percentage changes; differences in percentage points – right-hand scale)

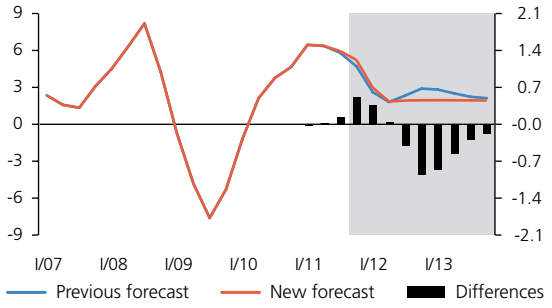
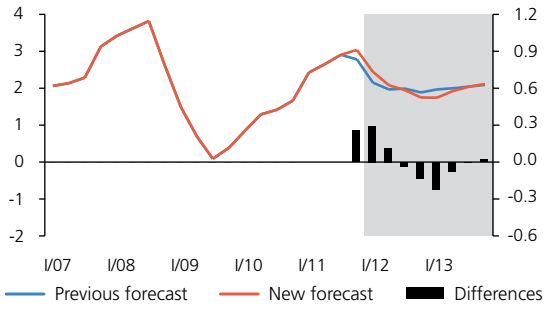



CHART II.1.3

EFFECTIVE CPI IN THE EURO AREA

**Effective inflation should be around 2%**

(annual percentage changes; differences in percentage points – right-hand scale)




## II. THE FORECAST, ITS CHANGES AND RISKS

### II.1 EXTERNAL ASSUMPTIONS OF THE FORECAST

*Economic growth in the euro area is expected to slow sharply this year. It should pick up again next year, but the risks surrounding external demand are still high and skewed to the downside. Producer price inflation is expected to go down significantly as the previous rise in commodity prices subsides and industrial production shrinks as expected. Associated with this is an expected fall in inflation despite a weaker euro-dollar exchange rate, as the subdued economic activity should foster lower inflation. The low outlook for 3M EURIBOR rates takes into account the existing and expected steps taken by the ECB to ease monetary policy; this is reflected in a weaker euro-dollar exchange rate. The outlook for the Brent crude oil price indicates stability initially, followed by a modest decline from the currently elevated levels.*

The outlook for the **effective indicator of euro area GDP** foresees a sharp slowdown in economic growth to 0.5% this year, i.e. 2.1 percentage points lower than in 2011 (see Chart II.1.1).[1] The fiscal consolidation process necessitated by the escalating debt crisis together with the uncertainty about future developments will foster a downturn in domestic demand in most member countries. This will give rise to falling exports in export-oriented euro area countries, including Germany. By contrast, higher price competitiveness linked with the weaker exchange rate of the euro will counteract the slowdown in foreign trade. Economic growth is expected to pick up again in 2013. The prediction of economic growth of 1.7% next year is, however, still 0.9 percentage point lower than the expected outcome for 2011. In addition, given the continuing debt crisis, the risks surrounding economic growth for this year and the next remain high and skewed to the downside.

The unwinding of last year's commodity price growth and the expected downturn in industrial production are reflected in the outlook for **growth in the effective indicator of producer prices in the euro area**. This indicator fell to 2.2% for 2012, down by 3.8 percentage points from the previous year (see Chart II.1.2). However, depreciation of the euro-dollar exchange rate and still high prices of energy commodities, which are expected to decrease slightly only in 2013, will act against any greater decrease in producer price inflation in 2012. In this context, industrial producer price growth should slow further to 1.9% next year.

The outlook for **growth in the effective indicator of consumer prices in the euro area** primarily takes into account the fiscal-

1 The outlook for external variables is based on Consensus Forecasts (CF) and prices of market contracts as of 9 January 2012. The outlook is indicated by the grey areas in the charts. This convention is used throughout this Report.

consolidation-related expected downturn in demand. Consumer price inflation is expected to decline to 2.1% this year (from 2.8% on average in 2011) despite continuing growth in fuel and energy prices and in rents. Growth in indirect taxes will also contribute to inflation. Consumer price inflation should fluctuate around 2% in 2013 as well (see Chart II.I.3).

The expected **3M EURIBOR** path has shifted further downwards this year and the next (see Chart II.1.4) owing to the escalating debt crisis. The lower outlook for interest rates also reflects recent ECB measures, namely the re-introduction of programmes to provide long-term liquidity to the banking sector and the lowering of the key refinancing rate in two steps from 1.5% to 1%. Compared to the previous year, 3M EURIBOR rates are expected to fall by 0.4 percentage point to 1% on average this year. Foreign rates should stay just below this level almost until the end of 2013. The market outlook for foreign rates is roughly in line with the expectations of CF analysts, who expect the 3M EURIBOR rate to reach 1% at the start of 2013, a figure only 0.1 percentage point higher than the market outlook for this period.

The current outlook for the **euro-dollar exchange rate** is affected by the depreciation of the euro since September 2011, which has been closely linked with the escalating debt crisis in the euro area (see Chart II.1.5). In addition, the deteriorating macroeconomic situation in the euro area contrasts with the moderately favourable data from the US economy. The forecast thus expects the dollar to appreciate from last year's average of USD 1.39/EUR to USD 1.29/EUR this year. Just a slight euro appreciation to USD 1.31/EUR is expected in 2013.

The outlook for the **Brent crude oil price** based on market futures has also been revised upwards (see Chart II.1.6). This means that it will remain at the 2011 average level this year, i.e. just above USD 110 a barrel. The slightly falling trend in the oil price remains unchanged, just at a higher level. The price of Brent crude oil is expected to average USD 107 a barrel. Compared to the previous forecast, this means an upward revision of about 8% for 2012 and 2013. The risks going forward are still on both sides and, moreover, have recently strengthened. A more marked decline in global oil demand reflecting the slowdown in the world economy may foster lower prices. By contrast, the current geopolitical risks can be linked with a risk of higher oil prices (see section III.7).

CHART II.1.4

**3M EURIBOR**

**The escalation of the debt crisis and the easy monetary policy of the ECB are reflected in a low market rate outlook**
(in %; differences in percentage points – right-hand scale)

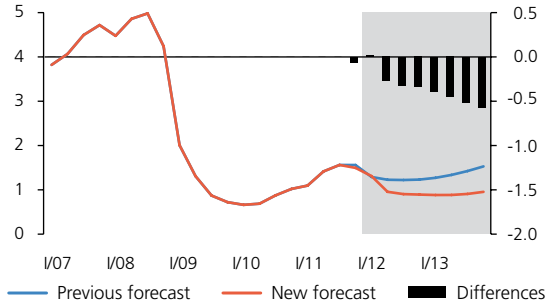



CHART II.1.5

**EURO-DOLLAR EXCHANGE RATE**

**A significantly weaker euro-dollar exchange rate is expected over the entire forecast horizon**
(USD/EUR; differences in % – right-hand scale)

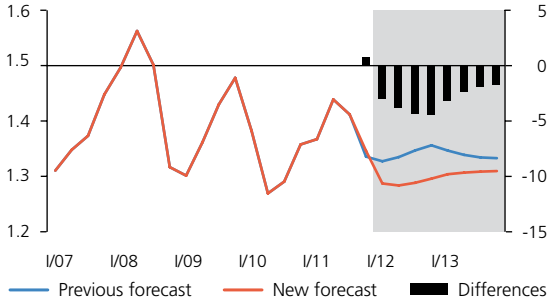



CHART II.1.6

**PRICE OF BRENT CRUDE OIL**

**The market outlook for the price of oil foresees flat prices initially, followed by a very gradual decline**
(USD/barrel; differences in % – right-hand scale)

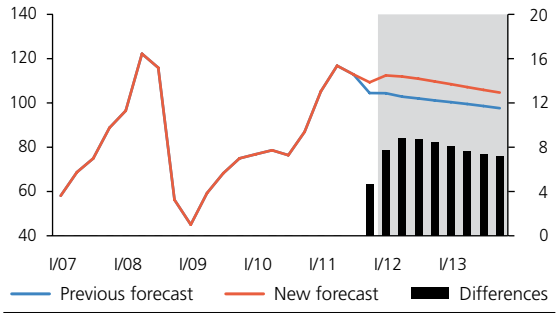


CHART II.2.1

HEADLINE INFLATION AND MONETARY-POLICY RELEVANT INFLATION

**Headline inflation will temporarily rise to just above 3% owing to tax changes, while monetary-policy relevant inflation will be close to the target**
(annual percentage changes)

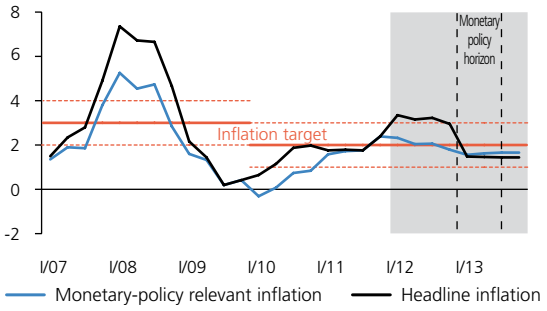



CHART II.2.2

ADMINISTERED PRICES AND FUEL PRICES

**Administered price inflation will rise in 2012 owing, among other things, to increases in VAT and rents**
(annual percentage changes; fuel prices excluding first-round effects of indirect tax changes)

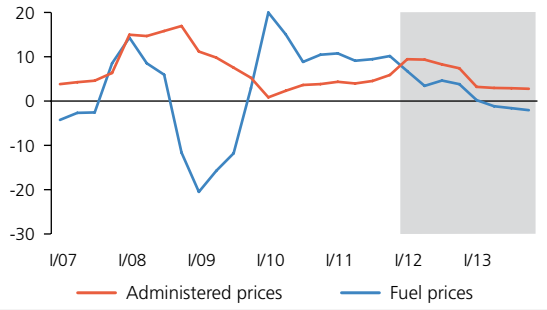



TABLE II.2.1

FORECAST OF ADMINISTRATIVE EFFECTS

**The growth of administered prices will be due mainly to rising energy prices and growth in regulated rents**
(annual percentage changes; impact in percentage points)

| | 2011 actual | | 2012 forecast | | 2013 forecast | |
|---|---|---|---|---|---|---|
| Administered prices – total[a)] | 7.0 | 1.22 | 6.5 | 1.15 | 2.7 | 0.51 |
| of which (main changes): | | | | | | |
| regulated rents | 7.7 | 0.12 | 19.0 | 0.26 | 5.0 | 0.07 |
| electricity | 4.8 | 0.17 | 3.5 | 0.13 | -0.1 | 0.00 |
| natural gas | 22.2 | 0.55 | 6.6 | 0.16 | 0.0 | 0.00 |
| heat | 1.9 | 0.05 | 7.6 | 0.18 | 5.1 | 0.12 |
| healthcare | 7.0 | 0.15 | 3.6 | 0.07 | 3.4 | 0.07 |
| First-round impacts of tax changes in non-administered prices | | 0.00 | | 0.95 | | -0.29 |

a) Including effects of indirect tax changes

## II.2 THE FORECAST

*Headline and monetary-policy relevant inflation were both 2.4% on average in 2011 Q4. Administered prices, food prices and the gradual pass-through of the depreciated exchange rate to prices are the main sources of inflation. Weak domestic demand and low wage growth mean that domestic factors are conversely dampening inflation. Owing to tax changes, headline inflation will be just above 3% this year, while monetary-policy relevant inflation will be close to the inflation target. Both headline and monetary-policy relevant inflation will fall below the inflation target in 2013. The inflationary effect of import prices will prevail in the near future, whereas cost pressures from the domestic economy will start to resurge gradually at the end of this year. In 2012, the subdued domestic economic activity will reflect a marked slowdown in external demand and continuing fiscal consolidation. GDP growth will therefore be flat. Next year, in connection with an external demand recovery, GDP growth will reach 1.9%. Consistent with the forecast is stability of market interest rates in the near future and a modest decline thereafter.*

Annual **headline inflation** was 2.4% on average in 2011 Q4, as was monetary-policy relevant inflation, i.e. inflation adjusted for the first-round impacts of changes to indirect taxes. Owing to tax changes introduced in January 2012, headline inflation will temporarily stand just above 3% for almost the entire year (see Chart II.2.1). Monetary-policy relevant inflation will be close to the inflation target this year. Both headline and monetary-policy relevant inflation will fall below the inflation target in 2013. Headline inflation will be slightly lower than monetary-policy relevant inflation due to the unification of VAT rates at 17.5% at the start of next year, which has a moderately anti-inflationary first-round effect overall.

Annual **administered price** inflation rose to 5.9% on average in 2011 Q4. A further increase to 9.4% is forecasted for 2012 Q1 (see Chart II.2.2). This will be due most of all to increases in prices of energy for households, regulated rents, water supply and sewerage collection charges and personal transport prices. The one-off effect of an increase in the reduced VAT rate in January 2012 will also contribute to the rise in administered price inflation. At the end of this year, administered prices will reflect the expected slowdown in growth in world natural gas prices in conditions of moderating year-on-year depreciation of the koruna-dollar exchange rate. This, together with the unwinding of the effect of the VAT change, will cause administered price inflation to slip below 3% in 2013 (see Table II.2.1).

In 2011 Q4, annual inflation was affected by the first-round impacts of changes to **indirect taxes**, but their effect will not be significant at the forecast horizon. The forecast incorporates an increase in the reduced VAT rate from 10% to 14% as of January 2012. The first-round effect of this change on inflation can be estimated at about 1.1 percentage points. At the same time it assumes that part of this VAT change passed through to food prices in advance at the end of last

year (see BOX 1). January 2012 also saw a "harmonisation increase" in excise duties on cigarettes with a contribution to inflation of just above 0.1 percentage point. The forecast then expects the two VAT rates to be unified at 17.5% in January 2013, with an overall first-round effect on inflation of about -0.2 percentage point. The effects of all these changes to indirect taxes on inflation expectations and wage growth are not expected to be significant.

Annual **net inflation** rose to 1.7% on average in 2011 Q4 (see Chart II.2.3). This change was mainly due to a rise in food price inflation together with a shift of adjusted inflation excluding fuels to less negative figures. Net inflation will decrease in 2012 Q1 as a result of slowing annual food price growth (excluding the first-round effect of VAT changes) and fuel price growth. On the other hand, this effect will be partly offset by adjusted inflation excluding fuels, whose decline will moderate and turn positive in Q2. Net inflation will thus fluctuate around 1% this year. In late 2012 and early 2013, net inflation will show deviations in both directions owing to the VAT changes introduced in both years. In 2013, net inflation will be affected above all by a continuing increase in adjusted inflation excluding fuels, whereas an expected decline in fuel prices will act in the opposite direction. The growth in prices will be counteracted by renewed exchange rate appreciation, but domestic cost pressures will gradually start to emerge. Net inflation will thus be around 1.5% in 2013 H2.

Annual **adjusted inflation excluding fuels** shifted to less negative values in 2011 Q4 (see Chart II.2.3). Subdued cost pressures thus continued to be apparent in an environment of weak domestic demand. The forecast expects adjusted inflation excluding fuels to rise gradually to 1%. It will initially be affected above all by an expected increase in import prices. By contrast, gradually resurging growth in domestic cost pressures will prevail at the end of the year. Their gradual strengthening will cause adjusted inflation excluding fuels to rise to around 2% at the end of 2013. This will also be fostered by expected instant second-round effects stemming from the reduction of the basic VAT rate to 17.5% in January 2013, i.e. the incomplete pass-through of this tax change to prices.

Annual **food price** inflation rose to 4.5% on average in 2011 Q4. Food prices probably partly reflected the increase in the reduced VAT rate as of January 2012 in advance (see BOX 1 for details). The high growth in agricultural producer prices has meanwhile almost disappeared and inflation in the food industry has weakened significantly. The forecast expects annual food price inflation (excluding the first-round effects of tax changes) to moderate in 2012 Q1, mainly in connection with the offsetting of its previous strong growth. Owing to an expected renewal of the annual decline in agricultural producer prices, food price inflation will slow in the coming quarters, reaching zero at the end of this year. As agricultural commodity prices start rising again in 2013, food price inflation will rise to about 1% (see Chart II.2.4).

CHART II.2.3

NET INFLATION AND ADJUSTED INFLATION EXCLUDING FUELS

**Adjusted inflation excluding fuels will turn positive in 2012 Q2**
(annual percentage changes)

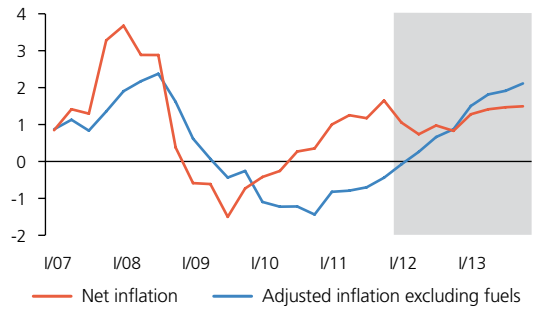



CHART II.2.4

FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

**Food price inflation will slow as agricultural producer price inflation subsides**
(annual percentage changes)

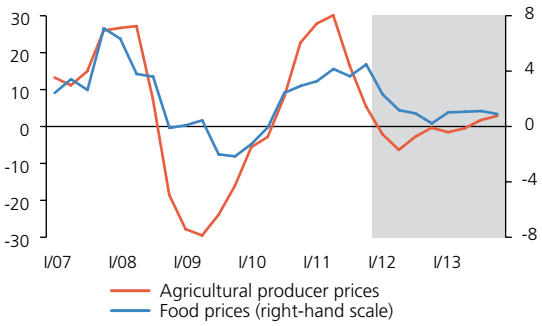


CHART 1 (BOX)

FOOD PRICE FACTORS

**Food prices were affected at the end of 2011 by an increase in VAT**

(annual percentage changes; contributions in percentage points)

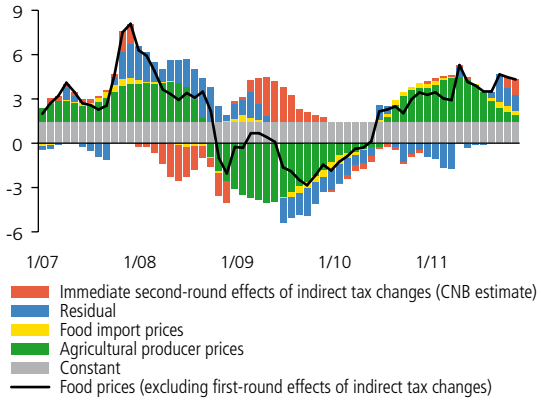
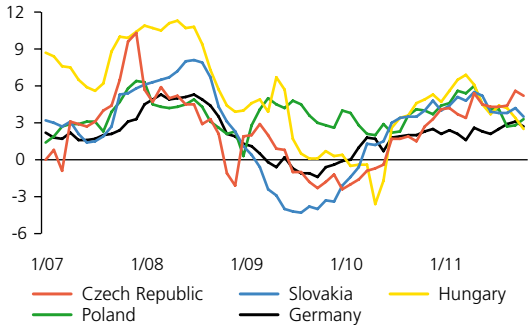



CHART 2 (BOX)

FOOD PRICES IN THE CZECH REPUBLIC AND SURROUNDING COUNTRIES

**At the end of 2011, the Czech Republic had the highest food price inflation in the region**

(annual percentage changes; HICP methodology)




**BOX 1**

**The pass-through of VAT to food prices at the end of 2011**

The tax changes included, among other things, an increase in the reduced VAT rate from 10% to 14% as of 1 January 2012. The effect of this change on consumer prices was first incorporated into the CNB's macroeconomic forecast in Inflation Report III/2011, where it was described in BOX 1 *The impacts of changes to VAT rates on the budget and inflation and their components in 2012 and 2013*. The increase in food prices due to the VAT changes at the start of this year implies a first-round effect on inflation of 0.6 percentage point. According to the forecasts in Inflation Reports III/2011 and IV/2011, the VAT change was not expected – owing to subdued demand – to pass through to consumer prices in advance, as had happened at the end of 2007. At that time, more than half of the effect of the approved change to the reduced VAT rate from 5% to 9% as from January 2008 had passed through to food prices two months in advance. Given the different position of the economy in the business cycle and the different agricultural producer price situation compared to 2007, the potential pass-through of the higher VAT rate to food prices at the end of 2011 was considered in Inflation Report IV/2011 to be only a temporary upside risk to the forecast.

However, strong across-the-board growth in food prices in October to December 2011 suggested that the VAT change might again have passed through in advance to prices of food (excluding alcohol and tobacco, which are not affected by the recent VAT change). Seasonally adjusted food prices rose by 2.7% in 2011 Q4, with most food items recording increases. An econometric analysis reveals that the pick-up in food price inflation in this period can be explained to only a very small extent by the currently rising imported food prices or the weaker exchange rate (see Chart 1). By contrast, the effect of the high domestic agricultural producer prices in the past on food prices is fading noticeably. At the same time, a comparison of food price inflation in the Czech Republic with that in neighbouring countries shows that the Czech Republic had the fastest growing food prices at the end of 2011 (see Chart 2). This difference has no significant cause other than the VAT change. A similar difference between prices in the Czech Republic and other countries was observed in late 2007 and early 2008.

The new forecast – just like the previous two – expects one quarter of the 0.6 percentage point first-round impact to be absorbed in sellers' margins in the short run and to manifest itself in price increases only in the longer run. The new forecast assumes, however, that 60% of the remainder of the impact (i.e. about 0.4–0.5 percentage point of the impact on inflation) has already shown up in food prices between October and December 2011; the remaining effect will pass through to food prices in January 2012. This means that the premature VAT pass-through is similar in magnitude to that in 2007.

**Fuel prices** recorded faster annual growth on average in 2011 Q4, as the annual depreciation of the koruna-dollar exchange rate outweighed the slower growth in world oil prices. The forecast expects slower fuel prices in the near term (partly due to base effects), as a result of more moderate annual growth in world prices of oil, which will, however, be partly offset by year-on-year depreciation of the koruna-dollar rate. Owing to an expected annual decline in oil prices on world markets and renewed appreciation of the koruna-dollar rate, fuel prices will switch to an annual decline during 2013 (see Chart II.2.5).

Czech money market **interest rates** were flat in 2011 Q4. Rates with maturities longer than one year were also broadly unchanged overall, but showed greater volatility. Consistent with the forecast is stability of market interest rates in the near future and a modest decline thereafter (see Chart II.2.6). Several factors, both from the domestic economy and from abroad, are fostering a decline in interest rates over the entire forecast horizon. Slow growth in economic activity and wages in the business sector, reflecting the slowdown in external demand this year and the low interest rate level abroad, are pushing domestic interest rates downwards. These anti-inflationary pressures are offset in 2012 H1 by elevated inflation, including the outlook for administered prices, and by depreciation of the exchange rate. Interest rates do not react to the expected temporary rise in headline inflation above the target in 2012 caused by the first-round effects of the changes to indirect taxes, to which the escape clause mechanism applies as usual.

**The koruna depreciated significantly against the euro** in 2011 Q4 and remained at weaker levels in January 2012. This reflected increased uncertainty stemming from the escalating debt crisis in the euro area. The short-term forecast for the exchange rate for 2012 Q1 is thus set at an average level of CZK 25.5 to the euro (see Chart II.2.7). The exchange rate in 2012 H2 will then be strongly affected by the outlook for foreign variables, with the effect of low euro rates being outweighed by a worse outlook for external demand and hence nominal net exports. The forecasted exchange rate path is also affected by a revision of foreign trade in the national accounts (see BOX 2 in section II.3). A renewed recovery of external demand and the gradual renewal of long-term real convergence will foster appreciation of the koruna in the longer run.

Quarter-on-quarter growth in **nominal marginal costs in the consumer goods sector** increased in 2011 Q4 owing to the depreciation of the exchange rate. This was largely reflected in rising inflation pressures from import prices (see Chart II.2.8). The strong growth in world commodity prices recorded in 2011 H1 has largely faded away and is thus reflected in import prices only marginally. By contrast, pressures from the domestic economy, approximated by intermediate goods price inflation, are anti-inflationary owing to persisting weak domestic demand and subdued wage growth. 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), which is now contributing less markedly to inflation than in the past.

CHART II.2.5

FUEL PRICES AND OIL PRICES

**The forecast expects fuel price inflation to slow, owing to a falling outlook for oil prices**
(annual percentage changes)

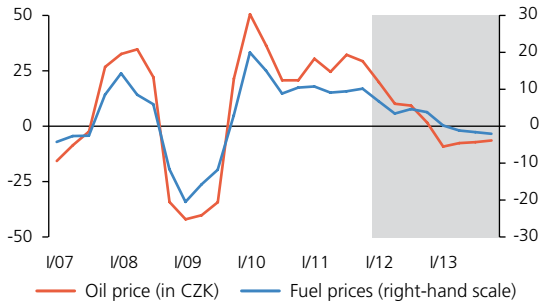



CHART II.2.6

INTEREST RATE FORECAST

**Consistent with the forecast is stability of market interest rates in the near future and a modest decline thereafter**
(3M PRIBOR and 3M EURIBOR in %)

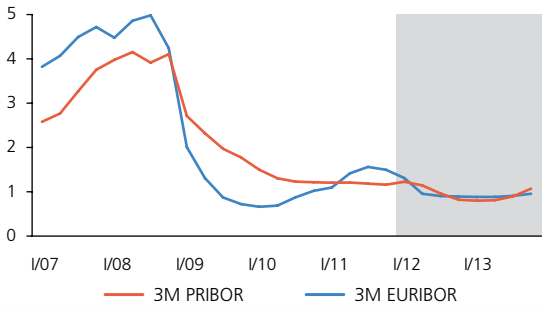



CHART II.2.7

EXCHANGE RATE FORECAST

**After an initial depreciation, the nominal exchange rate of the koruna against the euro is gradually appreciating**
(CZK/EUR and CZK/USD)

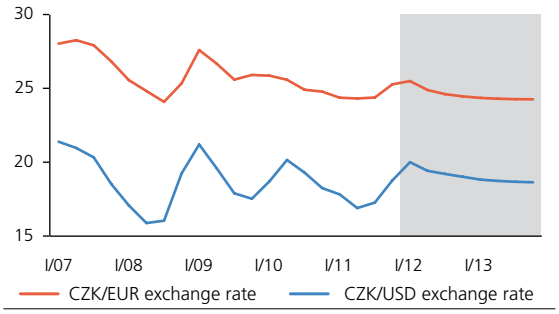


CHART II.2.8

COSTS IN THE CONSUMER SECTOR

**Pressures from the domestic economy will steadily revive at the end of this year, when the inflationary effect of import prices will conversely fade away**
(quarterly percentage changes; contributions in percentage points; annualised)

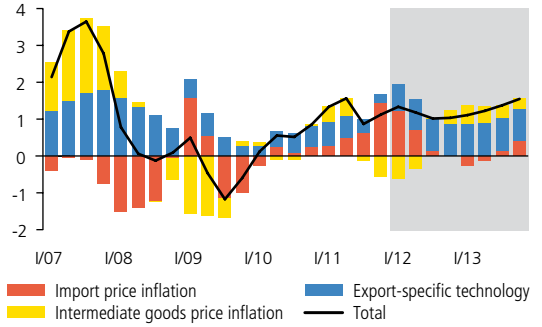



CHART II.2.9

COSTS IN THE INTERMEDIATE GOODS SECTOR

**Gradually accelerating wages will be largely offset by growth in labour productivity and a low price of capital**
(quarterly percentage changes; contributions in percentage points; annualised)

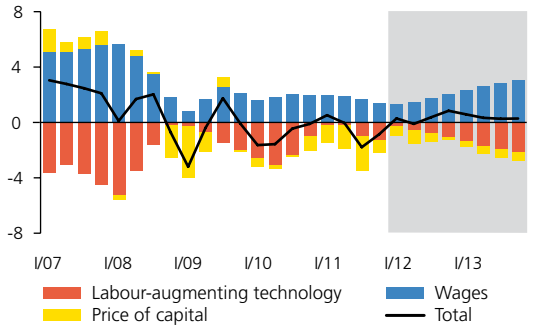
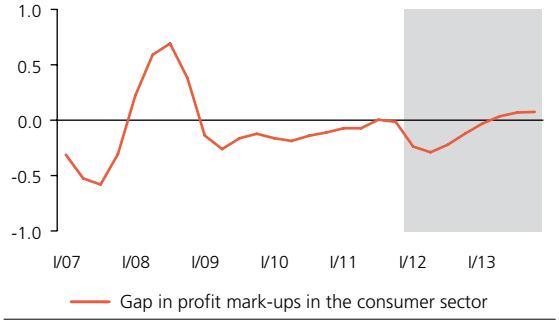



CHART II.2.10

GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

**The gap in profit mark-ups will open into negative values again at the start of the forecast**
(percentages)




The inflationary effect of import prices will persist in 2012 H1. This effect is due mainly to the gradual pass-through of the previous depreciation of the exchange rate into import prices. However, the return of the koruna's exchange rate to modest appreciation will eliminate these pressures at the end of 2012. Cost pressures from the domestic economy will start to resurge gradually at the end of 2012 as economic activity gradually recovers. The gradual return of export-specific technology growth to its long-run level reflects the assumption of a gradual renewal of equilibrium appreciation.

**Nominal marginal costs in the intermediate goods sector** continued to decrease in 2011 Q4, mainly as a result of low wage growth, which was outweighed by a slight rise in labour-augmenting technology and a fall in the price of capital (see Chart II.2.9). Labour-augmenting technology is moving in line with whole-economy labour productivity. The fall in the price of capital reflects low external demand, manifesting itself in a decrease in production capacity utilisation, and low capital goods prices. Domestic cost pressures are weak at the forecast horizon thanks to only moderate wage growth, which will, moreover, be largely offset by the contribution of labour-augmenting technology.

The gap in **profit mark-ups in the consumer goods sector** closed in 2011 H2, as growth in consumer goods prices was higher than growth in costs (see Chart II.2.10). The forecast assumes that the increase in food prices in 2011 Q4 already reflected 60% of the total expected impact of the VAT increase (see BOX 1). The setting of profit mark-ups thus takes into account the advance pass-through of the higher VAT to food prices through expert adjustments. The increase in food prices will be commensurately lower in 2012 Q1. Weak economic activity in 2012 will cause the gap in profit mark-ups to open into negative values via slightly higher growth in costs than in market prices. The gap will not close until early 2013, when growth in economic activity is expected to gain momentum.

Whole-economy **labour productivity** continued to slow in year-on-year terms in 2011 Q4 and rose by 1.5% on average for 2011 as a whole. Labour productivity growth will turn slightly negative in 2012 H1. At the end of 2012, in the context of a pick-up in economic activity amid flat employment, labour productivity will accelerate again, reaching 2% at the end of 2013. It will thus remain flat on average in 2012 and attain an average annual growth rate of 1.9% in 2013.

Annual growth in nominal **wages in the business sector** increased to 3.1% (adjusted for seasonal effects) in 2011 Q3. Wages in the business sector maintained a similar growth rate in 2011 Q4. However, wage growth will start to slow gradually at the start of 2012, mainly because of the economic slowdown abroad. The forecast then expects a turnaround towards a gradual pick-up in wage growth in the business sector at the end of 2012, copying the recovery in domestic economic activity. The average wage in the business sector increased by 2.9% in 2011 as a whole and will slow to 2.5% this year. In 2013, wages will rise by 3.5% (see Chart II.2.11).

The average wage in the **non-business sector** probably increased by 1% year on year in 2011 Q4, while a decline of 0.1% was recorded for 2011 as a whole. As a result of the continuing consolidation of public budgets, growth in the average wage will be subdued in 2012, at 2.2%. Wages in the non-business sector will grow by around 2% in 2013 as well.

**Real GDP growth** slowed considerably in 2011 Q3 compared to the previous quarter, to 1.2% year on year, and decreased by 0.1% quarter on quarter (see Chart II.2.12). The previous forecast had expected the year-on-year figure to be 0.5 percentage point higher. The slowdown in annual GDP growth was due to investment, government and household consumption, whose contributions were negative. Net exports were the only component to make a positive contribution.

According to the forecast, annual **growth in economic activity** slowed further to 0.7% in 2011 Q4 (see Chart II.2.13). This was due mainly to a decline in the positive contribution of net exports compared to the previous quarter, amid a more pronounced increase in annual import growth than export growth. Domestic demand made a negative contribution to GDP growth in all components except investment. The forecast expects GDP growth of 1.7% for 2011 as a whole. This figure is lower than in 2010 as a result of smaller contributions from all components of GDP.

**Domestic demand** will remain subdued in 2012 in all expenditure components. Their contributions to annual growth in economic activity will reach only slightly positive values. Private consumption will be suppressed by only weak growth in disposable income, mainly reflecting the stagnant labour market, and also by the effect of the increase in the reduced VAT rate. The muted growth in government consumption is due to continued austerity measures. As a result of weak final consumption and external demand, investment also shows only negligible growth. **Net exports** show negative contributions to GDP growth for most of 2012 in connection with the subdued external demand. The forecast therefore expects zero GDP growth in 2012 as a whole. The contributions of most expenditure components to annual GDP growth should increase in 2013, with real economic activity increasing by 1.9%. Higher wages and salaries, social benefits and profits of small businesses (operating surplus and mixed income) will be reflected in rising disposable income, and private consumption will recover. The positive contribution of investment will increase slightly, driven by both fixed capital formation and change in inventories. Faster growth in effective external demand will lead to an increase in exports. Import-intensive exports, investment and private consumption will foster growth in imports. The contribution of net exports will continue to be positive on balance. Government consumption will be the only component to make a negative contribution to GDP growth in 2013. This is linked with planned government austerity measures aimed at mitigating the impacts of the economic downturn on public budgets.

CHART II.2.11

AVERAGE NOMINAL WAGE

**Wage growth in the business sector will slow this year**
(annual percentage changes; seasonally adjusted)

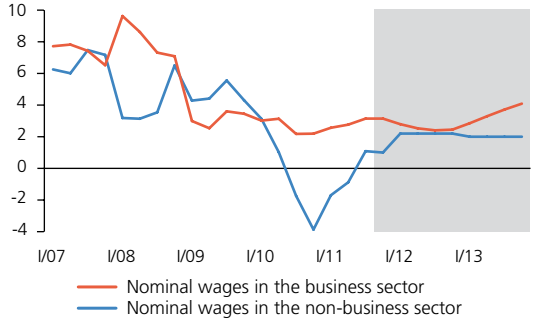



CHART II.2.12

GDP GROWTH FORECAST

**GDP growth will slow significantly in the coming quarters**
(percentage changes; seasonally adjusted)

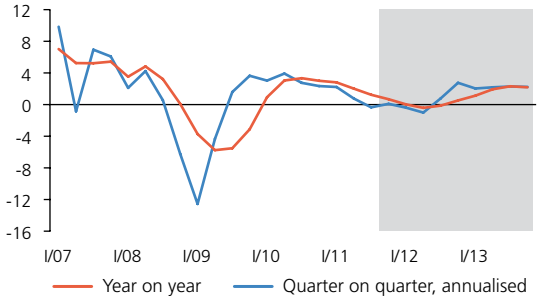



CHART II.2.13

ANNUAL GDP GROWTH STRUCTURE

**All components of GDP will be subdued in 2012 and will not pick up until 2013**
(annual percentage changes; contributions in percentage points; seasonally adjusted)

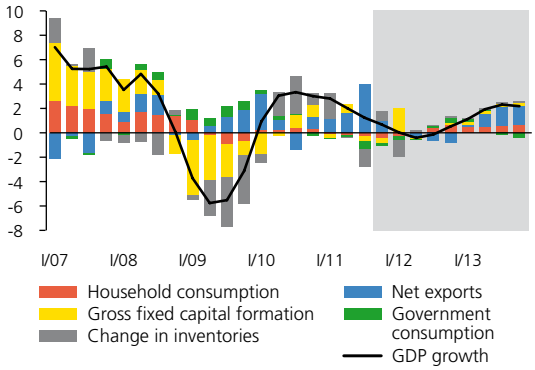


CHART II.2.14

LABOUR MARKET FORECAST

**Total employment will dip temporarily in 2012 H2**
(annual percentage changes in employment; general unemployment rate in percentages; seasonally adjusted)

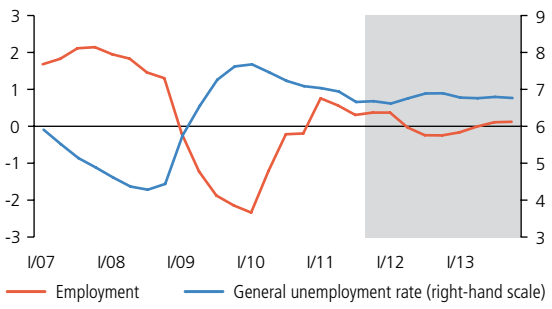



CHART II.2.15

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

**Household consumption will recover only gradually over the forecast horizon**
(annual percentage changes; seasonally adjusted)

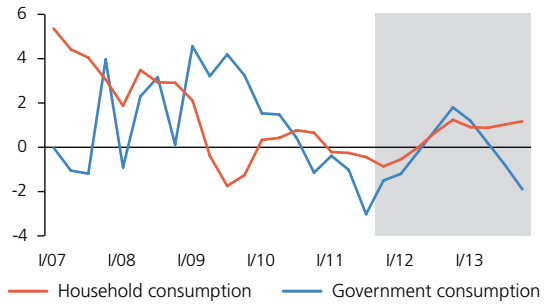
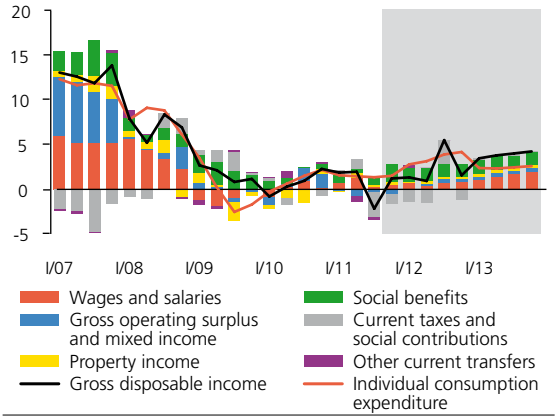



CHART II.2.16

NOMINAL DISPOSABLE INCOME

**Gross disposable income will rise owing to a rising volume of social benefits and wages and salaries**
(annual percentage changes; contributions in percentage points)




The fading economic recovery manifested itself in the labour market as a continued year-on-year rise in **total employment** at the end of last year. For 2011 as a whole, employment rose by 0.5% year on year. The onset of a phase of economic slowdown will be reflected in total employment in 2012 H2, when employment will dip temporarily. Total employment will return to growth, albeit modest, in 2013 H2 (see Chart II.2.14). Overall, employment will be flat on average in both 2012 and 2013.

As a result of the developments described above, the seasonally adjusted **general unemployment rate** was probably flat at 6.7% in 2011 Q4. It will increase slightly this year, reaching 7% in H2 (see Chart II.2.14). In 2013, the general unemployment rate will decline only negligibly, despite an economic recovery, as the labour market will react to movements in economic activity with the usual lag. It will therefore stand at 6.7% on average both in 2012 and 2013. Similar developments can be expected in the seasonally adjusted **total registered unemployment rate**, which will gradually increase to 9.1% at the end of 2012 and then come down from this level only marginally. It will therefore be 8.9% on average in 2012 and increase slightly to 9% in 2013.

Having dropped in 2011, real **household consumption** will recover slightly in 2012 H2. The still muted growth in consumption (0.3% for 2012 as a whole) will reflect relatively weak nominal disposable income growth linked with labour market developments. Real consumption will also be hindered by higher inflation due to a rise in indirect taxes. Consumption will rise by 1% in 2013 as a result of faster nominal wage growth and lower inflation (see Chart II.2.15).

Growth in nominal household consumption at the forecast horizon can largely be associated with the subdued growth in **gross disposable income**, which should gradually accelerate over the entire forecast horizon. The largest component of disposable income, i.e. the volume of wages and salaries, will be subdued in the near term, but its growth rate will gradually rise (see Chart II.2.16) in connection with the labour market developments described above. Another significant component of disposable income, social benefits, should also record positive contributions owing to a rise in pension expenditure. Operating surplus and mixed income, relating to the profits of businesses, will make negligible contributions to disposable income growth. The contribution of current taxes and social benefits to disposable income will be negative in 2012 and slightly positive in 2013.

The forecast expects the **saving rate** to fall in 2012 and start rising again in 2013. The saving rate will recover as conditions on the labour market improve and the substantial effect of the VAT change implemented in January 2012 fades away. However, it will not reach the pre-crisis level until the end of 2013 and will remain below 10%.

Real **government consumption** has been decreasing since 2010 owing to government austerity measures. The forecast expects this trend to continue into 2012 H1; afterwards, government consumption

should start rising again year on year. The full-year growth figure in 2012 will be slightly positive (0.3%). In 2013, government consumption will fall slightly again (by 0.3%) because of planned expenditure cuts aimed at reducing the impact of the shortfall in tax revenues on the general government balance.

**Gross capital formation** recorded a year-on-year decline of 6.6% in 2011 Q3. This result was due to base effects, as both fixed investment and inventories increased in quarter-on-quarter terms. Subdued growth in gross capital formation is expected over the forecast horizon (see Chart II.2.17), due to both its components. Overall, gross capital formation will grow by 1% and 1.7% in 2012 and 2013 respectively.

Growth in real exports of **goods and services** continued to slow in year-on-year comparison in 2011 Q3 (to 8.8%), while declining in quarter-on-quarter terms. This slowdown chiefly reflects the weaker external demand, showing up as a sharp deceleration in foreign trade turnover. The forecast expects weak annual export growth in 2012 (of 1.9% on average) due to subdued external demand, although this will be partly offset by a weaker koruna. Annual export growth should accelerate to almost 10% in 2013 H2 (see Chart II.2.18), when external demand will show renewed stable growth.

Given the slowdown in most components of domestic demand and exports in 2011 Q3, real **imports of goods and services** also recorded a decline in growth (to 3.1%). Amid weak growth in domestic private and government consumption and subdued external demand, imports of goods and services will grow at a low pace in 2012 as well (by 2.6% on average). Imports will accelerate gradually at the end of 2012 and in 2013 thanks to a recovery in import-extensive exports.

Given the export slowdown and the more pronounced fall in import growth, **net exports** made a significant positive contribution to annual GDP growth in 2011 Q4 (4 percentage points). The forecast expects a positive, although considerably smaller, contribution in 2011 Q4 (1 percentage point). Net exports should make a negative contribution to annual GDP growth throughout most of 2012. This will turn positive in 2013 (reaching 1.1 percentage points on average) thanks to an upswing in external demand and exports.

The balance of payments forecast expects the **current account** deficit to increase slightly in 2012 relative to the expected 2011 outcome and then return to a lower level in 2013 (see Table II.2.3). In relative terms, this implies an increase in the deficit from around 2.1% of GDP in 2011 to 2.8% in 2012 and a subsequent decline to 2.4% in 2013. The expected slight increase in the current account deficit this year is due to a lower trade surplus expected in connection with lower external demand and still unfavourable terms of trade. The expected significant decline in external and domestic demand is reflected mainly in lower export and import growth. However, real net exports will also decrease. Owing to an expected decline in commodity prices next year, the trade surplus will again increase. This will also be aided

CHART II.2.17

GROSS CAPITAL FORMATION

**Subdued growth in both components of capital formation is expected over the forecast horizon**
(annual percentage changes; seasonally adjusted)

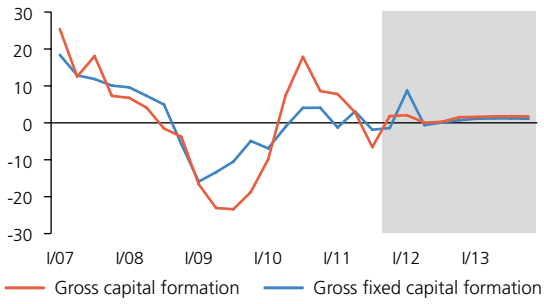



CHART II.2.18

REAL EXPORTS AND IMPORTS

**The contribution of net exports to GDP growth will be negative in 2012 but turn positive in 2013; both export growth and import growth will slow significantly**
(annual percentage changes; annual changes in CZK billions; seasonally adjusted)

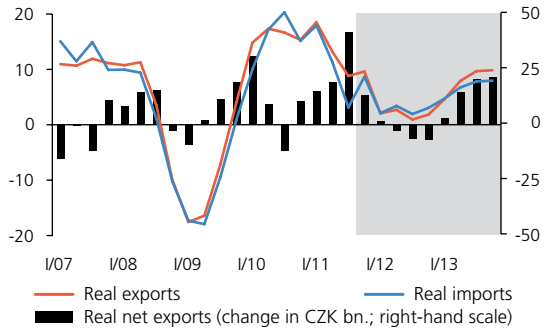



TABLE II.2.2

FORECAST OF SELECTED VARIABLES

**Wage growth will not accelerate until 2013**
(annual percentage changes unless otherwise indicated)

| | 2010 actual | 2011 exp. outc. | 2012 forec. | 2013 forec. |
|---|---|---|---|---|
| Real gross disposable income of households | 0.3 | -1.0 | -1.2 | 1.4 |
| Total employment | -1.0 | 0.5 | 0.0 | 0.0 |
| Unemployment rate (in per cent)[a] | 7.4 | 6.8 | 6.8 | 6.8 |
| Labour productivity | 4.5 | 1.5 | 0.0 | 1.9 |
| Average nominal wage | 1.9 | 2.4 | 2.5 | 3.2 |
| Average nominal wage in business sector | 2.5 | 2.9 | 2.5 | 3.5 |
| Current account deficit (ratio to GDP in per cent) | -3.1 | -2.1 | -2.8 | -2.4 |
| M2 | 4.0 | 3.4 | 6.1 | 5.2 |

a) ILO methodology, 15–64 years

**Table II.2.3**

**BALANCE OF PAYMENTS FORECAST**

**A lower trade surplus this year will increase the current account deficit**
(CZK billions)

| | 2010 actual | 2011 exp. outc. | 2012 forec. | 2013 forec. |
|---|---|---|---|---|
| A. CURRENT ACCOUNT | -116.4 | -80.0 | -110.0 | -95.0 |
| Trade balance | 53.8 | 115.0 | 90.0 | 110.0 |
| Balance of services | 75.3 | 65.0 | 60.0 | 65.0 |
| Income balance | -254.7 | -260.0 | -260.0 | -270.0 |
| Current transfers | 9.2 | 0.0 | 0.0 | 0.0 |
| B. CAPITAL ACCOUNT | 32.4 | 13.0 | 18.0 | 18.0 |
| C. FINANCIAL ACCOUNT | 183.2 | 45.0 | 95.0 | 85.0 |
| Direct investment | 97.0 | 72.0 | 65.0 | 65.0 |
| Portfolio investment | 157.4 | 0.0 | 40.0 | 20.0 |
| Financial derivatives | -3.0 | | | |
| Other investment[a)] | -68.2 | -27.0 | -10.0 | 0.0 |
| D. ERRORS AND OMISSIONS | -33.2 | | | |
| E. CHANGE IN RESERVES (- = increase) | 17.0 | | | |

a) forecast excluding operations of banking sector

**Table II.2.4**

**FISCAL FORECAST**

**The economic stagnation in 2012 will gradually be reflected in an increase in the general government deficit to GDP ratio**
(% of nominal GDP)

| | 2010 actual | 2011 forec. | 2012 forec. | 2013 forec. |
|---|---|---|---|---|
| Government revenue | 39.3 | 40.0 | 41.6 | 40.9 |
| Government expenditure | 44.1 | 43.7 | 45.0 | 44.8 |
| of which: interest payments | 1.4 | 1.4 | 1.5 | 1.7 |
| GOVERNMENT BUDGET BALANCE | -4.8 | -3.8 | -3.4 | -3.8 |
| of which: | | | | |
| primary balance[a)] | -3.4 | -2.3 | -1.8 | -2.2 |
| one-off measures[b)] | -0.1 | -0.2 | -0.1 | -0.4 |
| ADJUSTED BUDGET BALANCE[c)] | -4.7 | -3.6 | -3.3 | -3.5 |
| Cyclical component (ESCB method)[d)] | 0.1 | -0.2 | -0.7 | -0.7 |
| Structural balance (ESCB method)[d)] | -4.8 | -3.4 | -2.5 | -2.8 |
| Fiscal stance in p.p. (ESCB method)[e)] | 1.5 | 1.4 | 0.9 | -0.2 |
| Cyclical component (EC method)[d)] | -0.4 | -0.2 | -0.5 | -0.2 |
| Structural balance (EC method)[d)] | -4.3 | -3.4 | -2.7 | -3.2 |
| Fiscal stance in p.p. (EC method)[e)] | 1.0 | 0.9 | 0.7 | -0.5 |
| Government debt | 37.6 | 40.7 | 43.0 | 45.4 |

a) government budget balance minus interest payments
b) impact of the pension reform included for economic reasons in 2013
c) adjusted for one-off measures; CNB estimate
d) CNB estimate
e) year-on-year change in structural balance (positive value indicates fiscal restriction, negative value fiscal expansion)

by a recovery in external demand. The services balance should decline somewhat this year because of a slight fall in receipts from transport and tourism. The overall surplus should rise slightly again in 2013 owing to a decline in the other services deficit. The income deficit will stagnate this year as a result of the contrary effects of a decline in non-residents' direct investment earnings and an increase in net interest expenditure. In 2013, the interest income deficit, linked with a rise in debt liabilities to non-residents, will increase further and the income deficit will widen. Current transfers should remain roughly balanced, with the expected higher net drawdown of EU funds being offset by a widening of the private transfers deficit.

The current account deficit will be financed by a capital account surplus (due to drawdown of EU funds and sales of emission permits by private entities) and a financial account surplus (due mainly to net inflows of direct and portfolio investment). The net inflow of **direct investment** will be slightly lower in 2012 and 2013 than in 2011 and will be concentrated exclusively in reinvested earnings. The forecast contains very slightly negative net investment in equity and other capital, due primarily to the investments announced by ČEZ in Turkey and Romania. Foreign government bond issues should be the main factor behind a renewed inflow of **portfolio investment** this year.[2] Modest economic growth in 2013 should help to stimulate residents' interest in foreign portfolio investment. The overall balance will thus decline, but will remain positive as a result of growing holdings of government bonds by non-residents.

The future macroeconomic developments described above are reflected in the **government finance** outlook for 2012–2013 (see Table II.2.4). As in the previous forecasts, the fiscal outlook works with an increase in the reduced VAT rate from 10% to 14% at the start of this year and with the assumption of unification of the two VAT rates at 17.5% in 2013. The forecast also incorporates the effect of the pension reform, which will be launched by law in 2013. It also newly includes taxation of lotteries and other games of chance under new legislation, which will increase tax revenues by CZK 7.2 billion as from 2012.

According to the forecast, the general government deficit fell to 3.8% of GDP in **2011** owing to consolidation measures adopted in connection with the preparation of the 2011 state budget. The restrictive effect of these measures on government and household consumption hindered GDP growth in 2011 by roughly 0.6 percentage point. Problems with the drawdown of EU funds were reflected in lower capital income and government investment.

The forecast for **2012** expects the general government deficit to fall to 3.4% of GDP, mainly as a result of higher revenue due to the increase in the lower VAT rate and the taxation of lotteries and other games

2 The Ministry of Finance announced an issue of EUR 0–3 billion for 2012. The forecast assumes an issue of EUR 1.5 billion.

of chance. According to a revised CNB estimate, the increase of the reduced VAT rate will boost tax revenues by around CZK 29 billion. The higher living costs of households connected with the VAT increase will be partly offset by a rise in the personal income tax discount for dependent children (estimated impact: CZK 3.4 billion) and by an increase in pensions (CZK 5.8 billion). The resulting restrictive effect of fiscal policy enters the forecast mainly via household consumption, with an estimated impact on real GDP growth of around -0.4 percentage point. The forecast for the other government revenue and expenditure items is based on the assumption of unchanged fiscal policy compared to 2011.

According to adopted legislation, a pension reform should be launched in **2013**. A shortfall in social security revenue of CZK 15 billion (for details see BOX 1 *Pension system reform* in Inflation Report IV/2011) coupled with the fiscal impacts of the slowdown in economic growth will lead to a rise in the general government deficit to 3.8% of GDP. The second planned stage of the VAT rate changes will have a roughly neutral effect on the budget. The forecast for 2013 includes an assumption of additional (as yet unspecified) spending cuts that are fully within the competence of the government. These measures are of the same magnitude as in the previous forecast and will dampen GDP growth next year. However, according to CNB estimates, even this will not be enough to ensure fulfilment of the government's consolidation strategy aimed at bringing the general government deficit down below 3% of GDP in 2013.

The general government **structural deficit** exceeded 3% of GDP in 2011 and will not converge towards the medium-term fiscal objective of 1% under the Stability and Growth Pact in 2012–2013. The expected general government deficit will lead to an increase in general government debt from 37.6% of GDP in 2010 to more than 45% of GDP in 2013.

The government's response to the budget impacts of the expected economic downturn represents a **risk to the fiscal forecast**. Any further austerity measures in the fiscal area, which would probably further deepen the cyclical economic downturn, would foster a lower general government deficit. Likewise, should the pension reform be postponed[3] to 2014 or 2015, the deficit-to-GDP ratio would decline in 2013 by almost 0.4 percentage point. An additional risk stems from potential property settlement between the state and churches. [4]

3 Postponement of the pension reform is being considered primarily for technical reasons, as the reform assumes that the single collection authority will already be up and running. However, the authority will not be established until 2015.

4 In connection with property settlement between the state and churches, financial compensation of CZK 59 billion provided to churches and religious societies in 30 annual instalments is expected in addition to restitutions in kind totalling CZK 75 billion. In the national accounts statistics, the compensation will be reported as a non-recurring expenditure in the year in which the law on church property restitutions is passed. This will increase the general government deficit under ESA 95 methodology by the same amount (roughly 1.5% of GDP). The compensation will be exempted from the calculation of the structural deficit.

CHART II.3.1

CHANGE IN THE HEADLINE INFLATION FORECAST

**The forecast for headline inflation this year has moved upwards owing to a higher outlook for both administered price inflation and net inflation**
(annual percentage changes; differences in p.p. – right-hand scale)

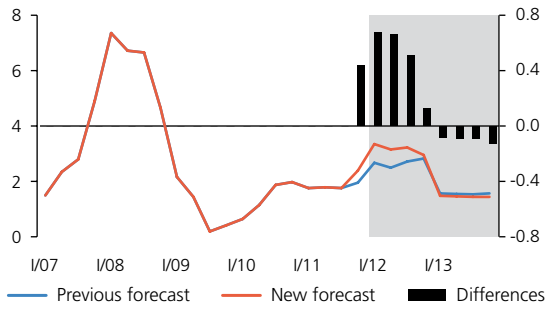



CHART II.3.2

CHANGE IN THE NET INFLATION FORECAST

**Higher energy prices and a weaker exchange rate are reflected in an increase in the net inflation forecast in 2012**
(annual percentage changes; differences in p.p. – right-hand scale)

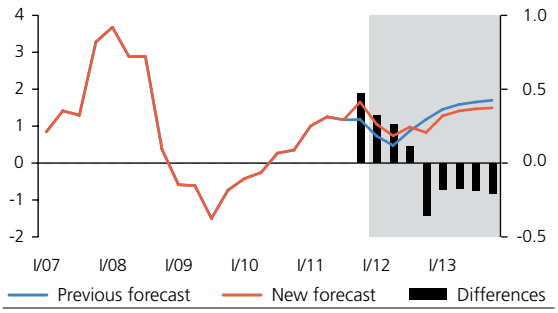
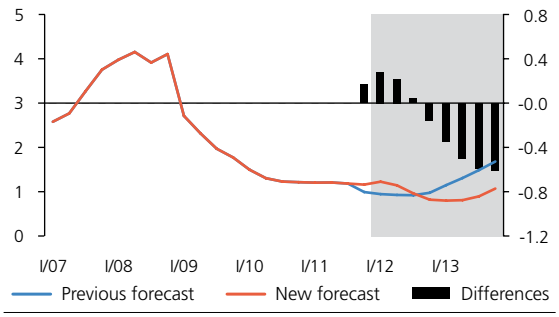



CHART II.3.3

CHANGE IN THE INTEREST RATE PATH

**The market interest rate path has moved upwards at the start of the forecast, but is lower in the longer term**
(in %; differences in p.p. – right-hand scale)




## II.3 COMPARISON WITH THE PREVIOUS FORECAST

*The predictions for headline and monetary-policy relevant inflation in 2012 have both been increased compared to the previous forecast. The outlooks for administered prices and net inflation have been revised upwards. A lower outlook for foreign interest rates and subdued domestic inflation pressures are fostering lower domestic interest rates. In 2012 H1, however, this effect is outweighed by a weaker exchange rate prediction due to fundamental and short-term reasons and by a higher outlook for administered prices. The considerably weaker exchange rate is due to a lower external demand outlook and a revision of nominal net exports. The annual GDP growth rate is significantly lower for both 2012 and 2013. This is due mainly to a lower outlook for growth in the effective euro area. The expected pace of wage growth in the business sector has also been revised downwards.*

Compared to the previous prediction, the forecast for annual **headline inflation** is higher for this year and slightly lower for next year (see Chart II.3.1). The forecasted growth in administered prices is higher over the entire forecast horizon, while net inflation is higher only in the first three quarters of 2012. The assumptions regarding the first-round effects of indirect tax changes remain unchanged, so the forecast for **monetary-policy relevant inflation** changes to the same extent as that for headline inflation.

Expected **administered price inflation** in 2012 was revised upwards, mainly as a result of faster growth in natural gas prices for households and a higher expected increase in regulated rents. In addition, heat prices and water supply and sewerage collection charges will rise faster. By contrast, the expected rise in electricity prices was revised downwards. Administered price inflation in 2013 is only slightly higher, as a result of a smaller expected decrease in world prices of natural gas and only slightly higher year-on-year appreciation of the koruna-dollar exchange rate. On the other hand, the outlook for growth in regulated rents in 2013 was decreased.

Compared to the previous forecast, annual **net inflation** is initially higher, but lower from 2012 Q4 onwards (see Chart II.3.2). Lower economic activity reduces inflation over the entire forecast horizon. In 2012 H1, its effect is outweighed by higher energy prices and gradual pass-through of the weaker exchange rate. The temporarily higher food price inflation due to advance pass-through of the VAT change will be offset in early 2012.

All the variables of the **external environment outlook** have been revised. By comparison with the assumptions of the previous forecast, the 3M EURIBOR path has dropped significantly over the entire forecast horizon in response to the continuing euro area debt crisis

(see section II.1). The expected growth rate of external demand has been reduced significantly, especially in 2012, towards the alternative scenario of the previous forecast.[5] The annual growth rates of foreign producer prices are slightly higher at the start of the forecast horizon, reflecting commodity price growth with a lag. From mid-2012 onwards, by contrast, producer prices are revised downwards because of an expected slowdown in economic activity.

The forecast for domestic **market interest rates** is higher at the start of the forecast, but lower from 2012 Q4 onwards (see Chart II.3.3). The lower domestic interest rates are due mainly to a lower outlook for foreign interest rates and to the initial state, whose anti-inflationary effect stems from low domestic economic activity and modest wage growth. In 2012 H1, this factor is outweighed by low external demand, which fosters higher rates via a deterioration in net exports and subsequent fundamental depreciation pressures on the nominal exchange rate of the koruna. The short-term exchange rate prediction for 2012 Q1 and a higher outlook for administered prices act in the same direction (see Chart II.3.4).

The prediction of the nominal **exchange rate of the koruna against the euro** has been revised towards a substantially weaker level (see Chart II.3.5). The new exchange rate path is due mainly to a major downward shift in external demand and a significant revision of past net exports (see BOX 2). The noticeably higher exchange rate prediction at the start of the forecast horizon also reflects recent developments, due among other things to the increased uncertainty associated with the escalation of the euro area debt crisis.

**BOX 2**
**Extraordinary revision of the quarterly national accounts**

One of the key factors affecting the message of the new forecast and its comparison with the previous one is an extraordinary revision of the quarterly national accounts that was published by the CZSO in December 2011 and applies to the entire available time series. Overall annual GDP growth was revised only slightly, but a more significant reassessment was made in the expenditure component breakdown of GDP. Not only were the levels and growth rates revised, but also the reference year for constant prices was changed from 2000 to 2005.

Household and government consumption underwent a significant revision. The time series were shifted upwards in connection with more accurate estimation of imputed rents and

5 The expected growth rate of GDP abroad in 2012 is roughly 0.4 percentage point above the alternative scenario described in Inflation Report IV/2011.

CHART II.3.4

DECOMPOSITION OF CHANGES IN THE INTEREST RATE FORECAST

**A weaker exchange rate and administered prices foster higher rates at the start of the forecast, but the lower outlook for foreign interest rates and currently subdued domestic inflation pressures prevail in the longer term**
(3M PRIBOR; percentage points)

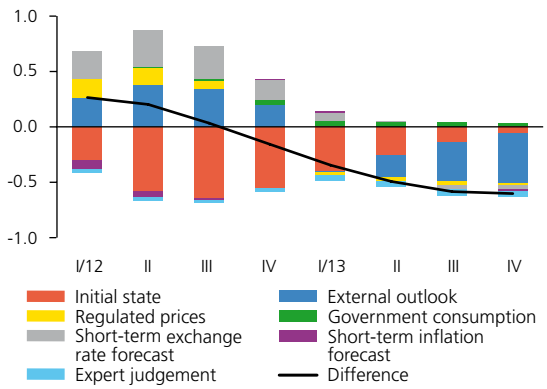



CHART II.3.5

CHANGE IN THE EXCHANGE RATE FORECAST

**The exchange rate is substantially weaker over the entire horizon**
(CZK/EUR; differences in CZK – right-hand scale)

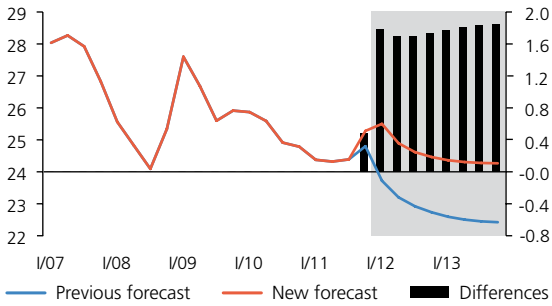



CHART 1 (BOX)

CHANGES IN HOUSEHOLD CONSUMPTION

**The level of nominal household consumption was shifted upwards**
(CZK billions; seasonally adjusted; annual percentage changes in real consumption before and after revision – right-hand scale)

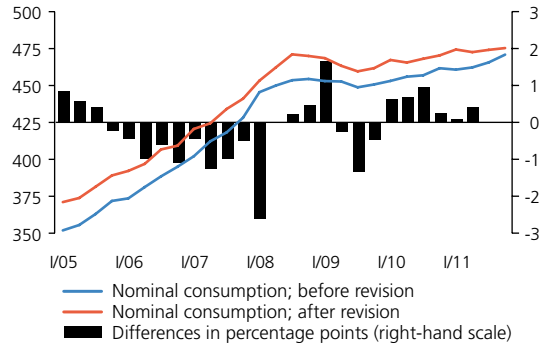
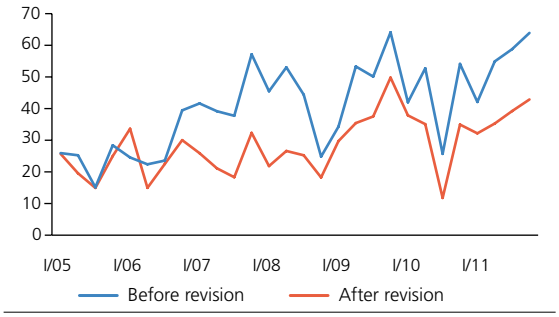


CHART 2 (BOX)

CHANGES IN NOMINAL NET EXPORTS

**The level of nominal net exports was revised downwards significantly**

(CZK billions; seasonally adjusted)




the grey economy (see Chart 1). In nominal terms, household consumption was increased by around CZK 44 billion on average every year.

According to the CZSO, the revision of the net exports data was due among other things to better recording of quasi-transitive trade and direct trade costs linked with trade in goods. These methodological changes gave rise to an increase in the nominal foreign trade balance before 2005 and a decrease thereafter (see Chart 2). Simultaneously, the growth rates of the export deflators were revised downwards and those of the import deflators upwards, resulting in a deterioration of the terms of trade. Overall, these effects increased real net exports. At the same time, the annual growth rates of real exports and imports in recent years were reduced (on average by 2.2 and 2.4 percentage points respectively in 2004–2010). From the perspective of the new forecast relative to the previous one, the downward revision of nominal net exports in the national accounts had the largest impact. It contributes significantly to a change in the nominal exchange rate path at the forecast horizon towards slower appreciation (with an impact of roughly CZK 1/EUR at the longer end of the forecast).

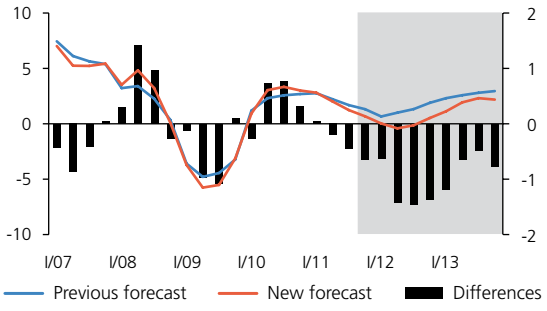
The data on the remaining expenditure component, i.e. real gross capital formation, were also revised upwards. This applied solely to fixed investment, while change in inventories was reduced slightly. According to the CZSO, the changes in investment were due mainly to better methods for estimating individual housing construction and the inclusion of capitalisation of internally developed software.

CHART II.3.6

CHANGE IN THE GDP FORECAST

**The forecast for annual GDP growth has been reduced substantially**

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




The forecast for annual **GDP** growth is considerably lower over the entire forecast horizon (see Chart II.3.6). For 2012 as a whole, it has been reduced from 1.2% in the previous prediction to zero. This change is due chiefly to a reduction in the external demand outlook.

The new forecast expects lower growth in **household consumption** as a result of more subdued labour market developments, as wage growth and to a lesser extent also employment have been revised downwards compared to the previous forecast. The expected lower growth of **gross capital formation** reflects the reduced outlook for foreign and domestic economic activity.

The new forecast for the growth rates of **export and imports** is affected significantly by the expected evolution of external demand, especially in 2012. This effect is only partly offset by a weaker exchange rate, which fosters a rise in exports.

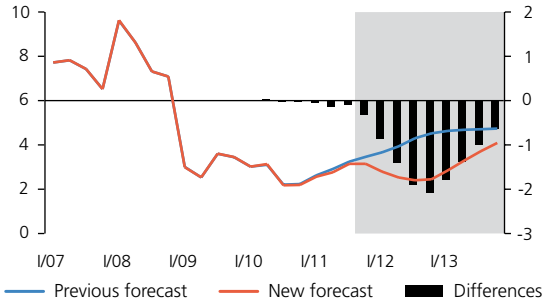
The forecast for average **nominal wage growth** in the business sector has been lowered sharply compared to the previous forecast in response to subdued leading indicators of wage growth for 2011 Q4 and the expected slowdown in economic activity this year (see Chart II.3.7).

CHART II.3.7

CHANGE IN THE NOMINAL WAGE FORECAST

**The business-sector nominal wage forecast has been lowered**

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



## II.4 ALTERNATIVE SCENARIOS AND SENSITIVITY ANALYSES

*The risks to the forecast continue to be associated with the external situation. The future course of the euro area debt crisis and its impact on external demand are still the main risks to the forecast. This time, however, the risk is not as clear-cut as in the previous forecast and therefore did not result in the preparation of an alternative or sensitivity scenario. Only the standard exchange rate sensitivity scenario was prepared.*

### II.4.1 Exchange rate sensitivity scenario

This sensitivity scenario quantifies the impacts of a **different exchange rate path** compared to the forecast. This standard 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 24.7/26.3 to the euro in 2012 Q1, compared to CZK 25.5 in the baseline scenario.

The table shows the results of the depreciation scenario, expressed as deviations from the baseline scenario of the forecast (see Table II.4.1). The scenario of a stronger nominal exchange rate leads to the same results but with the opposite sign.

Exchange rate depreciation improves producers' price competitiveness and, via higher net exports, leads to higher GDP growth compared to the baseline at the start of the forecast horizon. It also results in higher import prices and stronger inflation pressures. The market interest rate path is therefore higher than in the baseline scenario. However, GDP growth then slows slightly in response to tighter monetary policy and an exchange rate correction and returns to the baseline scenario at the end of the forecast horizon.

**Table II.4.1**

**EXCHANGE RATE SENSITIVITY SCENARIO**

**Exchange rate depreciation leads to temporarily higher inflation and faster GDP growth than in the baseline scenario; interest rates increase**
(deviations from baseline scenario)

| | CPI inflation (in p.p.) | 3M PRIBOR (in p.p.) | GDP (in p.p.) | Nominal exchange rate (CZK/EUR) |
|---|---|---|---|---|
| I/12 | 0.0 | 0.0 | 0.1 | 0.8 |
| II/12 | 0.0 | 0.3 | 0.2 | 0.3 |
| III/12 | 0.1 | 0.3 | 0.1 | 0.1 |
| IV/12 | 0.2 | 0.3 | 0.0 | 0.0 |
| I/13 | 0.2 | 0.1 | -0.2 | 0.0 |
| II/13 | 0.1 | 0.0 | -0.2 | 0.1 |
| III/13 | 0.1 | 0.0 | -0.2 | 0.1 |
| IV/13 | 0.0 | -0.1 | -0.1 | 0.1 |

## II.5 FORECASTS BY OTHER ENTITIES

*Analysts' inflation expectations decreased further in 2011 Q4 and at the start of this year at both the one-year and three-year horizon. They are therefore only slightly above the inflation target of 2% at both horizons. The analysts expect GDP growth to be only modest this year and to pick up pace next year. The majority of them also expect the koruna to appreciate and the CNB's key rates to be flat in the following 12 months. All the analysts were expecting stable key rates before the CNB Bank Board meeting in February. The market rate outlook also indicates stability. It is almost identical to the CNB forecast in the near future and only slightly higher in the longer term.*

**Inflation expected by financial market analysts** at the one-year horizon edged down during 2011 Q4. A more substantial decline was recorded in the January survey, in which the analysts took into account the fact that the impact of this year's rise in the reduced VAT rate would fall out of consumer price inflation at this horizon. By contrast, business managers increased their December 2011 prediction slightly. The expectations of both groups of respondents thus remained above the CNB's target of 2% (see Table II.5.1). Analysts' inflation expectations at the three-year horizon fell further towards the CNB's target of 2% and are currently only slightly above it.

The indicator of **inflation perceived by households** has been rising gradually from negative values over the last two years and was fluctuating around zero in 2011 Q4 (see Chart II.5.1). This means that households on average felt that prices rose only moderately over the last 12 months. By contrast, the indicator of expected inflation is positive. This suggests that the number of respondents who expect prices to rise more rapidly over the next 12 months is higher than the number of those who expect prices to stay the same or increase more slowly than in the recent past. Moreover, this indicator increased in 2011 H2.

**Both the FMIE and CF analysts** expect GDP to grow only modestly this year (see Table II.5.1 and Table II.5.2). Next year the economy should expand by around 2%, and wage growth should also pick up pace. Compared to the average koruna exchange rate so far in January 2012, the analysts participating in both the FMIE and the CF expect the exchange rate to be stronger at the one-year horizon (by 5.7% and 3.3% respectively). Before the CNB Bank Board meeting in February, all eleven FMIE analysts were expecting no changes in key rates at this meeting. Most of the analysts also expect rates to remain flat at the current level at the one-year horizon. Their estimates for the repo rate lie in the range of 0.50–1.00%. The forecasts for interest rates (including market rates) have shifted slightly downwards in recent months. Most analysts currently believe that the CNB's key rates will remain flat throughout this year.

TABLE II.5.1

### EXPECTED INDICATORS OF FMIE AND CORPORATIONS

**The analysts' inflation expectations are slightly above the CNB's target**

(at 1Y; annual percentage changes unless otherwise indicated)

| | 9/11 | 10/11 | 11/11 | 12/11 | 1/12 |
|---|---|---|---|---|---|
| FMIE: | | | | | |
| CPI | 2.8 | 2.8 | 2.8 | 2.6 | 2.1 |
| CPI, 3Y horizon | 2.3 | 2.2 | 2.2 | 2.1 | 2.1 |
| Real GDP in 2011 | 2.0 | 1.9 | 1.9 | 1.7 | |
| Real GDP in 2012 | 1.6 | 1.3 | 0.9 | 0.2 | 0.1 |
| Nominal wages in 2011 | 2.4 | 2.3 | 2.3 | 2.3 | |
| Nominal wages in 2012 | 3.4 | 3.1 | 2.9 | 2.8 | 3.0 |
| CZK/EUR exchange rate (level) | 23.7 | 24.0 | 24.3 | 24.2 | 24.2 |
| 2W repo rate (in per cent) | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 |
| 1Y PRIBOR (in per cent) | 2.0 | 1.9 | 1.9 | 1.8 | 1.8 |
| Corporations: | | | | | |
| CPI | 2.4 | | | 2.5 | |

CHART II.5.1

### PERCEIVED AND EXPECTED INFLATION

**The inflation expectations of households increased slightly in 2011 Q4**

(source: European Commission Business and Consumer Survey)

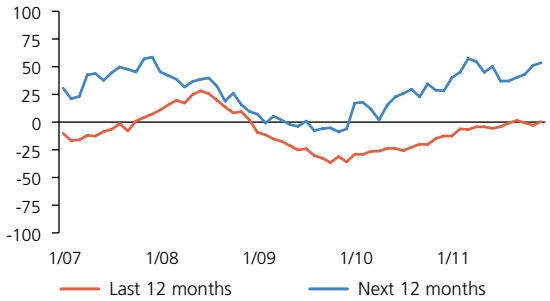



TABLE II.5.2

### CF EXPECTED INDICATORS

**The CF analysts expect economic growth to slow significantly this year**

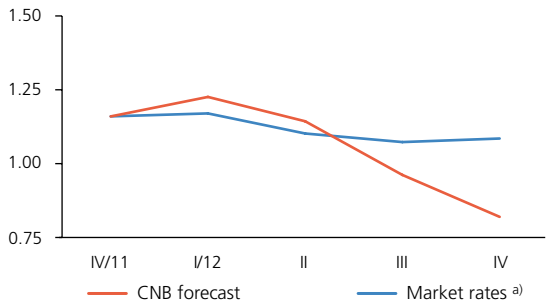
(at 1Y; annual percentage changes unless otherwise indicated)

| | 9/11 | 10/11 | 11/11 | 12/11 | 1/12 |
|---|---|---|---|---|---|
| Real GDP in 2011 | 2.1 | 2.0 | 2.0 | 1.8 | |
| Real GDP in 2012 | 1.8 | 1.5 | 0.9 | 0.3 | 0.3 |
| Nominal wages in 2011 | 2.4 | 2.4 | 2.4 | 2.2 | |
| Nominal wages in 2012 | 3.7 | 3.4 | 3.2 | 2.8 | 3.2 |
| CZK/EUR exchange rate (level) | 23.9 | 24.0 | 24.1 | 24.3 | 24.8 |
| 3M PRIBOR (in per cent) | 1.5 | 1.3 | 1.3 | 1.3 | 1.3 |

CHART II.5.2

**FRA RATES VERSUS THE CNB FORECAST**

**The near-term outlook for FRA rates is in line with the CNB forecast, but the longer-term outlook is slightly higher**
(percentages)




a) for 2011 Q4 and 2012 Q1 the 3M PRIBOR and for 2012 Q2–2012 Q4 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 20 January 2012

**Compared to the CNB's new forecast**, the analysts expect real GDP growth to be roughly the same in both 2012 and 2013. Inflation expected at the one-year horizon is slightly above the CNB forecast. The exchange rate outlooks at the one-year horizon differ only slightly from the CNB forecast. Compared to the new CNB forecast, the analysts participating in the FMIE expect the koruna to be 0.9% stronger, while the CF analysts predict that it will be 1.7% weaker. The analysts' expectations regarding the 2W repo rate and market rates at the one-year horizon are slightly above the 3M PRIBOR path consistent with the CNB forecast.

Chart II.5.2 provides a **comparison of expected 3M market rates** derived from FRA quotations and the interest rate path consistent with the new CNB forecast. The two paths are almost identical in the near future. In the longer term the current market outlook is slightly higher.

## III. CURRENT ECONOMIC DEVELOPMENTS

### III.1 INFLATION

*Headline and monetary-policy relevant inflation both stood at 2.4% in December 2011 and were thus slightly above the CNB's target. The rise in inflation in Q4 was probably due mainly to the partial pass-through of the VAT change introduced in January 2012 to food prices already at the end of last year. Annual administered price inflation also rose significantly compared to the previous quarter. Low wage growth and persisting weak domestic demand, affected by fiscal consolidation, had a dampening effect on market price inflation. Depreciation of the koruna had the opposite effect on prices.*

#### III.1.1 Fulfilment of the inflation target

**Headline inflation** was slightly above the CNB's inflation target level in 2011 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 2011 Q4, we have to examine above all the period roughly from April 2010 to December 2010 (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/2010 forecast with subsequent inflation.

The **Inflation Report III/2010 forecast** expected headline inflation to rise quite quickly at first from the low figures at the start of the forecast horizon. These figures had been due mostly to a downturn in real economic activity; as a result, there had been no apparent inflationary pressures from the domestic economy or from import prices. Headline inflation was expected to exceed the 2% inflation target for a short time at the end of 2010. Adjusted for the effect of indirect tax changes it was expected to stay below the target. Once the tax effect had subsided at the start of 2011, headline inflation was forecasted to moderate and fluctuate close to the target (see Chart III.1.1) thanks to a modest rise in economic activity supported by easy monetary policy over the entire forecast horizon.

Headline **inflation in reality** was close to the forecasted values over almost the entire forecast horizon and rose just above the forecast and thus also above the inflation target only in 2011 Q4. However, the individual consumer price categories showed deviations in both directions. Adjusted inflation excluding fuels, which remained negative, was strongly anti-inflationary. It reflected low domestic

Chart III.1.1

**FORECAST VERSUS ACTUAL INFLATION**

**Inflation was slightly above the IR III/2010 forecast in 2011 Q4**
(annual percentage changes)

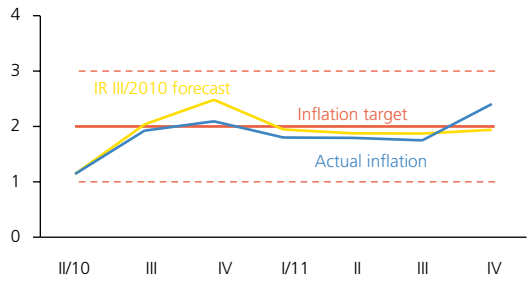



Table III.1.1

**FULFILMENT OF THE INFLATION FORECAST**

**Adjusted inflation excluding fuels fostered significantly lower inflation, while the contributions of other components were higher than forecasted**
(annual percentage changes; contributions in percentage points)

| | IR III/2010 forecast | 2011 Q4 outturn | Contribution to total difference |
|---|---|---|---|
| CONSUMER PRICES | 1.9 | 2.4 | 0.5 |
| Breakdown into contributions: | | | |
| administered prices | 2.9 | 5.9 | 0.5 |
| first-round impacts of changes to indirect taxes | 0.0 | 0.0 | 0.0 |
| food prices[a)] | 1.7 | 4.5 | 0.7 |
| fuel prices[a)] | 4.5 | 10.2 | 0.2 |
| adjusted inflation excl. fuels[a)] | 1.5 | -0.4 | -0.9 |

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

**Table III.1.2**

**FULFILMENT OF THE EXTERNAL ASSUMPTIONS**

**External cost factors fostered higher inflation**
(annual percentage changes unless otherwise indicated)

| | | III/10 | IV/10 | I/11 | II/11 | III/11 | IV/11 |
|---|---|---|---|---|---|---|---|
| GDP in euro area[a), b), c)] | p | 1.6 | 1.4 | 1.8 | 1.8 | 1.9 | 2.1 |
| | o | 3.0 | 2.9 | 3.6 | 2.9 | 2.5 | - |
| PPI in euro area[b), c)] | p | 2.9 | 3.0 | 2.5 | 1.8 | 2.1 | 2.3 |
| | o | 3.9 | 4.8 | 6.4 | 6.4 | 5.9 | 5.2 |
| 3M EURIBOR | p | 1.0 | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 |
| (percentages) | o | 0.9 | 1.0 | 1.1 | 1.4 | 1.6 | 1.5 |
| USD/EUR exchange rate | p | 1.26 | 1.21 | 1.20 | 1.20 | 1.20 | 1.21 |
| (levels) | o | 1.29 | 1.36 | 1.37 | 1.44 | 1.41 | 1.35 |
| Brent crude oil price | p | 72.6 | 75.4 | 77.0 | 78.3 | 79.3 | 79.9 |
| (USD/barrel) | o | 76.4 | 86.9 | 105.2 | 116.8 | 112.9 | 109.3 |

p – prediction, o – outturn
a) at constant prices
b) seasonally adjusted
c) effective indicator as defined in the IR III/2010 forecast

**Table III.1.3**

**FULFILMENT OF THE FORECAST FOR KEY VARIABLES**

**Domestic economic activity was rising faster than forecasted until mid-2011**

| | | III/10 | IV/10 | I/11 | II/11 | III/11 | IV/11 |
|---|---|---|---|---|---|---|---|
| 3M PRIBOR | p | 1.1 | 1.1 | 1.2 | 1.3 | 1.5 | 1.7 |
| (percentages) | o | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| CZK/EUR exchange rate | p | 25.3 | 24.9 | 24.6 | 24.4 | 24.2 | 24.1 |
| (levels) | o | 24.9 | 24.8 | 24.4 | 24.3 | 24.4 | 25.3 |
| Real GDP[a)] | p | 2.2 | 1.5 | 1.1 | 1.8 | 1.8 | 2.7 |
| (annual perc. changes) | o | 3.3 | 3.0 | 2.8 | 2.0 | 1.2 | - |
| Nominal wages[b)] | p | 2.9 | 2.7 | 3.1 | 3.5 | 3.7 | 3.1 |
| (annual perc. changes) | o | 2.8 | 1.7 | 3.0 | 3.0 | 2.7 | - |

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

inflation pressures and partly also a stronger koruna at the start of the period. This negative deviation from the forecast was offset by higher food prices (an unexpectedly strong rise in agricultural producer prices and the pass-through of the VAT change introduced in January 2012 to food prices already at the end of last year), administered prices (regulated rents and energy prices) and fuel prices (world oil prices and a weaker exchange rate at the end of 2011). The prediction of zero impacts of changes to indirect taxes was fulfilled (see Table III.1.1).

**External economic factors** contributed significantly to domestic inflation. The recovery in external – and therefore also domestic – economic activity was stronger than forecasted. At the same time, world oil prices and later also international production prices rose more quickly than forecasted. Foreign interest rates were at the expected levels initially and slightly higher only in the longer term (see Table III.1.2). Overall, external developments thus fostered higher domestic inflation.

Domestic **interest rates and the exchange rate** also differed from the forecast. Interest rates remained stable over the entire horizon under review and in the end deviated from the forecast, which had expected them to rise gradually. The exchange rate was mostly somewhat stronger than forecasted in response to improving export performance and a positive rating outlook for the Czech Republic. The koruna depreciated significantly only at the end of 2011, owing to the escalation of the euro area debt crisis (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 stronger domestic economic growth was driven – via exports – by a faster recovery of external demand. At the same time, the appreciating koruna offset the impacts of the faster growth and higher external inflation on domestic inflation. The faster GDP growth was also due to stronger growth in gross capital formation caused by replenishment of inventories and higher household consumption. By contrast, wage growth was more subdued than forecasted. Owing to the above factors and to the advance pass-through of the VAT change introduced in January 2012 to food prices, headline inflation was slightly above the target in 2011 Q4. The low domestic interest rates reflected, in addition to subdued domestic inflationary pressures, continuing easy global monetary policy and – in the recent period – also a worsening external outlook due to the escalation of the euro area debt crisis.

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 2010 and December 2010, the Bank Board assessed the risks of the forecasts mostly as being balanced. Market interest rates in the period under review were slightly higher than implied by the forecast. Nonetheless, both headline and monetary-policy relevant inflation fluctuated close to the forecasted

values over almost the entire period, deviating slightly above the 2% inflation target only at the end of 2011 (moreover probably partly because of the pass-through of the increase in the reduced VAT rate introduced in January 2012 to food prices already at the end of last year). From this perspective, based on current knowledge, it seems that the monetary policy pursued from April 2010 to December 2010 was appropriate.

### III.1.2 Current inflation

**Annual inflation**[6] increased significantly in 2011 Q4, peaking at 2.5% in November. In December it edged down to 2.4%, which was 0.6 percentage point more than in September (see Chart III.1.2). This pronounced change was due mainly to a noticeable rise in food and administered price inflation and partly also to less negative adjusted inflation excluding fuels (see Chart III.1.3). The main sources of the increase in inflation in 2011 Q4 were probably the partial pass-through of the impact of the increase in the reduced VAT rate to food prices before this change came into effect (on 1 January 2012) and rising natural gas prices, which fed through to administered prices. The higher inflation was also due to a weaker exchange rate. By contrast, domestic macroeconomic factors dampened inflation.

Turning to the **structure of annual inflation**, the effect of administrative factors, i.e. the first-round effects of changes to indirect taxes (which were, however, zero in this period) and administered prices, was offset in December 2011 by the effect of market prices (see Chart III.1.4).

**Administered prices** thus remained an important component of annual inflation (see Chart III.1.4). The marked rise in their annual growth rate to 7% in December was chiefly a result of rising prices of natural gas and also of administered health care items, which increased mainly in December, when hospital stay fees were increased. Regulated rents continued rising as well. Changes in electricity prices and water supply and sewerage collection charges made in previous quarters also contributed to annual administered price inflation.

Annual **market price inflation**, as measured by net inflation, also increased markedly in 2011 Q4 (to 1.5% in December). This was chiefly due to the aforementioned stronger food price growth, whose contribution to annual market price inflation was still the biggest (see Chart III.1.4). By contrast, the contribution of fuels decreased somewhat, broadly offsetting the effect of the less negative adjusted inflation. A persisting annual decline in prices within adjusted inflation excluding fuels continued to foster low inflation. Adjusted inflation thus continued to show a significant effect of subdued demand and

6 Measured by year-on-year growth in consumer prices.

CHART III.1.2

INFLATION

**Inflation increased in 2011 Q4**
(annual percentage changes)

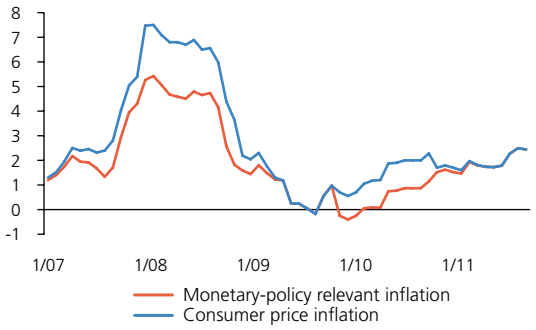



CHART III.1.3

INFLATION COMPONENTS

**Annual food price inflation increased noticeably, while fuel price inflation slowed**
(annual percentage changes; excluding indirect tax changes except for administered prices)

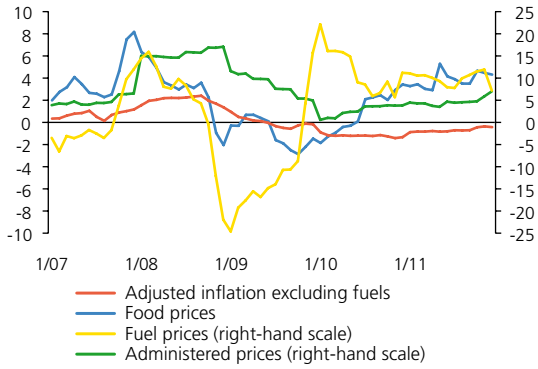



CHART III.1.4

STRUCTURE OF INFLATION

**Administered prices and food prices contributed the most to inflation**
(annual percentage changes; contributions in percentage points)

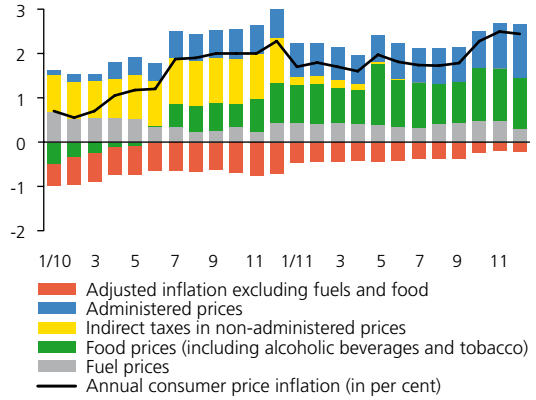


CHART III.1.5

FOOD PRICES

**Food price inflation rose sharply again even though food producer prices and agricultural producer prices slowed markedly**
(annual percentage changes)

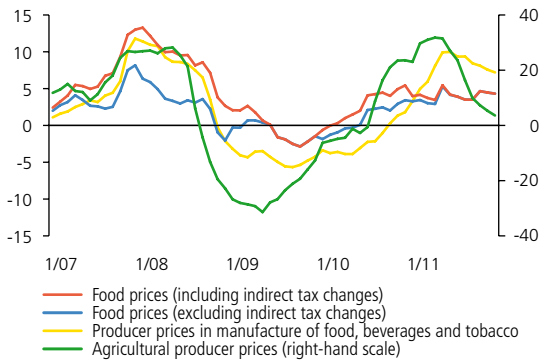



CHART III.1.6

ADJUSTED INFLATION EXCLUDING FUELS

**The annual decline in prices within adjusted inflation moderated further**
(annual percentage changes)

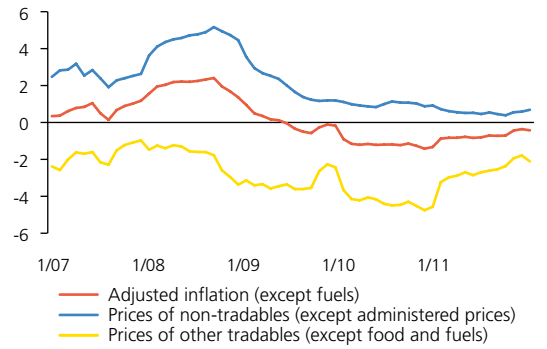
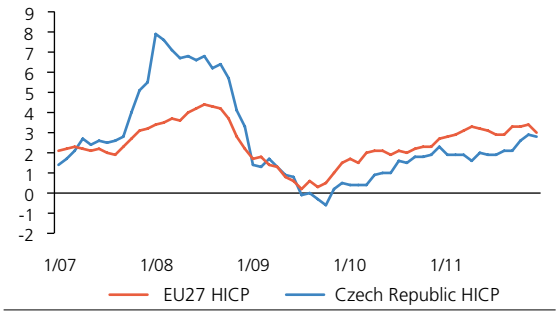



CHART III.1.7

HICP

**Annual HICP inflation in the Czech Republic remained below the EU average**
(annual percentage changes; source: Eurostat)




the absence of inflationary pressures from the domestic economy. By contrast, the previously strong anti-inflationary effect of falling import prices of final products for the consumer market subsided, mainly because of depreciation of the koruna.

Annual **food price** inflation rose sharply again in 2011 Q4, reaching 4.3%, a rise of 0.8 percentage point from September (see Chart III.1.5). This high growth was probably associated with the aforementioned partial advance pass-through of the VAT increase to consumer prices in late 2011. At the same time, the effect of rising import prices of food and energy cannot be ruled out. The increase in food price inflation was also due to base effects. The assumption that the partial reflection of the VAT increase in prices was the main factor of the food price growth in Q4 is supported by weakening growth rates of agricultural producer prices and food producer prices (see Chart III.1.5), indicating a rapid unwinding of the effect of high prices of agricultural products on food prices. The almost across-the-board nature of the food price rise in November and December also suggested pass-through of the VAT increase to prices before the change came into effect (see BOX 1).

Amid low domestic demand, **adjusted inflation excluding fuels**, comprising prices of products with a high degree of processing and services, remained in negative values, which, however, moderated further in 2011 Q4 (to -0.4% in December; see Chart III.1.6). This change was due partly to year-on-year depreciation of the koruna-euro exchange rate, which was reflected in a moderation of the annual decline in prices of other tradable commodities (to -2.1% in December). The change in adjusted inflation was also due to prices of non-tradable commodities (excluding administered prices), whose annual growth picked up slightly (to 0.7% in December).

**Fuel prices** remained volatile. Their annual growth fell in 2011 Q4 (to 7.2% in December) owing to a sharp slowdown in world oil price growth, which was only partly offset by year-on-year depreciation of the koruna-dollar exchange rate. The growth was also due to base effects.

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 2011 Q4 (see Chart III.1.7). According to Eurostat's latest estimate, annual HICP growth in the Czech Republic was 2.8% in December, while the average figure for the EU countries was 3% in the same month. Annual HICP inflation in the Czech Republic thus remained higher than CPI inflation. This difference was due mainly to the inclusion in the CPI of the effect of imputed rent, which is not included in the HICP. The year-on-year change in imputed rent was zero in December, i.e. much lower than inflation in the remainder of the consumer basket, and this was the main reason for annual CPI inflation being lower than HICP inflation.

## III.2 IMPORT PRICES AND PRODUCER PRICES

*Continuing still fast annual growth in prices of key commodities on world markets and depreciation of the exchange rate led to a rise in annual import price inflation. The growth in commodity import prices was again reflected most of all in prices of producers at the early stages of the production chain. After a long decline, import prices of products with a high degree of processing also recorded growth in Q4. Annual producer price inflation in other high-value-added branches of manufacturing fell slightly. Agricultural producer price inflation slowed further and food industry prices also recorded more modest growth. Prices in market services picked up slightly, whereas construction work prices continued to show a modest decline.*

### III.2.1 Import prices

In the first two months of 2011 Q4, the rise in **import prices** was again due to still strong annual growth in prices of some key commodities on world markets (see Chart III.2.2). According to the latest data for November, annual import price inflation increased noticeably further (to 7.6%), owing primarily to depreciation of the exchange rate.

Fast growing prices of imported **mineral fuels** remained the biggest contributor to annual import price inflation in October and November (see Chart III.2.2). Their contribution increased again compared to August, reaching 4 percentage points in November. Since August, oil price growth rates have been decreasing from their previous high levels of over 50%. Nonetheless, annual oil price growth was still high in November (29%). Annual growth in world natural gas prices, which follow oil prices with a lag, has been rising steadily since 2011 Q2 and reached 39.1% in November. In addition, the overall still high annual growth in world energy commodity prices was accompanied by year-on-year depreciation of the koruna-dollar exchange rate in the first two months of 2011 Q4 (see Chart III.2.3).[7] This resulted in a further rise in growth of import mineral fuel prices from 23% in August to 33.9% in November.

The pronounced change in the exchange rate (koruna-dollar in particular) in the first two months of 2011 Q4 fostered a rise in import price inflation in other import categories as well. Annual growth in import prices of chemicals and related products rose to 7.1%. Import prices of **semi-finished products** also recorded stronger growth, and food import prices rose faster in November than in September. The year-on-year depreciation of the koruna-dollar exchange rate was also probably the main cause of the turnaround in import prices of **non-energy commodities**, where the previous downward trend was replaced by renewed growth (to 16% in November; see Table III.2.1).

7 The koruna-dollar exchange rate appreciated by 5.6% in September, but depreciated by 4.1% in November.

CHART III.2.1

IMPORT PRICES AND PRODUCER PRICES

**Import price inflation accelerated again, industrial producer price inflation slowed, and agricultural producer price inflation fell further**

(annual percentage changes)

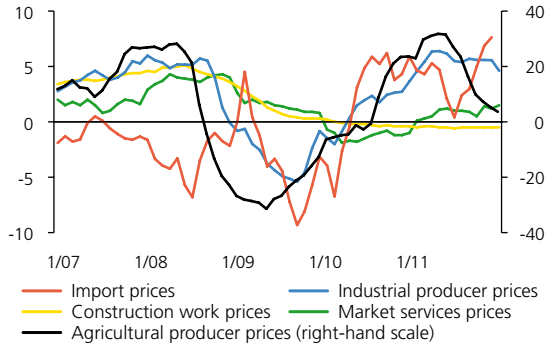



CHART III.2.2

IMPORT PRICES

**Import price inflation was due mainly to prices of imported energy commodities**

(annual percentage changes; contributions in percentage points)

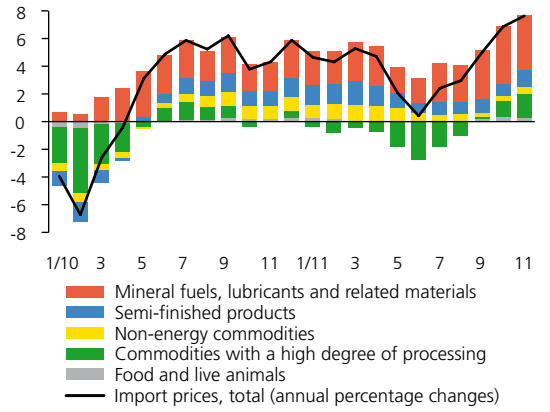



CHART III.2.3

MINERAL FUELS

**Depreciation of the koruna-dollar exchange rate contributed to the upswing in growth of import prices of energy commodities in October and November**

(annual percentage changes)

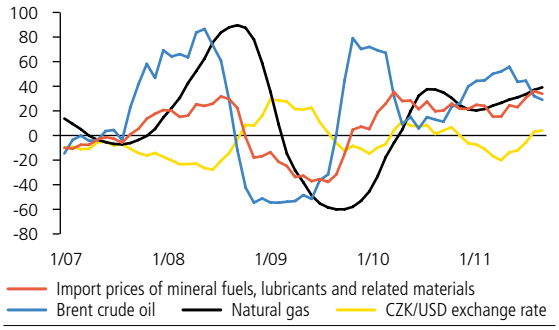


TABLE III.2.1

**STRUCTURE OF IMPORT PRICE INFLATION**

**Import prices rose in all categories, and most of all in the case of imported energy commodities**
(annual percentage changes)

| | 8/11 | 9/11 | 10/11 | 11/11 |
|---|---|---|---|---|
| IMPORTS, TOTAL | 3.0 | 5.0 | 6.9 | 7.6 |
| of which: | | | | |
| food and live animals | -0.4 | 1.9 | 4.7 | 3.6 |
| beverages and tobacco | 7.7 | 8.9 | 11.1 | 11.9 |
| crude materials inedible, except fuels | 15.0 | 10.0 | 10.6 | 16.0 |
| mineral fuels and related products | 23.0 | 30.6 | 36.1 | 33.9 |
| animal and vegetable oils | 30.1 | 28.9 | 23.0 | 20.3 |
| chemicals and related products | 5.0 | 5.6 | 6.5 | 7.1 |
| manufactured goods classified chiefly by material | 4.0 | 4.3 | 4.1 | 5.3 |
| machinery and transport equipment | -4.0 | -1.6 | 0.1 | 1.3 |
| miscellaneous manufactured articles | -1.9 | 0.1 | 3.2 | 3.9 |

CHART III.2.4

**INDUSTRIAL PRODUCER PRICES**

**Industrial producer price inflation slowed at the end of 2011**
(annual percentage changes; contributions in percentage points)

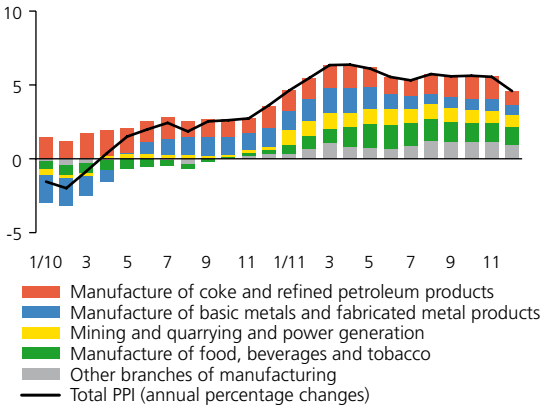
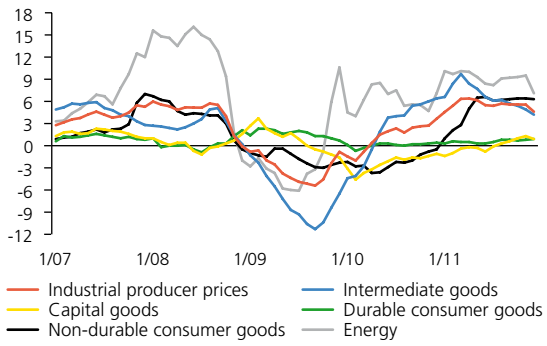



CHART III.2.5

**PRODUCER PRICES BY MAIN INDUSTRIAL GROUPINGS**

**The rising prices of commodities fed through quickly to prices of intermediate goods and non-durable goods**
(annual percentage changes)




Only the growth rates of import prices of vegetable and animal oils continued to fall from the more than 40% recorded in 2011 H1.

From the perspective of domestic producers, prices of imported inputs (raw materials and semi-finished products) thus showed fast growth in October and November. This growth reached double figures in half of the import categories. Import prices of **high-value-added commodities**,[8] which had mostly recorded annual decreases in previous quarters, were also affected by the depreciation of the exchange rate (particularly the koruna-euro rate). Their renewed growth, however, was much lower than in the case of commodities, as it derives from the low growth of these prices abroad (see Table III.2.1).

### III.2.2 Producer prices

#### *Industrial producer prices*

Annual **industrial producer price** inflation slowed in 2011 Q4. After staying around 5.5% in 2011 Q3 and in the first two months of Q4, it fell to 4.6% in December (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 quarter, although the intensity of some key factors moderated at the end of 2011. The growth continued to be strongly affected by fast growing import prices of commodities and semi-finished products, although to a lesser extent than in the previous quarter (mainly owing to oil price developments). These cost pressures fed through quickly to prices of producers at the early stages of the production chain (see Chart III.2.4 and Chart III.2.5). The still strong growth in energy producer prices also increased the costs of corporations in some industries (see Chart III.2.5). At the same time, Q4 saw a continuing marked slowdown in producer price inflation in the food industry, indicating a weakening of the cost pressures stemming from high prices of agricultural inputs.

Producer prices in the **food industry** again made the biggest contribution to annual inflation in industry in 2011 Q4 (1.2 percentage points). However, their year-on-year growth slowed further (to 7.2%) owing to the sharp fall in agricultural producer price inflation (see Chart III.1.5). An only slightly smaller contribution to industrial producer price inflation was recorded by prices in the **manufacture of coke and refined petroleum products**. The sizeable drop in annual inflation in this sector in December (of 8 percentage points from September, to 15.9%) was a response to global oil prices. Chart III.2.4 shows that this change was the main factor behind the moderation of industrial producer price inflation in 2011 Q4. Annual producer price inflation in the **basic metals industry** also slowed in Q4 (to 5% in December).

8 This category contains machinery, transport equipment and miscellaneous manufactured articles.

Industrial producer price inflation was also affected by continued price growth in the **electricity, gas and steam industry** (4.2% in December) and in the water supply and sewage-related services industry (6.3% in December). By contrast, annual price growth in mining and quarrying slowed further (to 3%). Overall, the contribution of these industries to annual industrial producer price inflation decreased slightly to 0.8 percentage point in December.

Annual inflation in **other branches of manufacturing**, comprising the manufacture of high-value-added products, declined slightly at the end of 2011. Its contribution to annual industrial producer price inflation thus decreased to 0.9 percentage point in December 2011. Producer prices increased in most of these branches, but their growth rates were mostly low. A decline in prices was recorded only in the manufacture of electrical equipment.

### *Agricultural producer prices*

**Agricultural producer prices** in 2011 Q4 saw a continued sharp slowdown in annual growth from the levels exceeding 30% recorded in 2011 H1 (see Chart III.2.7). In December they rose by only 3.6%. This pronounced change was due solely to crop product prices, which switched to a modest annual decline at the end of 2011 (of 1.2% in December). By contrast, livestock product prices recorded a pick-up in annual growth to almost 10% in December.

The main causes of the slowing agricultural producer price inflation are the same as in the previous Inflation Report. The marked slowdown in agricultural producer price inflation in 2011 H2 was a result of the dissipation of most of the **key factors** that had caused these prices to increase at the end of 2010 and in 2011 H1. In particular, better weather conditions in 2011 – together with the return of some traditional exporters to the world market – led to a slight fall in global prices of crop commodities. The domestic harvest in 2011 was also well above average from the longer-term perspective. Some traditionally volatile agricultural producer price items (potatoes, vegetables) started to record significant annual declines of about 40–50%. The year-on-year appreciation of the exchange rate (koruna-euro in particular) also had an anti-inflationary effect on domestic agricultural producer prices in the first three quarters of 2011. In 2011 Q4, however, the exchange rate turned inflationary.

### *Other producer prices*

Amid persisting low construction investment demand, **prices of construction work** continued to show a slight annual decline in 2011 Q4 (see Chart III.2.8). Annual growth in prices of materials and products consumed in the construction industry meanwhile decreased somewhat (to 2.0% in December).

CHART III.2.6

**PRICES OF METALS AND REFINED PETROLEUM PRODUCTS**

**Producer prices in manufacture of mineral fuels, lubricants and related materials respond to movements in world oil prices with a short lag**
(annual percentage changes)

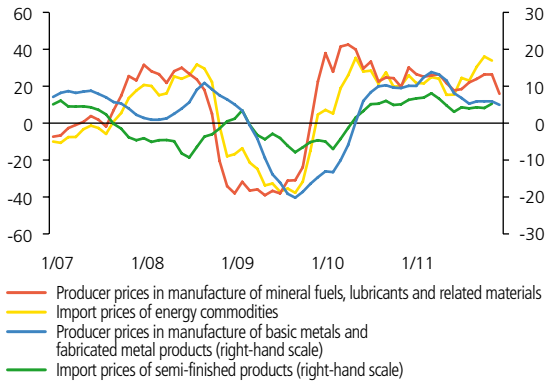



CHART III.2.7

**AGRICULTURAL PRODUCER PRICES**

**Annual agricultural producer price inflation continued to fall sharply**
(annual percentage changes)

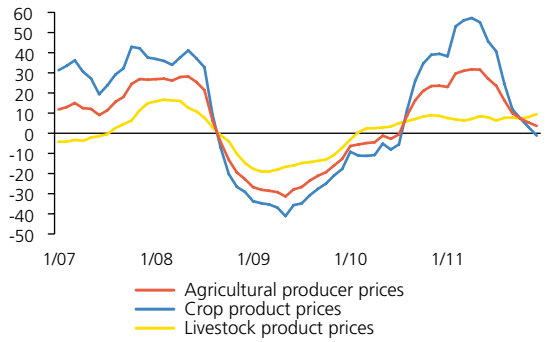
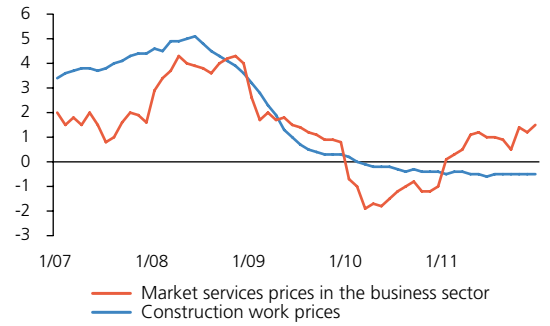



CHART III.2.8

**OTHER PRICE CATEGORIES**

**Prices of construction work showed a further modest decline, while growth in prices of market services rose slightly**
(annual percentage changes)



By contrast, **prices of market services** continued to rise slowly. Their growth picked up gradually in 2011 Q4 (to 1.5% in December). Prices in most monitored branches of market services in the business sector showed modest growth, reflecting the effect of low domestic demand. Advertising services and market research, where prices increased by 11.2% year on year in December, were the only exception.

## III.3 DEMAND AND OUTPUT

*Annual real GDP growth slowed further in 2011 Q3 (by 0.8 percentage point to 1.2%).*[9] *In quarter-on-quarter terms GDP recorded a slight decrease (of 0.1%). Amid a persisting lead of export growth over import growth, the annual GDP growth was due to net exports, whose contribution increased compared to the previous quarter. The other GDP expenditure components made no contribution to economic growth in Q3, as the year-on-year decline in final consumption intensified and the previous growth in gross capital formation turned negative. On the supply side, manufacturing was the biggest contributor to economic growth, although its positive contribution was smaller than in the previous quarter. Gross value added decreased in most other industries.*

### III.3.1 Domestic demand

The slowing domestic demand growth observed since 2010 Q4 turned into a noticeable annual decline in 2011 Q3. This decline was due to all its components, but most of all to change in inventories (see Chart III.3.2). Household and government consumption, whose annual decline intensified, affected domestic demand to a lesser extent. A renewed decline in fixed investment also contributed to the contraction in domestic demand.

#### *Final consumption*

In 2011 Q3, **household consumption** continued to record an annual decline, which deepened only slightly compared to the previous quarter (to -0.4%). The continuing annual decline in household consumption expenditure, observed since the start of 2011, mainly on account of fiscal consolidation, continued to be accompanied by structural changes in consumption. Households have been cutting expenditure on non-durable, semi-durable and durable goods since 2011 Q2. Only real expenditure on services increased in Q3.

Annual **nominal gross disposable income** growth, which is the main source of financing of households' consumption expenditure, was subdued in 2011 H1 and switched to a decline in Q3. Moreover, its real purchasing power continued to be reduced by annual inflation[10] (see Chart III.3.3).

A closer look at the **structure** of gross disposable income growth shows that only wages and salaries, property income and income from

CHART III.3.1

GROSS DOMESTIC PRODUCT

**GDP growth slowed further in 2011 Q3**

(annual and quarterly percentage changes at constant prices; seasonally adjusted data)

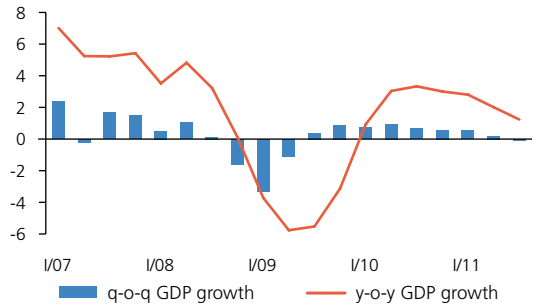



CHART III.3.2

STRUCTURE OF ANNUAL GDP GROWTH

**Net exports were the sole contributor to real GDP growth**

(contributions in percentage points; seasonally adjusted data)

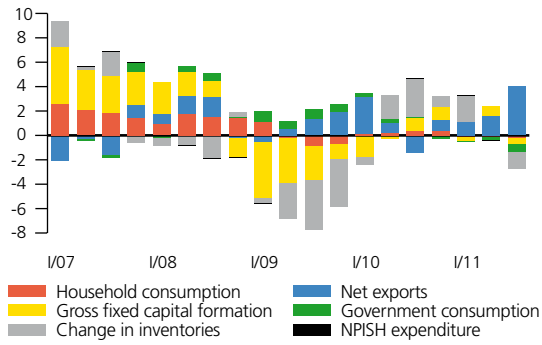
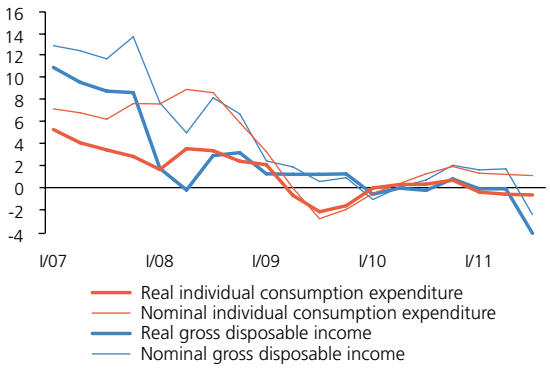



CHART III.3.3

HOUSEHOLD CONSUMPTION EXPENDITURE

**The falling household consumption was affected by real disposable income**

(annual percentage changes)




9 The assessment of the evolution of GDP expenditure and sources is based on revised (see BOX 2 *Extraordinary revision of the quarterly national accounts* in section II.3) and seasonally adjusted data from the quarterly national accounts.

10 As measured by the household consumption deflator.

CHART III.3.4

DISPOSABLE INCOME

**Households' gross disposable income fell year on year in 2011 Q3**
(annual percentage changes; contributions in percentage points; current prices)

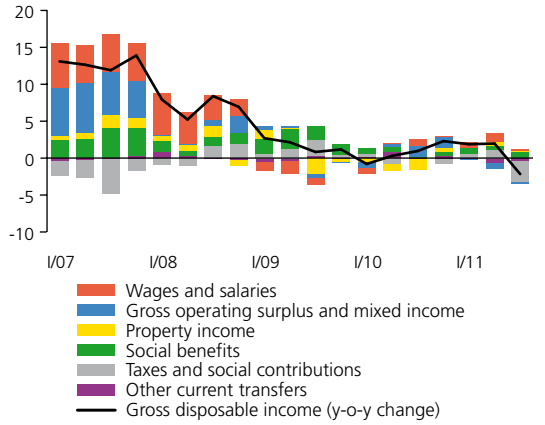



CHART III.3.5

CONSUMER CONFIDENCE INDICATOR

**Household confidence is decreasing**
(2005 average = 100; seasonally adjusted data)

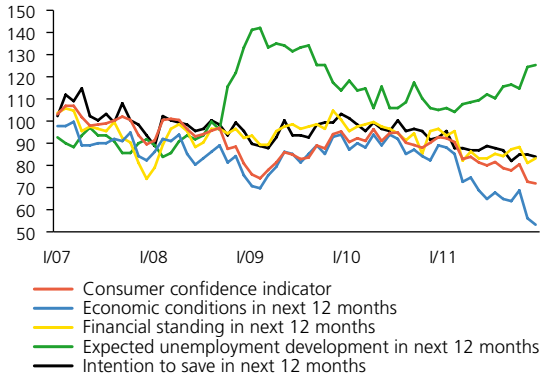
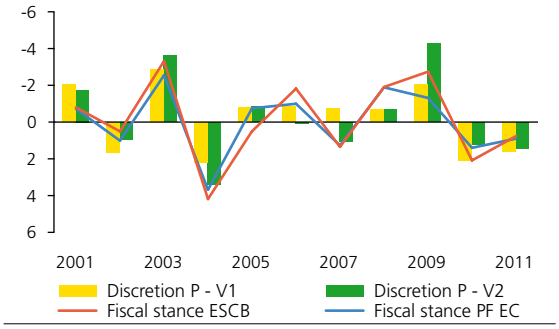



CHART 1 (BOX)

"BOTTOM-UP" AND "TOP-DOWN" FISCAL DISCRETION

**The estimation of discretion by different methods yields similar results**
(% of nominal GDP)




Note: Positive value indicates fiscal restriction, negative value fiscal expansion. Top-down method: fiscal stance according to ECB and European Commission methods. Bottom-up method: difference between revenue and expenditure discretion. P is discretionary revenue, V1 is deviation from trend of adjusted total expenditure, V2 is deviation from trend of ratio of adjusted total expenditure to GDP.

social benefits recorded positive contributions to annual growth in 2011 Q3. However, their contributions were low (see Chart III.3.4), with only income from social benefits recording a rise in year-on-year growth (from 1.8% in 2011 Q2 to 3.1% in 2011 Q3). By contrast, the relatively high-weight business income, i.e. gross operating surplus and mixed income, continued to record a modest annual decline, mainly reflecting the low domestic demand. The contribution of income from other transfers and tax payments and social contributions was also negative.

The **saving rate**, which in recent quarters has been at quite a high level of around 10%, indicated continuing prudent behaviour of households amid a very uncertain labour market outlook and concerns about the impacts of fiscal consolidation. The restrained consumption behaviour of households was also evidenced by persisting subdued consumer credit growth (see section III.5.2).

According to the latest available **leading indicators**, household consumption is not expected to recover significantly in the period ahead. The seasonally adjusted real retail sales data for October increased slightly only in the automotive segment, while real sales in the other subcategories of this sector declined. The latest results of the November CZSO business survey do not indicate any change in the consumption behaviour of households either, as the consumer confidence indicator remains on a downward trend. It still primarily reflects a deterioration in households' expectations regarding the overall economic situation and unemployment (see Chart III.3.5).

Real **government final consumption expenditure** fell quite significantly in 2011 Q3, reflecting government austerity measures (fiscal discretion is examined in more detail in BOX 3 *An analysis of the impacts of fiscal measures in the Czech Republic in 2001–2011)*. Its year-on-year decline was bigger than in the previous quarter, reaching 3.0%.

**BOX 3**
**An analysis of the impacts of fiscal measures in the Czech Republic in 2001–2011**

This box examines discretionary Czech fiscal policy measures in 2001–2011, analyses their economic impacts and assesses their effect on the business cycle.

Given the difficulty in distinguishing between discretionary and autonomous government revenue and expenditure, three **methods of estimating fiscal discretion** are used. The first, direct (**"bottom-up"**) method sums the impacts of individual fiscal measures on the revenue and expenditure sides of the public budgets. Explanatory reports for passed laws and regulations are the source of information for revenue measures. Expenditure discretion is proxied by the deviation

of expenditure (excluding unemployment benefits, interest payments and capital transfers to transformation institutions) from "autonomous expenditure" (modelled as the trend in this expenditure or as the trend in this expenditure relative to GDP).

The second, indirect (**"top-down"**) method measures fiscal discretion from the aggregate perspective as the annual change in the cyclically adjusted (structural) balance of the public budgets (the "fiscal stance") calculated according to the ESCB and European Commission methods.[11] Chart 1 shows fiscal discretion estimated using the first two methods.

The third, **"residual"** method measures the impact of fiscal measures on the real economy implicitly. This method uses the residual of the output gap equation of the former CNB core prediction model (QPM), taking into account the standard model demand factors.[12] This method identifies demand shocks mostly in line with the previous two methods, with the significant exception of the crisis year 2009.

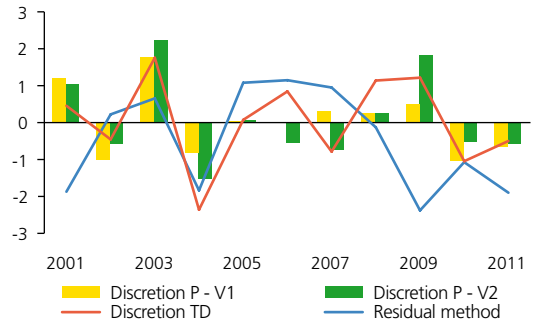
The **impact of fiscal discretion on GDP** is calculated using fiscal multipliers estimated by various authors (see Chart 2). The average impacts of fiscal discretion on GDP according to both the bottom-up and top-down methods tell qualitatively the same story (see Chart 3). The impact of the 2009 anti-crisis package is estimated at 0.9–1.5% of GDP, in 2010 the impact of discretion was between -0.8% and -1.0% of GDP due to the austerity package, and in 2011 the impact of further consolidation on GDP is estimated at -0.5% to -0.6% of GDP.

The **assessment of the stabilisation effect of fiscal discretion** on the business cycle is performed by comparing the impacts of fiscal discretion on GDP with the output gap estimates. Fiscal measures stabilise the economy if the contribution of fiscal discretion is negatively correlated with the output gap. As Chart 3 shows, the periods of desirable counter-cyclical fiscal policy are relatively short (only 2001, 2003, 2007 and 2009), while the periods of pro-cyclical fiscal policy are dominant and longer-lasting (2002, 2004–2006, 2008, 2010–2011).

Chart 2 (Box)

THE IMPACT OF FISCAL DISCRETION ON GDP

**Fiscal discretion had significant impacts on the real economy in several years**
(% of real GDP)

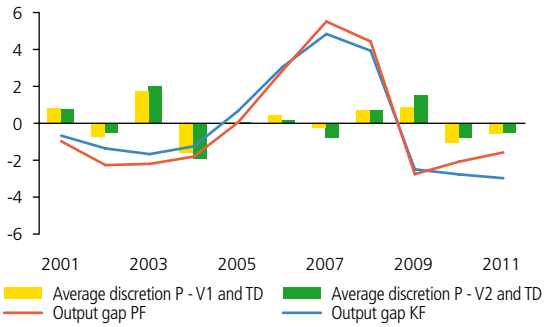



Note: Positive value indicates fiscal expansion, negative value fiscal restriction. Impacts of bottom-up discretion: P are impacts of revenue measures using IMF fiscal multipliers (Klyuev and Snudden, 2011), V1 and V2 are impacts of expenditure discretion using CNB multiplier of 0.6. TD is average impact of discretions identified by top-down method using multiplier of 0.6.

Chart 3 (Box)

THE OUTPUT GAP AND THE IMPACT OF FISCAL DISCRETION ON GDP

**Fiscal policy was mostly pro-cyclical and was counter-cyclical in only some years**
(% of real GDP)




Note: Positive value indicates fiscal expansion, negative value fiscal restriction. For discretions P, V1, V2 and TD see note to Chart 2. Output gap: PF – using production function, KF – using Kalman filter.

11 The fiscal position is calculated using data as of 11 December 2011. For a more detailed description of the methodology, see for example BOX 3 in Inflation Report III/2009: http://www.cnb.cz/en/monetary_policy/inflation_reports/2009/2009_III/boxes_and_annexes/ir_III_2009_box_III.html

12 The QPM model is described in Coats, W., Laxton, D., Rose, D. (2003): *The Czech National Bank's Forecasting and Policy Analysis System*. http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/en/about_cnb/publications/download/forecasting_2003_1-4.pdf

CHART III.3.6

FIXED CAPITAL FORMATION

**Fixed investment fell slightly again in 2011 Q3**
(annual percentage changes; contributions in percentage points; constant prices)

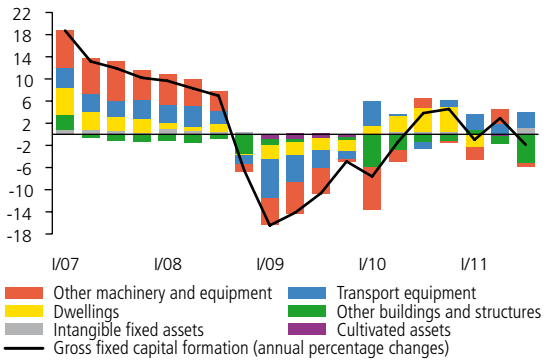



TABLE III.3.1

INVESTMENT BY SECTOR

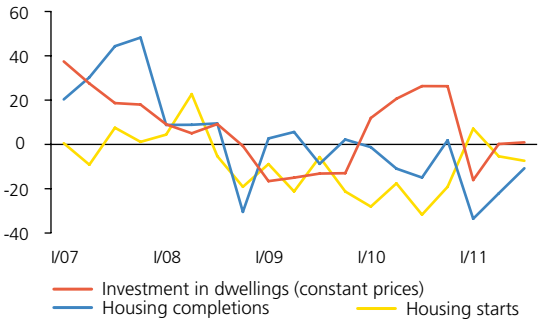
**Investment fell in most sectors, but rose modestly in the non-financial corporations sector**
(constant prices; CNB calculation)

| | IV/10 | I/11 | II/11 | III/11 |
|---|---|---|---|---|
| Annual percentage changes | | | | |
| Non-financial corporations | 2.3 | 2.2 | 6.7 | 1.9 |
| Households | 22.1 | -9.0 | 0.9 | -0.4 |
| General government | -10.5 | 1.2 | -5.7 | -12.4 |
| Financial corporations | 43.9 | -18.2 | -7.7 | -24.6 |
| Nonprofit institutions serving households | 9.0 | 8.0 | 7.9 | 4.7 |
| Share in total fixed investment in per cent | | | | |
| Non-financial corporations | 56.0 | 58.5 | 59.7 | 57.8 |
| Households | 24.2 | 20.8 | 21.7 | 23.8 |
| General government | 17.1 | 18.5 | 16.3 | 16.4 |
| Financial corporations | 2.4 | 1.9 | 2.1 | 1.7 |
| Nonprofit institutions serving households | 0.2 | 0.3 | 0.2 | 0.3 |

CHART III.3.7

INVESTMENT IN DWELLINGS

**Investment in dwellings rose weakly, while housing starts and completions kept falling in 2011 Q3**
(annual percentage changes)




### *Investment*

The uneven development of **fixed investment** visible in previous quarters continued into 2011 Q3 (see Chart III.3.6). Its swings between growth and decline can be regarded mainly as a reflection of persisting substantial uncertainty regarding future demand, in addition to base effects. It was also strongly affected by a slowdown in infrastructure investment in the government sector. In 2011 Q3 alone fixed investment fell by 1.9% year on year. A decline was also recorded in quarter-on-quarter terms.

Investment fell in most sectors (see Table III.3.1). However, in the **non-financial corporations** sector, which accounts for more than half of total investment, fixed investment increased in Q3. At less than 2%, however, its year-on-year growth was only modest. According to the latest business survey conducted in non-financial corporations by the CNB and the Confederation of Industry in 2011 Q4, the balance of the expected change in investment expenditure at the 6-month and 12-month horizons turned negative. This reflects corporations' weakening optimism regarding future orders and their response to the rising uncertainty.

The overall annual downturn in investment in Q3 was due most of all to the **government sector** (-12.4%), where a decline was recorded in the civil engineering area. This was linked chiefly with reduced drawdown of EU funds. The fall in investment in other sectors was less significant from the point of view of total investment. Investment in the **household sector** showed only a modest decrease (0.4% year on year). However, investment in dwellings, which accounts for a large proportion of total household investment, continued to edge up for the second consecutive quarter (by 0.9% in Q3; see Chart III.3.7). Its modest recovery was probably connected with the expected increase in VAT on construction work with effect from 1 January 2012. However, leading indicators[13] do not suggest any noticeable recovery in housing demand in the period ahead. On the contrary, the mostly negative year-on-year changes in these indicators still indicate a generally prudent approach of developers and households to investment in dwellings, mainly because of uncertainty regarding future economic developments and the situation on the labour market.

The contribution of additions to **inventories** to annual GDP growth fell sharply in 2011 Q3 (to -1.4 percentage points; see Chart III.3.2). This fall was broadly in line with the results of the business survey conducted by the CNB and the Confederation of Industry in September. The biggest changes occurred in stocks of raw and ancillary materials and semi-finished products, indicating that corporations were adjusting to the subdued trend in orders. According to this survey, however, corporations are not expecting the decline in inventories to intensify in 2011 Q4.

13 Data on housing starts and completions.

### III.3.2 Net external demand

The year-on-year growth in **net exports of goods and services**[14] visible for a year now continued into 2011 Q3. The net export surplus increased by almost CZK 42 billion year on year and also rose slightly in quarter-on-quarter terms (by almost CZK 3 billion; see Chart III.3.8). As in the previous three quarters, the year-on-year growth in net exports was due to the trade surplus. In Q3, an increase in the surplus on services also made a minor contribution. The contribution of net exports to GDP growth was again positive and much bigger than in the previous quarter (see Chart III.3.2).

Nonetheless, annual growth in total foreign trade turnover decreased further in Q3 (to 6.1%), as a further slowdown in export growth was accompanied by an even larger decrease in import growth. As a result, the lead of export growth over import growth increased markedly to 5.7 percentage points (see Chart III.3.9). **Total exports** grew by 8.8%, their growth rate falling by 4.4 percentage points from the previous quarter. The continuing decline in total export growth, visible already in the previous quarter, was connected with a further slowdown in external demand growth in the Czech Republic's major trading partner countries and increasing uncertainty about future economic developments internationally.

The noticeable moderation of **total import** growth in Q3 (by 8.2 percentage points from Q2 to 3.1%) was due to weakening external and domestic demand. The clear effect of these factors was apparent in all three categories of imports by use. The decline in total import growth in 2011 Q3 was mostly due to imports for investment and imports for intermediate consumption[15] (particularly for export production), which was affected by the unfavourable trend for orders.

### III.3.3 Output

Seasonally adjusted **gross value added** at basic prices remained at the previous quarter's level in 2011 Q3 and its year-on-year growth slowed further (by 1 percentage point from 2011 Q2, to 1.1%). The year-on-year value added growth was driven largely by industry. Financial intermediation and other services also recorded minor positive contributions, whereas the other branches showed year-on-year decreases (see Chart III.3.10).

The slowdown in annual value added growth was again due primarily to **industry**; its contribution to growth in Q3 was 1 percentage point lower than in Q2, but was still the largest (1.4 percentage points). The main cause was a noticeable slowdown in value added growth

14 At 2005 prices, seasonally adjusted.
15 Given the high import intensity of exports, imports for intermediate consumption accounted for 64% of total imports.

CHART III.3.8

NET EXTERNAL DEMAND

**Net exports increased significantly year on year in 2011 Q3**
(CZK billions; constant 2005 prices; seasonally adjusted data)

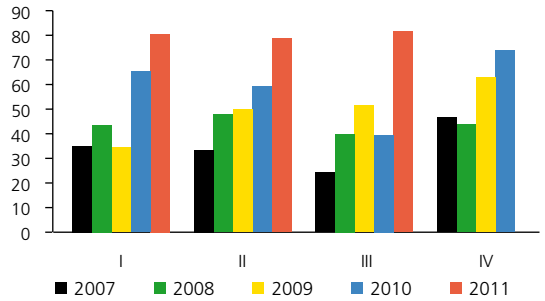



CHART III.3.9

EXPORTS AND IMPORTS

**Foreign trade turnover continued to slow in 2011 Q3, but exports rose markedly faster than imports**
(annual percentage changes; percentage points; constant prices; seasonally adjusted data)


CHART III.3.10

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

**Year-on-year gross value added growth continued to slow in 2011 Q3**
(at basic prices; contributions in percentage points; annual percentage changes)

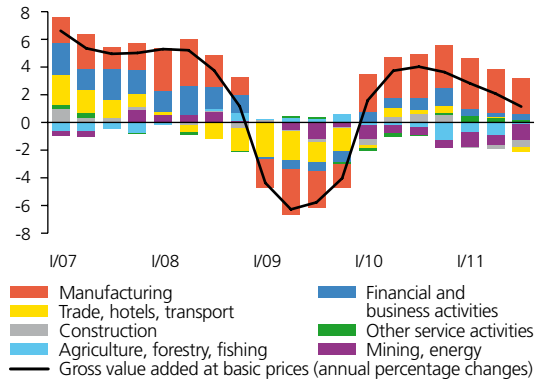


CHART III.3.11

INDUSTRIAL PRODUCTION

**Production capacity utilisation in industry is falling very slowly**
(basic index; year 2005 = 100)

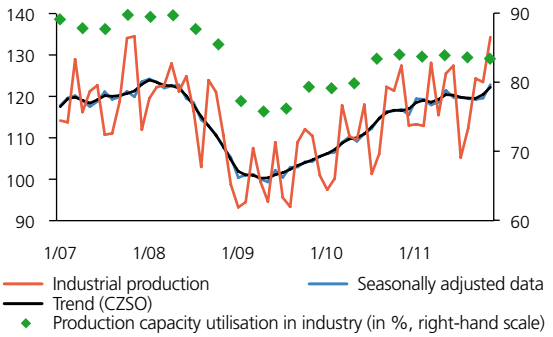



CHART III.3.12

NEW ORDERS IN INDUSTRY

**New industrial orders are being driven by orders from abroad amid declining domestic orders**
(annual percentage changes)

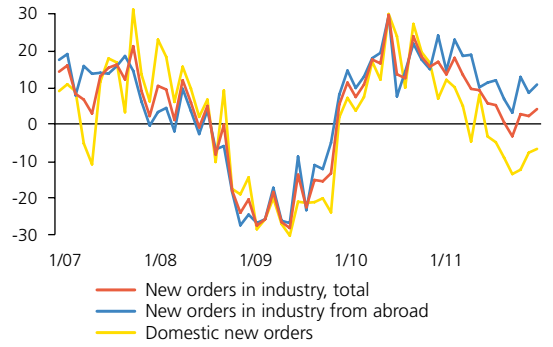
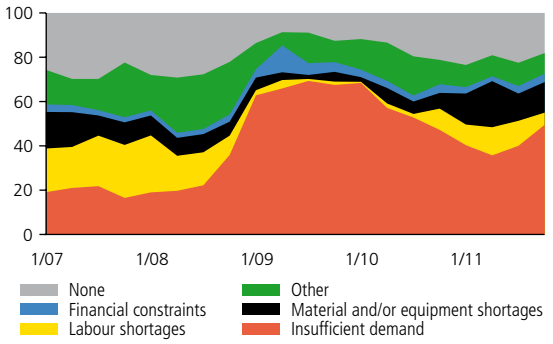



CHART III.3.13

BARRIERS TO GROWTH IN INDUSTRY

**Insufficient demand is still the main barrier to growth in output in industry**
(percentages)




in manufacturing, which, however, stayed in double figures (10.9%). The clearly slowing, but still solid, growth in **manufacturing** (4.5%),[16] supported by external demand, thus remained the key factor for value added growth in industry in Q3. This was confirmed by the statistics of sales of own products, according to which – even after the growth moderated – direct export sales continued to rise quickly year on year (by 14.5% at current prices), whereas domestic sales decreased. These results were consistent with the slowing, although still fast, real growth in goods exports according to the CZSO's national accounts (9.6% year on year).

The latest data show that seasonally adjusted industrial production increased month on month in October and particularly in November 2011, and its year-on-year growth increased as well. According to the CZSO, these results were influenced by the accumulation of completions of a large number of orders with a long production cycle in the manufacture of machinery and heavy transport equipment, which can be assessed as a one-off effect. The latest (October) data on **capacity utilisation** in industry indicate a continued very slow fall in this indicator (see Chart III.3.11).

The evolution of industrial production in the months ahead will probably still depend heavily on external demand. This is indicated by survey results on **new orders in industry** showing that domestic orders continued to fall year on year in October and November 2011, whereas orders from abroad increased (see Chart III.3.12). According to the CZSO's latest (December) survey, industrial businesses do not expect aggregate demand to change significantly in the months to come. The perception of insufficient demand as the main **barrier to growth in output** in industry thus persists (see Chart III.3.13).

Amid persisting low domestic demand, the contribution of **services and trade** to annual total gross value added growth in 2011 Q3 was insignificant (0.3 percentage point). The main contributors to growth were financial intermediation and insurance and real estate activities. Value added in most other services and trade decreased. The data on real retail sales show that the growth in 2011 Q3 was again driven by sales of motor vehicles (including re-exports), whereas sales of other retail goods declined. This situation continued into October and November. It is therefore likely that value added growth will not be fostered by sales in these other categories in 2011 Q4.

**Construction**, which was hit hardest by the weakening demand, saw its value added decline deepen further in 2011 Q3 (to -7%). According to sector statistics, the fall in construction was most significant in civil engineering. The year-on-year decline in construction output continued

16 The following branches contributed most to the 4.2% annual growth in real industrial production in 2011 Q3: manufacture of motor vehicles, trailers and semi-trailers (3.5 percentage points), manufacture of machinery and equipment (0.5 percentage point) and manufacture of rubber and plastic products (0.4 percentage point).

into October and November. In November, however, the decline was more moderate, as building construction recorded a modest annual increase after seven months of contraction. Strong falls in the value of new construction work orders and the approximate value of building permits, and the still pessimistic expectations of businesses operating in this industry according to the CZSO business survey, do not yet indicate any improvement of the situation in construction in the months to come.

The **overall confidence indicator** declined in November and December 2011 according to the CZSO business survey. Consumer sentiment worsened particularly significantly. As for businesses, confidence decreased in all the main sectors under review, with negative prospects continuing to prevail in construction businesses in particular. From an international comparison it is apparent that in Germany – unlike in the Czech Republic and the EU as a whole – concerns about the future were not so great in December and the indicator recorded modest growth (see Chart III.3.14). This is good news for export industries.

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

According to the calculation of the **Cobb-Douglas production function**,[17] the continuing slowdown in annual GDP growth in 2011 Q3 led to a slight decrease of the potential output growth rate (to 1.2%;[18] see Chart III.3.15) and to a further opening of the output gap into negative values (to -0.7%, compared to -0.4% in 2011 Q2 according to revised data; see Chart III.3.16). According to the calculation of the production function, the rate of growth of potential output in the coming quarters will initially be flat at around 1.2% and then fall slightly to 1%. The output gap will probably continue to open into negative values for several quarters and will not start closing before the end of 2012.

The breakdown of the **contributions of the individual factors** entering the baseline production function reveals that the slowdown in annual potential output growth in 2011 Q3 was due to a negative contribution of equilibrium employment. According to the calculation of the production function, equilibrium unemployment will adversely affect potential output in the quarters to come as well. The contributions of capital will decrease slightly at the forecast horizon, as will those of aggregate productivity (see Chart III.3.17).

17 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 reduce the deviation of the HP filter at the end of the data sample.

18 Average of the three calculations.

CHART III.3.14

CONFIDENCE INDICATORS

**Unlike in the Czech Republic and the EU as a whole, the confidence indicator in Germany rose slightly in December**

(long-term average = 100; seasonally adjusted data; source: Eurostat)

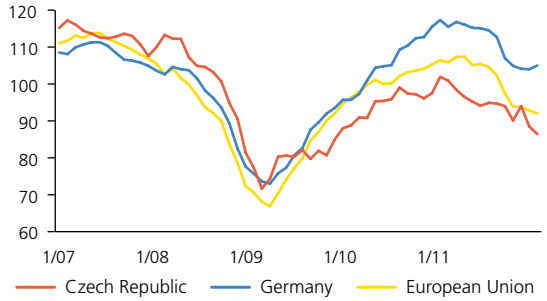



CHART III.3.15

POTENTIAL OUTPUT

**The rate of growth of potential output slowed in 2011 Q3 according to the calculation of the production function**

(annual percentage changes)

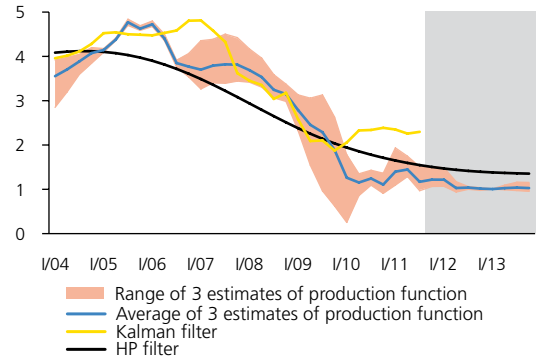



CHART III.3.16

OUTPUT GAP

**The output gap continued to open into negative values in 2011 Q3**

(in % of potential output)

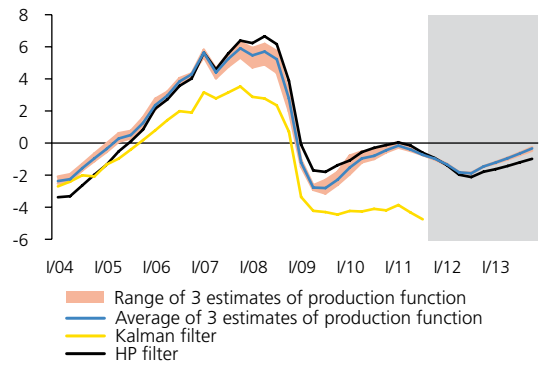
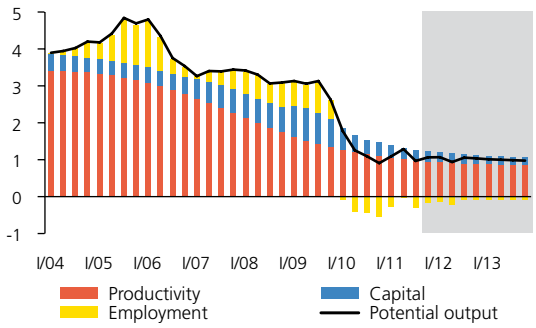


CHART III.3.17

**CONTRIBUTIONS TO POTENTIAL OUTPUT GROWTH**

**A fall in equilibrium employment contributed to the slowdown in potential output growth in 2011 Q3**
(baseline production function; annual percentage changes)




An alternative estimate using the **HP filter**[19] suggests a slightly higher growth rate of potential output (1.5% in 2011 Q3) than that calculated using the production function. The evolution of the output gap is similar under both methods, with the HP filter merely suggesting slower closure of the output gap in 2013. The **Kalman filter** continues to indicate a higher growth rate of potential output (2.3% in 2011 Q3) accompanied by a much more negative output gap (-4.8% of potential output). The results of all three methods indicate a continuing opening of the output gap into negative values in 2011 Q3. However, the persisting sizeable dispersion between the calculations points to a high degree of uncertainty surrounding the estimates of the current cyclical position of the economy.

19 The estimate using the HP filter also used coefficient $\lambda$ = 10,000.

## III.4 THE LABOUR MARKET

*The slowdown in employment growth continued into 2011 Q3. Its annual growth rate was about half that in the previous quarter. The general unemployment rate continued to decline. The registered unemployment rate showed a similar trend, but its quarter-on-quarter growth halted towards the end of the year. Annual average nominal wage growth picked up slightly owing to renewed growth in the non-business sector. On the other hand, growth in the average wage in the business sector eased. Growth in whole-economy productivity slackened further. Unit labour costs declined again year on year due to a greater slowdown in growth in the volume of wages and salaries than in GDP growth.*

### III.4.1 Employment and unemployment

Annual growth in **total employment**[20] eased further to 0.3% in 2011 Q3 (see Chart III.4.1), reflecting the slowing growth in economic activity. In absolute terms this meant an increase of 15,800 in the number of employed persons compared to the same period last year. Adjusted for seasonal effects, employment rose by just 0.1% in quarter-on-quarter terms. This slowdown was due mainly to developments in the category of employees, whose number increased by just 0.2% year on year. This slowdown was partly offset by slightly higher growth in the number of entrepreneurs, which, however, remains low compared to previous quarters.[21]

**Industry** remained the biggest contributor to the rise in employment, although its contribution fell considerably compared to 2011 Q2 (see Chart III.4.2). Nevertheless, the number of employees in industry was still rising at a solid pace (up by 3.8%, or 52,700 persons, year on year).[22] The weakening external and domestic demand affected employment in individual industrial branches to greatly varying degrees. Employment in export-oriented **manufacturing** will remain of key importance for continued employment growth in industry, but the rate of growth of the number of employees also moderated in this branch (from 6.5% in 2011 Q2 to 4.3% in Q3). Employment in the other industrial branches edged down in Q3.

Employment in the **services sector** recorded a further slight annual decline of to 0.2% (or 5,400 persons) in Q3. This decline was due mainly to government austerity measures, which affected non-market services (see Chart III.4.2). In market services, by contrast, the number of people employed rose further, although the increased demand for labour did not concern all branches. Employment in a number of

20 Employment according to the LFS.
21 For details see the BOX *Labour market developments during the economic recession and the subsequent recovery*, Inflation Report III/2011.
22 The number of employees in industry had increased by 6.4%, or 86,700, in 2011 Q2.

CHART III.4.1

LABOUR MARKET INDICATORS

**Growth in employment eased further and growth in the average wage was subdued in 2011 Q3**
(annual percentage changes)

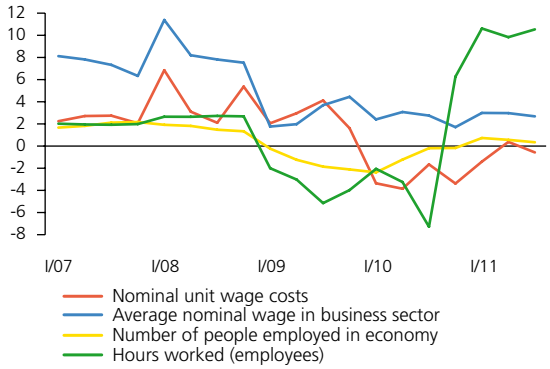



CHART III.4.2

EMPLOYMENT BREAKDOWN BY BRANCHES

**Employment growth decreased in industry**
(contributions in percentage points to annual growth; selected branches; source: LFS)

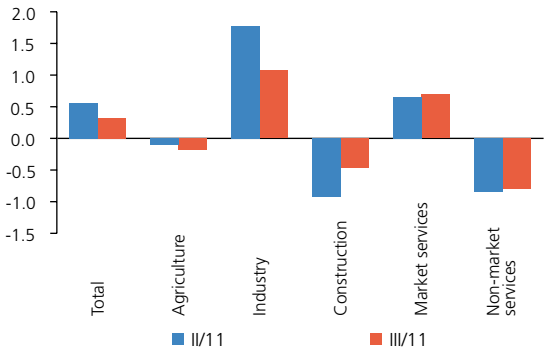



CHART III.4.3

UNEMPLOYMENT RATE

**The decline in the registered unemployment rate halted in 2011 Q4**
(percentages; seasonally adjusted data; source: MLSA, CZSO)

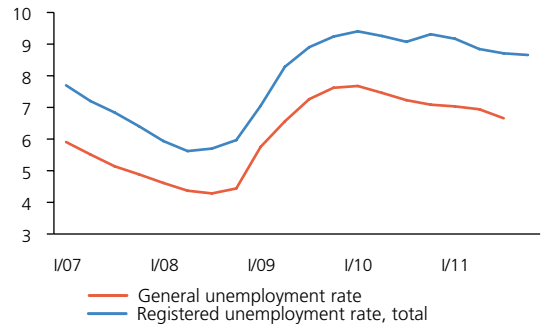
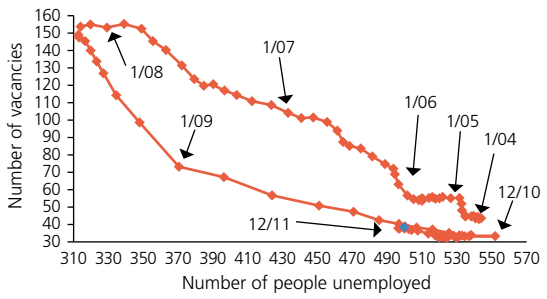


CHART III.4.4

**BEVERIDGE CURVE**

**The number of vacancies remains low**
(seasonally adjusted numbers in thousands)




sectors thus remained affected by the low level of domestic demand. Employment in **construction**, which was hit hardest by the weakening demand (see section III.3.3), fell sharply in 2011 Q3 (by 4.9%).

With the labour force declining and employment growing, the **general unemployment rate**[23] decreased by 0.5 percentage point year on year in 2011 Q3. Adjusted for seasonal effects, it fell by 0.2 percentage point to 6.7% in quarter-on-quarter terms. The **total registered unemployment rate** (MLSA) showed similar developments, declining by 0.4 percentage point year on year and by just 0.1 percentage point quarter on quarter to 8.7% in the same period;[24] however, its decline halted at this level in 2011 Q4 (see Chart III.4.3).

**The Beveridge curve** indicated no distinct positive changes in demand for labour in terms of vacancies in 2011 Q3. The seasonally adjusted number of unemployed persons and the number of vacancies fluctuated around the same levels in this quarter. Parallel slight increases in both the number of unemployed persons and the number of vacancies were recorded only at the end of 2011 Q4 (see Chart III.4.4).

### III.4.2 Wages and productivity

Annual **average nominal wage growth** edged up to 2.4% in 2011 Q3. The real increase amounted to just 0.6% because of inflation (see Table III.4.1). The rise in annual average wage growth was due to the **non-business sector**, where the previous long annual decline due to government austerity measures was replaced in Q3 by a slight increase (of 1.1%); in real terms, however, the average wage continued to decline in this sector. In the business sector, on the other hand, annual average nominal wage growth fell below 3% in Q3.

TABLE III.4.1

**WAGES, PRODUCTIVITY, UNIT LABOUR COSTS**

**Average wage growth accelerated slightly, but slowed in the business sector**
(annual percentage changes)

| | IV/10 | I/11 | II/11 | III/11 |
|---|---|---|---|---|
| Average wage in Czech Republic | | | | |
| nominal | 0.6 | 2.1 | 2.2 | 2.4 |
| real | -1.5 | 0.4 | 0.4 | 0.6 |
| Average wage in business sector | | | | |
| nominal | 1.7 | 3.0 | 3.0 | 2.7 |
| real | -0.4 | 1.3 | 1.2 | 0.9 |
| Average wage in non-business sector | | | | |
| nominal | -3.9 | -1.7 | -0.9 | 1.1 |
| real | -5.9 | -3.3 | -2.7 | -0.7 |
| Whole-economy labour productivity | 4.1 | 2.9 | 2.0 | 1.2 |
| Unit labour costs | -3.4 | -1.4 | 0.4 | -0.6 |

The continuing subdued average wage growth in the **business sector** was due mainly to still relatively fast, albeit now noticeably slowing, output growth in numerous branches of industry, associated primarily with external demand. At the same time, productivity continued to grow considerably faster than the average wage in manufacturing. This was due mainly to persisting excess labour supply, cost-cutting motives (offsetting of the increased costs caused by the fast growing prices of some imported inputs) and also considerable uncertainty regarding future demand. The average wage in manufacturing increased by 3.3% in Q3. Wage growth also continued in most other manufacturing branches, but was very mixed (in transport and storage, for instance, wages rose by a mere 1.1%).

23 In the 15–64 age category. Measured by the ILO methodology according to the LFS.
24 Seasonally adjusted data.

Annual **whole-economy productivity** growth eased further (to 1.2% in Q3; see Chart III.4.5), amid a further noticeable slowdown in GDP growth and an only marginal increase in employment. Major differences in productivity growth continued to be observed across sectors. Labour productivity rose sharply again in **manufacturing** (by 10.5%), although the pace of growth moderated further. However, productivity in market and non-market services switched to a slight annual decline, while in construction its previous fall sharp deepened further (to -5.8%). This was due mainly to the pronounced fall in demand.

**Unit labour costs**[25] returned to an annual decline during 2011 Q3 (of 0.6%; see Chart III.4.6). This was due mainly to a larger slowdown in growth in the volume of wages than in GDP growth. Unit labour costs recorded the largest annual decline in industry, and especially in manufacturing. They also decreased in non-market services, while increasing in market services.

CHART III.4.5

WHOLE-ECONOMY PRODUCTIVITY

**Whole-economy productivity growth slowed further**
(annual percentage changes)

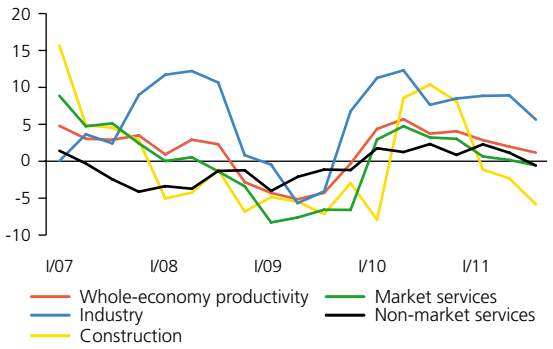
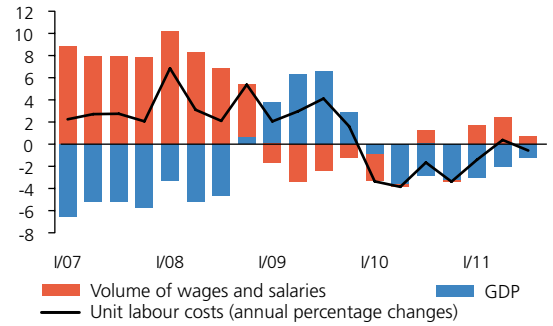



CHART III.4.6

UNIT LABOUR COSTS

**Unit labour costs fell again in 2011 Q3**
(contributions in percentage points; annual percentage changes)




25 Unit labour costs are calculated on the basis of non-seasonally adjusted data.

CHART III.5.1

MONETARY AGGREGATES

**Growth in the broad money aggregates M2 and M3 increased slightly**

(annual percentage changes)

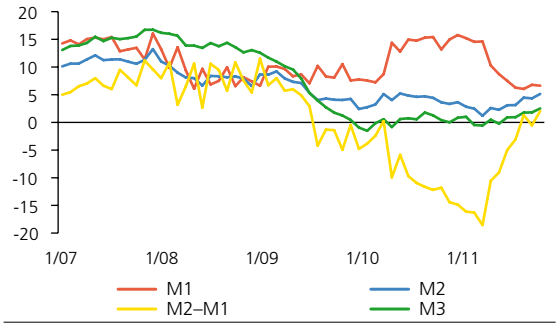



CHART III.5.2

MAIN COMPONENTS OF M2 AND THE INTEREST RATE SPREAD

**Liquidity growth remains concentrated in overnight deposits, and the decline in other short-term deposits is moderating**

(annual flows in CZK billions; spreads in percentage points)

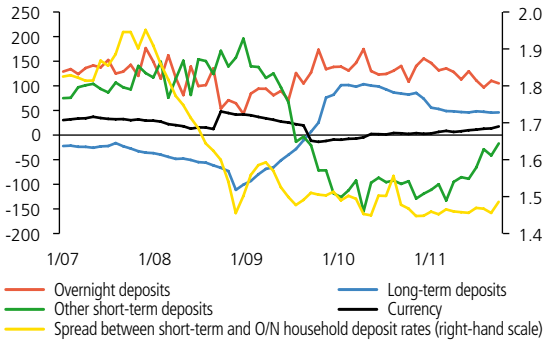
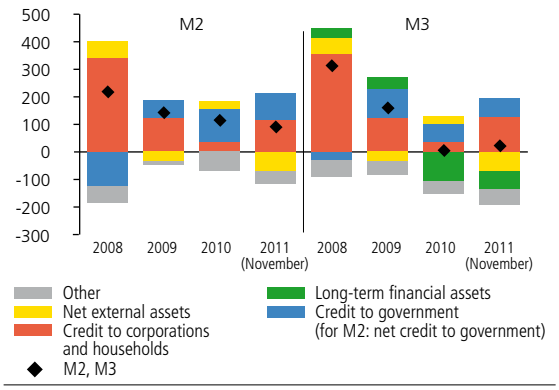



CHART III.5.3

MONEY SUPPLY FACTORS

**Net external assets declined, although this decline slowed in 2011 H2**

(average annual flows in CZK billions)




Note: Long-term financial assets comprise time deposits with an agreed maturity of more than two years and redeemable at notice of more than three months as well as issued debt securities with maturity of more than two years.

## III.5 FINANCIAL AND MONETARY DEVELOPMENTS

*Annual M2 and M3 growth rose slightly. The growth rate of corporate loans remained subdued, and that of loans to households declined slightly. However, the volume of new mortgage loans and the number of new mortgages was the highest in November since the start of 2011. Client interest rates on loans for house purchase and on large corporate loans decreased, while those on small corporate loans increased and those on deposits were broadly unchanged. Risk premia mostly decreased further. Most financial indicators and key corporate performance indicators deteriorated. The household debt-to-income ratio increased. The year-on-year decline in asking prices of apartments continued.*

### III.5.1 Money

Following a slowdown in 2011 H1, annual **M2** growth gradually rose towards the end of the year, reaching 5.1% in November (see Chart III.5.1). The growth rate of money remains lower than in the pre-crisis period. M3 showed a similar trend; its annual growth rate gradually increased, reaching 2.5% in November.[26] The upswing in M2 growth together with the slowdown in economic activity led to a decrease in the velocity of the broad money aggregates.

**Transaction money** remained the biggest contributor to M2 growth. Following a previous slowdown, the annual growth rate of M1 was broadly unchanged in late 2011 and reached 6.6% in November. On the one hand, this reflected an increased growth rate of currency in circulation, which rose further to 4.9%, and on the other hand it reflected lower growth in overnight deposits, whose flows, however, were higher than the flows of time deposits (see Chart III.5.2).[27] The opportunity cost of holding overnight deposits, as expressed by the spread between the interest rate on short-term deposits (i.e. deposits of up to two years and deposits of up to three months) and overnight deposits, increased marginally. The decline in the other short-term deposits thus moderated. Demand of economic agents for long-term deposits remained flat.

Turning to **money supply factors**, the growth rate of credit to the private sector increased in 2011 compared to 2010, but is lower than in the pre-crisis period, while government financing is still elevated (see Chart III.5.3). The annual decline in net external assets moderated further in October and November as a result of a halt in the outflow

26 Annual M3 growth in the euro area increased in 2011 Q3, but later slowed to 2% in November.

27 While the growth in currency in circulation before 2008 was correlated to a certain extent with household consumption expenditure growth, this relationship has now loosened and the faster growth in currency in circulation amid still subdued household consumption is probably related to the correction of the large fluctuations in currency in circulation recorded in late 2008 and early 2009.

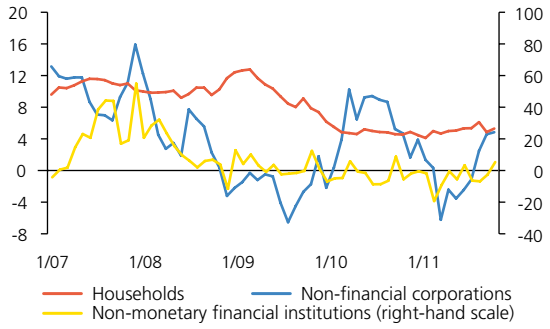
of funds in the form of residents' portfolio investment abroad. The growth of long-term financial assets of households and corporations moderated in 2011.

Growth in client **deposits** has edged up to 4% in recent months. After rising in Q3, the growth rate of household deposits later slowed to 5.3%. This was due to investment by households in government bonds (the amount of government bonds purchased by households reached around CZK 20 billion, i.e. 1% of deposits of households). Growth in non-financial corporations' deposits has risen to 4.8% since August (see Chart III.5.4), fostering a gradual increase in the growth rate of the broad money aggregates and a rise in the acid-test ratio of corporations in the current phase of the business cycle (see section III.5.6).

CHART III.5.4

DEPOSIT STRUCTURE OF M2

**Growth in non-financial corporations' deposits increased, contributing to an acceleration of money**
(annual percentage changes)




### III.5.2 Credit

Annual growth in **loans to the private sector** was broadly flat in 2011 Q4, reaching 5.5% in November (see Chart III.5.5). However, this was due to non-transaction factors, in particular a weaker koruna-euro exchange rate. Adjusted for these factors, loan growth slowed slightly both for corporations and for households. The ratio of loan flows to GDP also gradually decreased steadily in the second half of 2011 (see Chart III.5.6), but the monthly flows of loans were positive. By contrast, the ratio of the stock of loans to GDP gradually increased to around 53% (see Chart III.5.5). In the euro area, growth in loans to the private sector was relatively weak in Q3 and declined by 1 percentage point to 1.7% in November compared to the previous month.[28]

Annual growth in **loans to non-financial corporations** stood at 6.8% in November. The growth rate of long-term loans slowed as a result of lower expected investment activity by corporations, while growth in short-term loans was almost unchanged and growth in medium-term loans accelerated (see Chart III.5.7). As regards sectors, the growth in loans was due mainly to loans to the energy sector (although their contribution decreased) as well as to loans to manufacturing industry, developers and agriculture. For the first time in 2011, loans to construction recorded a major increase in November, but the construction output data continue to indicate low demand in this sector. New corporate loans recorded an annual decline due to lower growth in overdrafts and revolving loans. New large loans decreased, while small loans of up to CZK 7.5 million continued to rise. This would suggest a persisting need for operating financing in some corporations.

CHART III.5.5

LOANS TO CORPORATIONS AND HOUSEHOLDS

**Growth in loans to the private sector remains subdued**
(annual percentage changes; ratios in %)

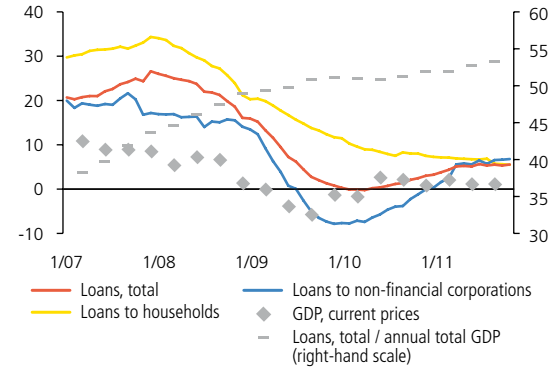
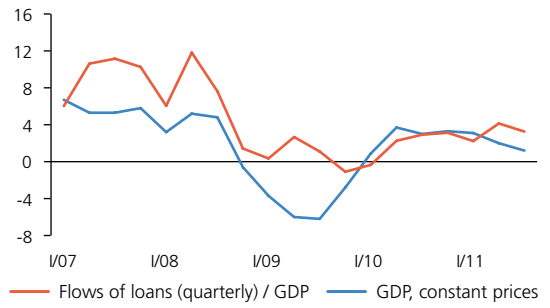



CHART III.5.6

LOANS AND GDP

**The ratio of loan flows to the private sector to GDP decreased slightly**
(ratios in %; annual percentage changes)




28 Funding-related problems persist in some banks in the euro area. These are usually reflected in the loan supply with a lag (see the *ECB Monthly Bulletin, December 2011*). The potential lower willingness to lend of these banks might adversely affect the future external and subsequently domestic economic situation and the credit market. Loan growth in the Czech Republic currently remains above the euro area average (as is the case in Slovakia and Poland).

CHART III.5.7

LOANS TO NON-FINANCIAL CORPORATIONS

**Growth in long-term loans to non-financial corporations is slowing, while growth in medium-term loans is accelerating**
(annual percentage changes)

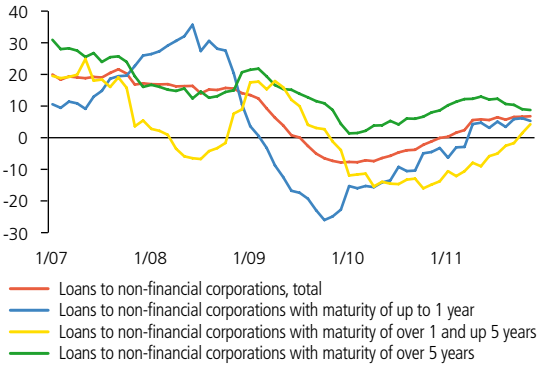



CHART III.5.8

AVAILABILITY OF LOANS TO NON-FINANCIAL CORPORATIONS

**More non-financial corporations expect loan availability to worsen rather than improve in the following 12 months**
(percentage shares of firms in total number of firms surveyed)

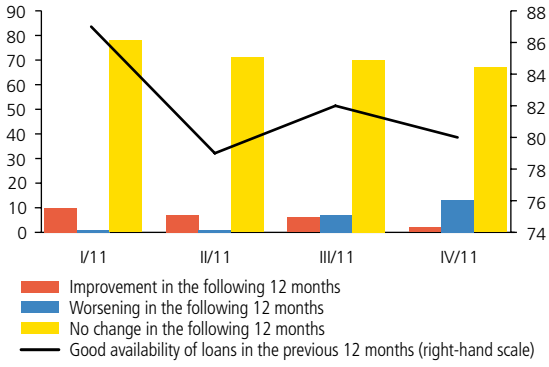
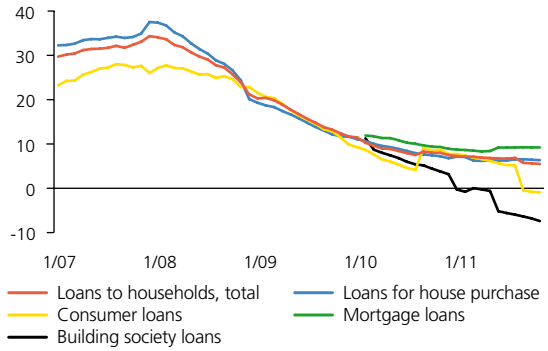



CHART III.5.9

LOANS TO HOUSEHOLDS

**The rate of growth of loans to households decreased slightly**
(annual percentage changes)




Note: Consumer loans have been affected since September 2010 by the merger of a bank with a non-bank institution (which was originally in the category of financial corporations engaged in lending).

The muted rate of growth of corporate loans continued to primarily reflect **demand factors** related to the expected moderation of growth in domestic economic activity and a further decrease in the confidence of domestic industrial companies amid a continuing rise in insufficient demand as the largest barrier to growth in industrial output (see section III.3). The costs associated with taking out short-term loans declined to historical lows, amid flat interest rates on long-term loans (at 3.4% and 4.1% for short-term and long-term loans respectively).

According to a survey conducted by the CNB and the Confederation of Industry, the availability of loans on the **supply side** was relatively good according to 80% of the businesses surveyed in 2011 Q4. However, the percentage of such businesses gradually declined in 2011. Moreover, more businesses expect the availability of loans to worsen rather than improve in 2012 (see Chart III.5.8). Turning to the supply of loans, domestic banks have sufficient primary funds and, unlike European banks, most of them do not depend on funding via the financial market or from parent banks. Client deposits exceed loans. Their ratio decreased slightly to about 126% in 2011. However, it cannot be ruled out that the new capital requirements will partially restrict the supply of loans in the period ahead.

Annual growth in the stock of **loans to households** fell slightly further to 5.5%. Annual growth in loans for house purchase dropped to 6.3% owing to a decline in building society loans (see Chart III.5.9). However, the volume of new loans for house purchase increased in November 2011 (to its highest level in 2011). The number of new mortgages also rose (see Chart III.5.10). According to Hypoindex, the volume of mortgage loans and the number of new mortgages both increased year on year in December 2011, albeit at a slower pace than in the previous month.

The higher demand for **mortgages** probably reflected both the VAT changes introduced in January 2012 and other changes in this area approved for 2013, and partly also the effort to refinance old mortgages. It can be assumed that the mortgage market will be affected in 2012 by a deteriorating economic situation, a weak labour market and temporarily elevated consumer inflation due to the VAT changes. The adverse affect of these factors on the repayment of mortgage loans provided in the past, especially among low-income households, remains a risk.

In the **structure of new loans for house purchase** broken down by interest rate fixation period, loans with interest rate fixations of over one year and up to five years still account for the largest share (47%). However, their share has been decreasing since August, while the share of loans with long-term fixations of over ten years is

rising (reaching around 22% in November). This reflected record-low interest rates with long fixations. To a lesser extent the share of loans with short fixations of up to one year also increased (to around 27%).

**Consumer credit** recorded an annual decrease of 0.9% in line with the fall in the consumer confidence indicator. Demand for these loans thus remains low. Consumer credit from non-bank institutions, i.e. hire-purchase and leasing companies, switched to a slightly positive growth rate in 2011 Q3 owing to base effects, but the volume of these loans remained broadly unchanged in 2011.

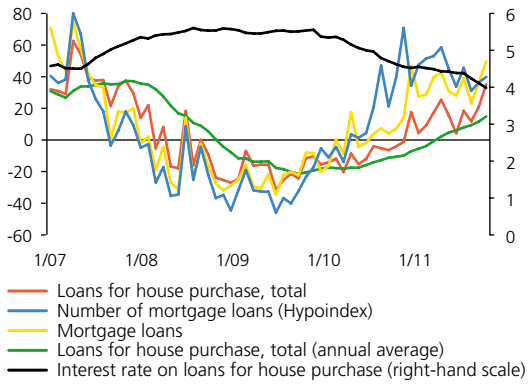
The ratio of **non-performing loans** to total loans decreased slightly in 2011 Q4 for both loans to non-financial corporations (8.1%) and loans to households (5.1%). The shares of non-performing loans in loans for house purchase and in consumer credit were 3.3% and 11.8% respectively.

CHART III.5.10

NEW LOANS FOR HOUSE PURCHASE

**The rate of growth of new loans for house purchase reached its 2011 peak in November**

(new business; annual percentage changes; interest rate in %)




### III.5.3 Interest rates

#### *Monetary policy interest rates*

The monetary policy decision-making of the CNB Bank Board in 2011 Q4 was based on the macroeconomic forecast published in the previous Inflation Report. Consistent with the forecast and its assumptions was a slight decline in market interest rates at the start of the forecast and flat rates in late 2012 and early 2013. At the Bank Board meeting in November, the risks of the previous forecast were assessed as being significant and tilted towards interest rate stability in the spirit of the alternative "euro area stagnation" scenario. At the Bank Board meeting in December, the risks were assessed as being moderately inflationary, or tilted towards slightly higher interest rates by comparison with the baseline scenario. Accordingly, the Bank Board decided at both meetings to leave the **key interest rates** unchanged. 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.5.11).

At its monetary policy meeting on 2 February 2012, the Bank Board decided unanimously **to leave interest rates unchanged**. The risks of the new forecast were assessed as being balanced. The downside risks to inflation include additional fiscal consolidation measures beyond those included in the forecast. By contrast, potential faster food price growth would foster higher inflation. In addition, there exist also two-sided risks, namely external developments and the exchange rate of the koruna.

CHART III.5.11

CNB KEY RATES

**The CNB has left key rates unchanged since May 2010**

(percentages)

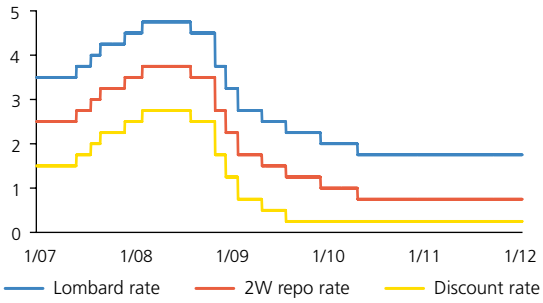


CHART III.5.12

MARKET INTEREST RATES

**Money market interest rates were virtually unchanged, while IRS rates were volatile**
(percentages)

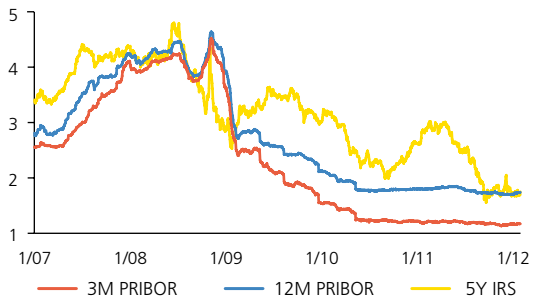



CHART III.5.13

INTEREST RATE DIFFERENTIALS

**Interest rate differentials vis-à-vis the euro were approaching zero**
(percentage points)

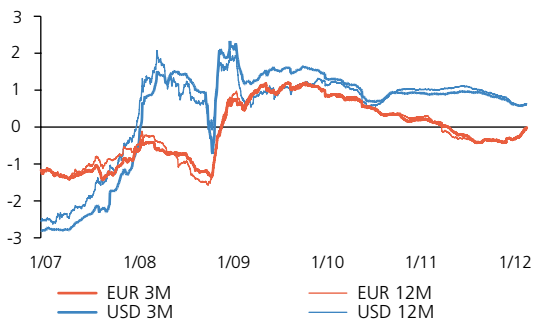
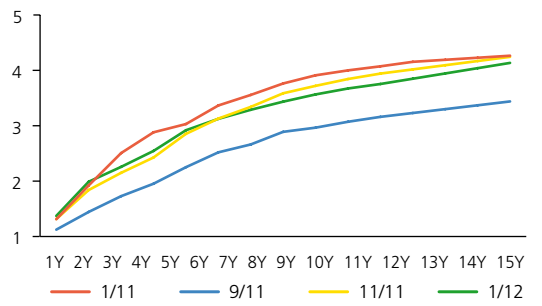



CHART III.5.14

GOVERNMENT BOND YIELD CURVE

**The yield curve shifted upwards**
(percentages)




### *Financial market interest rates*

**Money market interest rates** were virtually unchanged in 2011 Q4, with the downward movements at individual maturities not exceeding 0.1 percentage point (see Chart III.5.12). **FRA derivative rates** discontinued the sharp fall observed in the previous period, when mainly rates with longer maturities had declined. However, the increased rate volatility associated with the koruna's exchange rate movements remained. Expectations of long-term stability of CNB interest rates currently prevail on the market. This reflects the absence of domestic demand-pull inflation pressures, the slowing economic growth and the declining outlook for euro area interest rates. The current market outlook for 3M rates according to FRA quotations is broadly stable. In the near future, it is in line with the path consistent with the baseline scenario of the new forecast, whereas at the longer horizon it is slightly above it (see sections I and II).

**Interest rates with longer maturities** responded almost exclusively to events abroad. Marked changes in sentiment relating to political developments and proposed solutions to the debt crisis were reflected in sharp increases in rates and subsequent corrections. Owing to the lengthy and so far unsuccessful effort to avert a crisis in the euro area, risk aversion grew, volatility in the market increased and the contagion spread to the countries of Central Europe (owing to higher risk perception of the entire emerging markets group). Overall, IRS rates remained broadly unchanged in 2011 Q4, close to a historical low. Government bond yields recorded increases of up to 0.6 percentage point.

The average **3M PRIBOR** was 1.2% in 2011 Q4 and was thus slightly above the baseline scenario of 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 0.41 percentage point in 2011 Q4. This spread has therefore yet to respond to the sharp increase in the risk premium in the euro area interbank market; it has been close to this level since May 2010.

The **PRIBOR yield curve** barely changed during 2011 Q4 and its slope remained positive. The spread between the 1Y PRIBOR and 2W PRIBOR was around 0.9 percentage point in December 2011. The money market yield curve remained unchanged during January. The **IRS yield curve** shifted in both directions, but the changes were not significant and the positive slope of the curve was virtually unchanged. In December, the average 5Y–1Y spread was 0.7 percentage point and the 10Y–1Y spread 1.2 percentage points.

Short-term **interest rate differentials** vis-à-vis the two main world currencies (PRIBOR/CZK – EURIBOR/EUR, or LIBOR/USD) reflected developments in foreign markets amid flat rates on the domestic money market. The differentials vis-à-vis dollar rates declined, while those vis-à-vis euro rates became significantly less negative (see Chart III.5.13). The 3M PRIBOR–3M EURIBOR interest rate differential was -0.3 percentage point on average in 2011 Q4. On 20 January, it reached zero.

Six auctions of fixed coupon bonds and three auctions of variable coupon bonds were held on the primary **government bond market** in the period under review. The total volume of bonds issued was CZK 59.2 billion. Demand strongly exceeded supply in almost all the auctions. This means that the Ministry of Finance had no problems subscribing government bonds in the primary market even in an environment of increased risk aversion, albeit with a slightly higher yield in some auctions. The interest of institutional investors focused mainly on variable coupon bonds and bonds with shorter maturities. The government bond yield curve shifted upwards in 2011 Q4 as a result of the foreign market situation, while its positive slope increased slightly (see Chart III.5.14)

### *Client interest rates*

The **interest rate on loans to non-financial corporations** excluding overdrafts remained close to a historical low, at 2.7% in November (see Chart III.5.15). Floating rates and rates fixed for up to one year, typical of a large proportion of new corporate loans, rose for small loans while declining for large loans (by 0.1–0.2 percentage point in both cases). Risk premia are thus still rising for small loans and continuing to fall for large loans (small loans are usually taken out by small and medium-sized enterprises and are characterised by a potentially higher risk of default in the current phase of the business cycle). In the euro area, interest rates on corporate loans remained low at 3–5%, with rates on small and large loans showing similar trends.

Turning to households, the average **interest rate on loans for house purchase** continued to fall, reaching 4% in November. Rates on mortgages dropped, while rates on building society loans were flat. Rates with both short and long fixations recorded declines, with floating rates and rates fixed for up to three months falling to 3.4% (see Chart III.5.16). According to Hypoindex, mortgage interest rates edged down again in December 2011 (to 3.6%). The path of interest rates with short fixations reflected flat money market rates and lower client risk premia. The spread between the overall rate on house purchase loans and the ten-year government bond yield also decreased as a result of a significant rise in the government bond yield (see Chart III.5.17). There are signals that some banks increased their rates on new house purchase loans in December, while others announced that they would hold them only until the end of 2011. House purchase loan rates in the euro area stayed at around 4% in late 2011.

The **interest rate on consumer credit** remained high, despite decreasing in November (to 13.9%). The rate on current account overdrafts and the credit card rate were also little changed in the period under review (at 15.5% and 20.3% respectively). The spread between the consumer credit rate and the 3M PRIBOR market rate increased overall in 2011 H2. These rates therefore remain significantly higher than in the euro area. Rates on consumer credit in the euro area were flat or falling at the end of 2011, at 6–8%, while those on current account overdrafts and credit cards were 8% and 17% respectively.

CHART III.5.15

INTEREST RATES ON LOANS TO CORPORATIONS

**Interest rates on corporate loans remain low**
(new business; percentages)

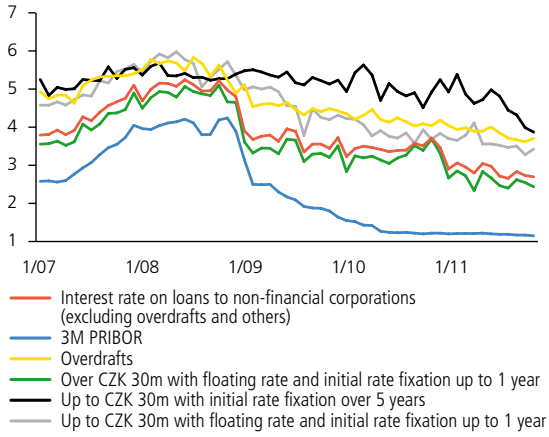



CHART III.5.16

INTEREST RATES ON LOANS FOR HOUSE PURCHASE

**Rates on loans for house purchase decreased for most fixations**
(new business; percentages)

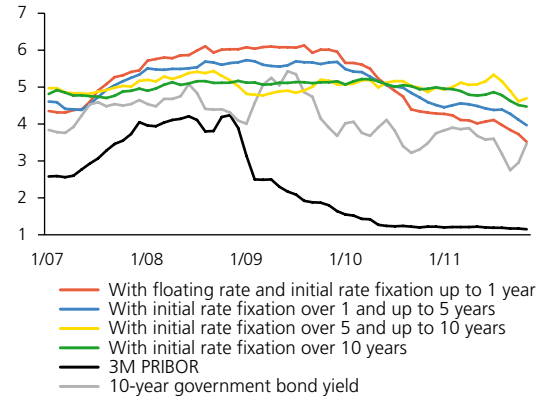



CHART III.5.17

CLIENT AND MARKET INTEREST RATE SPREADS

**Banks reduced slightly further the spreads between client and market rates on house purchase loans and on large corporate loans**
(percentage points)

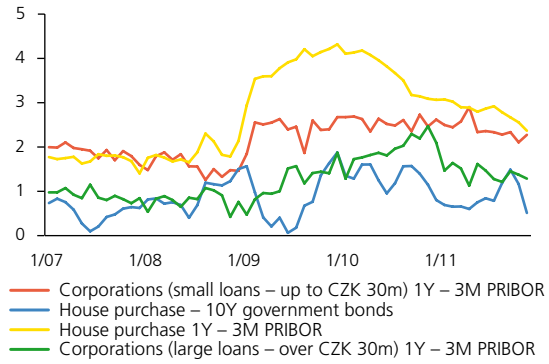


CHART III.5.18

EX ANTE REAL RATES

**Ex ante real interest rates on new loans declined further**
(percentages)

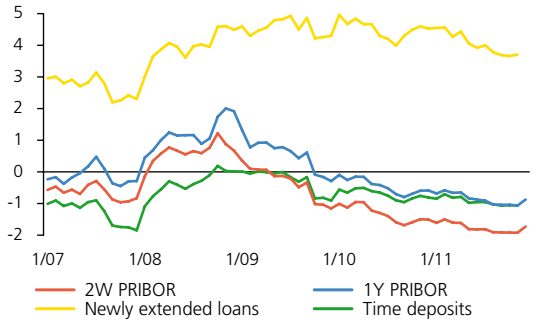
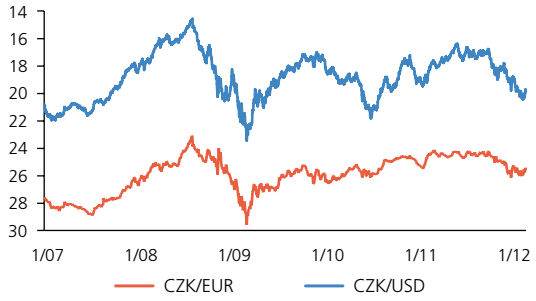



CHART III.5.19

CZK/EUR AND CZK/USD EXCHANGE RATES

**The koruna weakened against both the euro and the dollar in 2011 Q4**




**Interest rates on deposits** remained broadly unchanged in 2011 Q4. Only the household deposit rate with an agreed maturity of up to one year rose again (to 1% in November), while the household deposit rate with agreed maturity of over two years fell to 1.8%. The interest rates on overnight deposits of households and on deposits redeemable at notice are 0.7% and 2% respectively. Rates on corporate deposits were 0.4% on average.

**Real client interest rates**[29] showed no major changes in 2011 Q4. Real rates on new loans were 3.7% in November, while real rates on time deposits were -1.1% (see Chart III.5.18).

### III.5.4 The exchange rate

The average **exchange rate of the koruna against the euro** was CZK 25.3 in 2011 Q4. This represents a year-on-year depreciation of 2.0% and a quarter-on-quarter depreciation of 3.6%. Between February and mid-September, the exchange rate was fluctuating between CZK 24.0 and 24.6 to the euro. Then, in the course of three months, the koruna depreciated by around 8% to CZK 26 to the euro. In December 2011 and early January 2012, the koruna was again relatively stable at just below CZK 26 to the euro (see Chart III.5.19). In mid-January, the koruna appreciated by 2% to about CZK 25.4 to the euro, but later corrected again slightly.

The koruna's exchange rate was affected by the escalation of the debt crisis in Europe, especially in 2011 H2. Moreover, the lack of investor confidence in Europe was exacerbated in the Central European region by the unconventional actions taken by Hungary. The escalating situation in European financial markets led to a decline in non-residents' interest in domestic koruna government bonds and direct investment in the Czech Republic. Moreover, the Ministry of Finance responded by temporarily suspending the issuance of government bonds in foreign markets. By contrast, the changes in the short-term interest rate differential of the koruna against the euro during 2011 had no visible effect on financial flows.

The average **exchange rate of the koruna against the dollar** was CZK 18.8 in 2011 Q4. This represents a year-on-year depreciation of 2.9% and a quarter-on-quarter depreciation of 8.7%. The depreciation of the koruna was more pronounced at the end of the year owing to the appreciation of the dollar in global markets (more precisely, the depreciation of European currencies). The exchange rate of the koruna against the dollar was slightly above CZK 20 to the dollar at the end of 2011 and in early January, and then appreciated slightly below this level.

29 Ex ante real interest rates: nominal interest rates are deflated by the consumer price inflation expected by financial market analysts.

### III.5.5 Economic results of non-financial corporations

In the monitored segment of **non-financial corporations with 50 employees or more**[30] the annual growth of the main monitored indicators continued to slow in 2011 Q3. Growth in book value added almost halted amid a further significant slowdown in the growth rate of sales and output. This was also fostered by still faster growth in intermediate consumption than in output (see Table III.5.1). Annual growth in personnel costs slowed only moderately, and so, according to CNB calculations, the gross operating surplus in fact recorded an annual decline (see Chart III.5.20).

The **material cost-output ratio** increased again year on year in Q3 (by 1.2 percentage points; see Table III.5.1) amid a persisting lead of growth in intermediate consumption over output. The rising material cost-output ratio of non-financial corporations was still due to buoyant annual growth in import prices of energy and non-energy commodities and metal-based semi-finished products. Corporate costs were also affected by continued growth in prices of energy of domestic origin.

On the other hand, the rise in personnel costs was again more moderate than the rise in output in Q3, and so the **personnel cost-output ratio** continued to fall year on year. At just 0.1 percentage point, however, the decline was considerably smaller than in previous quarters (see Table III.5.1). The annual growth in personnel costs was slower than in the previous quarter owing to slower growth in both the number of employees and their average wage.

Data for the narrower **segment of large corporations** (with 250 employees or more[31]) indicate that the output of these corporations continued to rise somewhat faster than in the larger segment of corporations. However, their book value added still declined slightly and, according to CNB calculations, their gross operating surplus showed a larger annual decline than in the wider segment of corporations.

CHART III.5.20

KEY FINANCIAL INDICATORS

**Annual growth in the main financial indicators continued to slow in 2011 Q3**
(annual percentage changes)

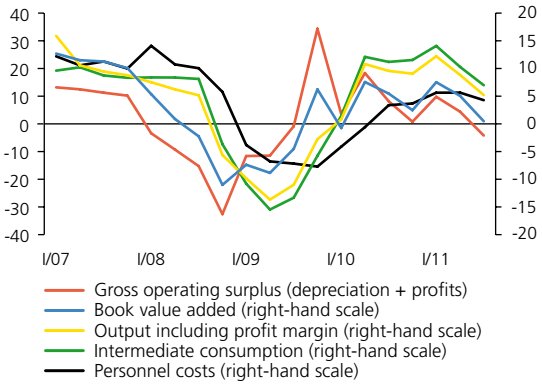



TABLE III.5.1

PERFORMANCE INDICATORS OF CORPORATIONS

**The material cost-output ratio increased again and the decline in the personnel cost-output ratio slowed in 2011 Q3**
(annual percentage changes)

| | 2010 Q3 | 2011 Q3 | Annual percentage changes |
|---|---|---|---|
| Output incl. profit margin (CZK billions)[a] | 1,272.8 | 1,338.9 | 5.2 |
| Personnel costs (CZK billions) | 192.0 | 200.2 | 4.3 |
| Intermediate consumption (CZK billions) | 924.6 | 989.1 | 7.0 |
| Book value added (CZK billions) | 348.2 | 349.8 | 0.5 |
| Sales (CZK billions) | 1,645.8 | 1,740.1 | 5.7 |
| | Percentages | Percentages | Annual changes in p.p. |
| Ratio of personnel costs to value added[a] | 55.1 | 57.2 | 2.1 |
| Material cost-output ratio[a] | 72.6 | 73.9 | 1.2 |
| Personnel cost-output ratio[a] | 15.1 | 15.0 | -0.1 |
| Ratio of book value added to output[a] | 27.4 | 26.1 | -1.2 |

a) CNB calculation

30 The segment of corporations with 50 employees or more consisted of more than 9,300 non-financial corporations at the end of 2011 Q3.
31 The segment of corporations with 250 employees or more consisted of almost 1,700 non-financial corporations at the end of 2011 Q3.

CHART III.5.21

FINANCING OF NON-FINANCIAL CORPORATIONS

**Growth in the total financial liabilities of corporations decreased**
(contributions to external financing in percentage points; annual percentage changes)

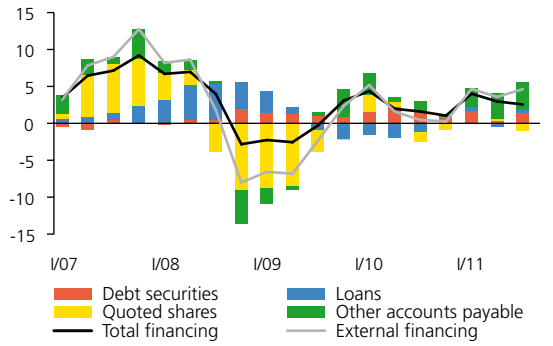
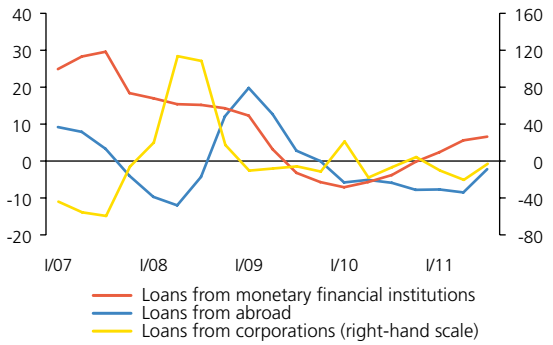



CHART III.5.22

DOMESTIC AND FOREIGN CORPORATE LOANS

**Domestic bank loans increased**
(annual percentage changes)

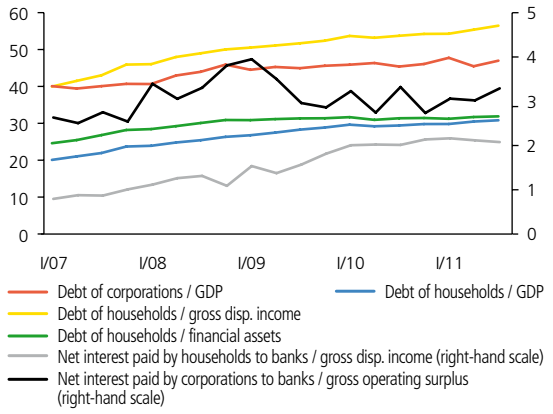



Note: The time series of loans from other financial institutions is not included owing to a change in methodology in 2011.

CHART III.5.23

DEBT AND NET INTEREST PAYMENTS

**The ratios of corporate debt to GDP and household debt to income increased**
(percentages)




### III.5.6 Financial position of corporations and households

In 2011 Q3, most financial indicators were pointing to a further **deterioration in corporate profitability** and gradually accelerating growth in **external financing**. Annual growth of external financing of corporations increased to 4.6% (see Chart III.5.21).[32] This was due mainly to issues of long-term debt securities and other accounts payable. Long-term debt securities were used to finance some large corporations. Two-thirds of them were issued in foreign financial markets. On the other hand, financing through the issuance of quoted shares recorded an annual decline due to revaluation of quoted shares. The share of market financing of corporations via securities in external financing thus declined to around 19%. Growth in **total corporate financing**, which additionally includes shareholders' equity in the form of unquoted shares and other equity, declined to 2.6% in 2011 Q3. The ratio of debt financing of corporations in the form of loans, debt securities issued and other accounts payable to equity increased to 105.5% as a result of a rise in debt and a decline in the value of equity issued.

The subdued growth in **total loans** to non-financial corporations was driven exclusively by loans from domestic banking institutions in Q3. Loans from abroad and loans from other domestic corporations continued to decline amid a fall in loans from financial non-banking institutions (see Chart III.5.22).

Annual growth in **financial investment by corporations** was flat at 2.7% in 2011 Q3. Corporations held more liquid financial assets in the form of currency in circulation and deposits (see section III.5.1) amid an increase in loans provided by them. On the other hand, corporations invested less in debt securities and equity. The share of financial investment by corporations in total financial investment in the economy fell slightly.[33] At the same time, however, corporations held more foreign financial assets; the share of these in the total financial assets of corporations was around 7% in Q3, compared to 6% in 2008 and 4% in 2007.

The ratio of the **debt of non-financial corporations** (loans and debt securities issued) to GDP reached 47%[34] in 2011 Q3 and increased compared to the previous quarter. This ratio remains low by international comparison (the euro area average is 79%), which is currently an advantage. The net interest burden on corporations resulting from bank loans relative to gross operating surplus increased to 3.3% (see Chart III.5.23). This mainly reflected a decline in the gross operating surplus of corporations.

32 The 2011 Q2 data were revised upon the publication of the financial accounts data for 2011 Q3. External financing comprises loans, debt securities, quoted shares and other accounts payable. Total financing comprises all financial liabilities of corporations.
33 Non-financial corporations account for 22%, households 18%, financial institutions 32%, general government 8% and rest of the world 20% of total financial investment in the economy.
34 When other accounts payable (relating among other things to trade payables) are included, the ratio of corporate debt to GDP is significantly higher, at 111.4%.

The **financial indicators of non-financial corporations** point to a rise in the acid-test ratio due to higher growth in short-term financial assets. By contrast, the solvency of corporations worsened amid higher financial leverage (see Table III.5.2).

The difference between corporations' **internal funds** (gross savings, i.e. profit and depreciation) and their investment expenditure (i.e. gross capital formation) remained negative in Q3. However, the difference narrowed compared to the previous quarter thanks to growth in gross savings. Unlike in some previous periods, the ratio of gross savings of corporations to gross value added increased in Q3.

The annual growth rate of total **financing of households** by banks and non-bank institutions was flat at below 6% in 2011 Q3 (see Chart III.5.24). The ratio of household debt to gross disposable income rose to around 57%, mainly because of an annual drop in gross disposable income. The ratios of household debt to GDP and to financial assets were virtually unchanged at around 30% in both cases. The interest burden on households remained at 2.1% (see Chart III.5.23). Households' solvency (as measured by the ratio of financial assets to liabilities) and acid-test ratio (as measured by the ratio of selected short-term financial assets to short-term loans) fell slightly.

Growth in **financial investment by households** picked up slightly to 4.4%. This reflected growth in financial investment in currency in circulation and deposits and, to a lesser extent, in securities and equity. Compared to the previous quarter, year-on-year growth in the ratio of net financial assets to annual gross disposable income rose as a result of stronger growth of financial assets than of liabilities (see Chart III.5.25).

### III.5.7 The property market

**Asking prices of older apartments** continued to decline moderately in quarter-on-quarter terms in 2011 Q3. According to CZSO data, the quarterly decline reached 0.2% in Prague and 1.6% in the rest of the Czech Republic. In year-on-year terms, the price decline deepened further in the rest of the Czech Republic (by 1.7 percentage points), while in Prague it moderated to roughly the same extent (by 1.8 percentage points), so that the year-on-year declines in the two regions are now almost identical (just above 5%; see Chart III.5.26). The CZSO made a downward revision to the 2009 and 2010 data on **transaction prices of older apartments**.[35] At the same time, however, a new estimate of transaction prices of older apartments was published for 2011 H1 (data from tax returns). This confirmed previous information

35 Prices as at the end of 2009 were revised downwards by 0.8% for Prague and by 0.6% for the Czech Republic excluding Prague; prices as at the end of 2010 were lowered by 3.3% and 1.1% respectively.

TABLE III.5.2

**FINANCIAL INDICATORS OF CORPORATIONS**

**Corporate solvency decreased, while the acid-test ratio increased**

| | I/11 | II/11 | III/11 | III/11 |
|---|---|---|---|---|
| Corporations total[a)] | Annual percentage changes | | | CZK billions |
| Equity (shares and other equity issued) | -0.7 | 2.1 | -7.2 | 4,002.0 |
| Loans | 1.5 | -1.5 | 1.2 | 1,463.2 |
| Debt securities | 34.4 | 4.9 | 24.3 | 328.6 |
| Quoted shares | -0.7 | 2.1 | -7.2 | 602.7 |
| Other accounts payable | 5.3 | 7.1 | 7.9 | 2,457.6 |
| Total financing[1)] | 4.0 | 3.0 | 2.6 | 8,251.4 |
| Financial assets | 5.8 | 2.7 | 2.7 | 4,624.2 |
| Corporations total[a)] | Annual changes in percentage points | | | Indicators in % |
| Acid-test ratio[2)] | 8.7 | 6.0 | 16.4 | 165.1 |
| Solvency indicator[3)] | 0.2 | -1.2 | -4.1 | 108.8 |
| Financial leverage[4)] | 3.6 | 0.7 | 4.5 | 115.5 |

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

CHART III.5.24

**FINANCING OF HOUSEHOLDS**

**The rate of growth of total household debt was flat**

(contributions in percentage points; annual percentage changes)

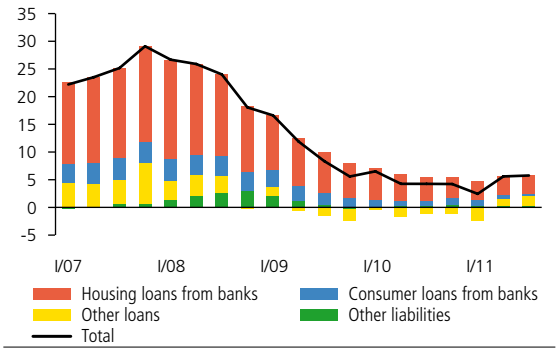



CHART III.5.25

**HOUSEHOLDS' NET FINANCIAL ASSETS**

**Growth in the ratio of net financial assets to gross disposable income accelerated**

(annual percentage changes calculated from annual flows; ratios in percentages)

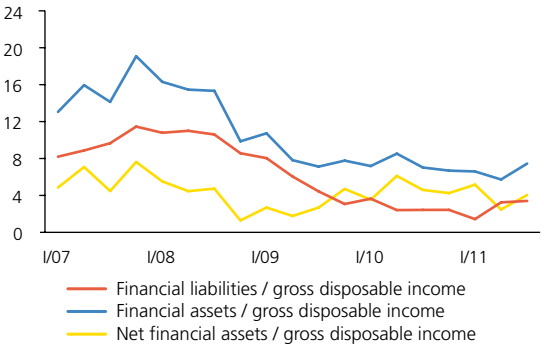


CHART III.5.26

TRANSACTION AND ASKING PRICES OF APARTMENTS

**The year-on-year decline in asking prices of apartments continued into 2011 Q4**

(annual percentage changes; source: CZSO, Institute for Regional Information)

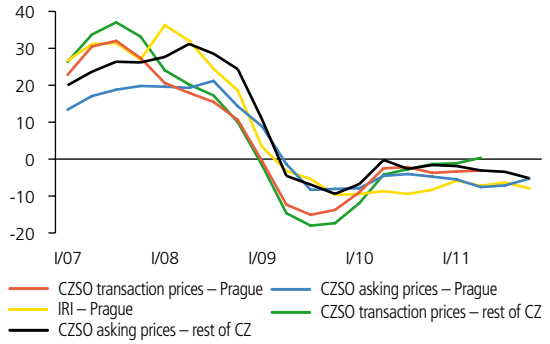



CHART III.5.27

NUMBERS OF TRANSACTIONS IN THE PROPERTY MARKET

**Growth in the number of transactions and the number of mortgages suggests that the property market is stabilising**

(2006 average = 100; numbers of transactions as one-year moving sums; source: CZSO, COSMC, Fincentrum Hypoindex)

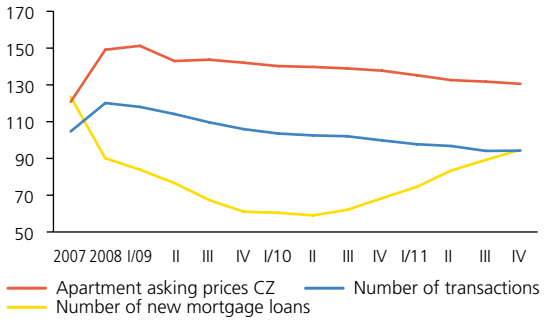
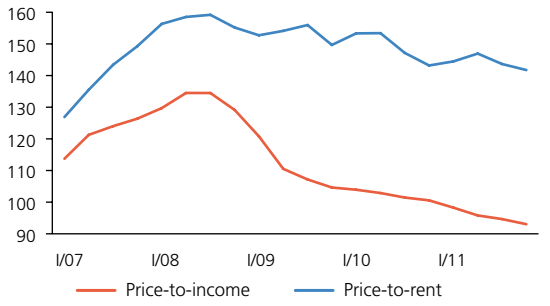



CHART III.5.28

APARTMENT PRICE SUSTAINABILITY INDICATORS

**The apartment price-to-income and price-to-rent ratios continued to fall**

(2000–2007 average = 100; source: Institute for Regional Information)




indicating a moderation of their annual decline. Prices for the Czech Republic excluding Prague even recorded a slight year-on-year rise for the first time since the end of 2008 (see Chart III.5.26). On the other hand, estimates of transaction prices in Q3 based on CZSO surveys in real estate agencies[36] point to a fall in transaction prices in Prague (of 2.2% for older apartments and 2.1% for new apartments).

A partial stabilisation of the property market was also indicated by a modest increase in the **number of property market transactions** after almost three years of declines. The number of proceedings on entry of ownership rights in the cadastre rose by 0.6% year on year in 2011 Q4 and the one-year moving sum of the number of transactions increased by 0.2% quarter on quarter (see Chart III.5.27). The number of new mortgage loans for house purchase meanwhile continued to grow, increasing by 6.2% quarter on quarter (one-year moving sum). In 2011 as a whole, the number of new mortgages rose by 38.5% year on year (Fincentrum Hypoindex data). In addition to substitution between mortgage loans and building society loans (see section III.5.2) and refinancing of existing mortgages, the recovery in mortgage lending growth reflects a recovery in property market demand, especially in the segment of new apartments. This recovery can be illustrated, for example, using Ekospol data, according to which the number of apartments sold in Prague rose by 30.7% year on year in Q4 (and by 28.4% for 2011 as a whole; data for developments with more than 50 apartments). On the other hand, the number of unsold completed apartments rose further by around 4.3% compared to the start of the year (Trigema data). The recovery in demand for new apartments towards the end of 2011 was also linked with the rise in VAT from 10% to 14% effective from the start of 2012. Although, according to anecdotal evidence, developers have not yet fully reflected the tax increase in prices, a drop in demand can be expected in 2012.

The property price sustainability indicators continued to fall in 2011 Q4. The **price-to-income ratio** fell by 1.7% and the **price-to-rent ratio** by 1.3% quarter on quarter. These indices are now down considerably (by 30.8% and 11% respectively) from their highs recorded at the end of 2008 Q3 (see Chart III.5.28) and indicate no risk of property price overvaluation. In combination with the decrease in interest rates on mortgage loans, both indicators point to increased housing affordability.

As in the previous period, we continue to expect prices of older apartments to remain flat in 2012 and recover slightly in H2, depending primarily on the stabilisation of the economic situation (see section III.3) and demographic developments (lower population

36 This index differs from the transaction price index based on prices from property transfer tax returns, which is the source of data for Chart III.5.26. The advantages of this index are that it has a shorter publication lag and that it covers prices of new apartments, which are not subject to property transfer tax. On the other hand, this index does not cover property transactions outside estate agencies, its structure is less detailed and its time series is shorter (the oldest data are from 2008).

growth). However, prices could be squeezed by deteriorating domestic economic growth linked with foreign developments and foreclosures of apartments or apartment blocks used to secure mortgage loans.

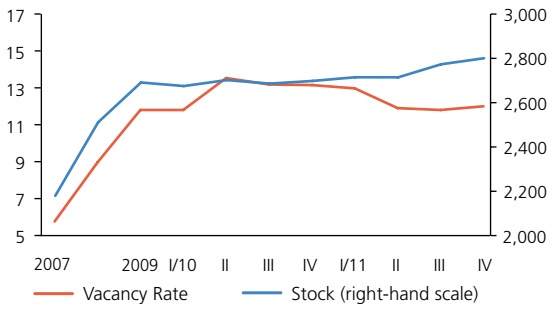
The market continued to recover in the **commercial property sector**, as evidenced by a higher total volume of investment in 2011 Q3 (EUR 1.05 billion) than in the whole of 2010 (EUR 780 million). Retail was the most active segment, accounting for about 80% of investment. As regards office property, gross take-up increased by 8% in the first three quarters of 2011 and the share of renegotiations in gross take-up fell from 42% in 2010 to 31% so far in 2011 (Jones Lang LaSalle data). New supply of office space continued to recover. Total office floor area rose by 3.9% year on year in 2011 Q4, while the vacancy rate increased by only 0.2 percentage point quarter on quarter to 12% and fell by 1.2 percentage points year on year (see Chart III.5.29). Similarly, the vacancy rate also declined for other types of commercial property, i.e. industrial property (to 6.9% in 2011 Q3[37]) and retail property (to 4.9% from 6.4% in 2009).

CHART III.5.29

SITUATION IN THE OFFICE PROPERTY MARKET

**The recovery in the supply of new office space continued and the vacancy rate fell year on year**

(vacancy rate in %; stock in thousands of m²; source: Jones Lang LaSalle, Prague Research Forum)




37 Down by 12 percentage points from the record high seen in 2009 Q2.

CHART III.6.1

CURRENT ACCOUNT

**The current account deficit decreased in 2011 Q3, owing mainly to a rising trade surplus**
(annual moving totals in CZK billions)

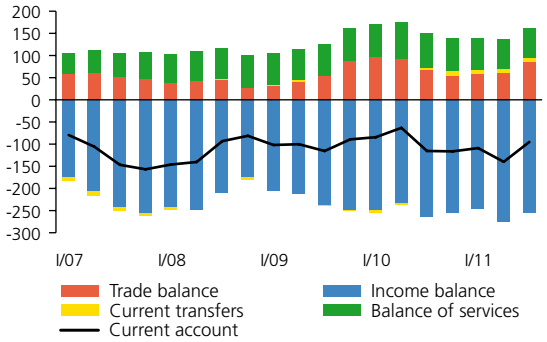



CHART III.6.2

TRADE BALANCE

**The year-on-year change in the trade balance was affected most strongly in 2011 Q1–Q3 by growth in the machinery surplus**
(accumulation since start of year in CZK billions)

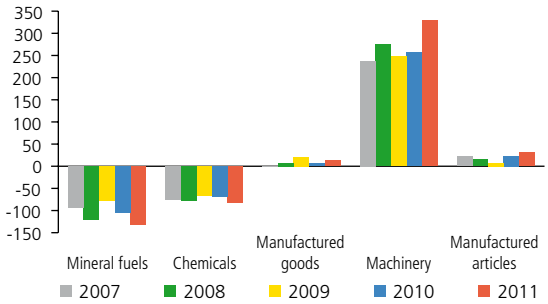
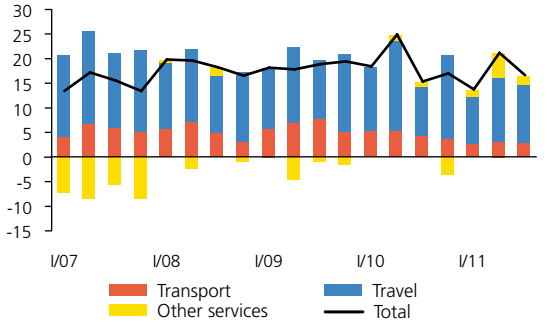



CHART III.6.3

BALANCE OF SERVICES

**All three sub-balances contributed to the services surplus in 2011 Q1–Q3**
(CZK billions)




## III.6 BALANCE OF PAYMENTS

*In the first three quarters of 2011, the balance of payments was characterised as usual by a high income deficit, due mainly to dividends from direct investment paid to non-residents. However, its effect on the current account was largely offset by a goods and services surplus resulting from a higher trade surplus. The financial account surplus was driven mainly by a net inflow of direct investment due to earnings reinvested in the Czech Republic, as well as by a surplus on other investment linked with an increase in the external liabilities of Czech monetary financial institutions. However, it was partly offset by a net portfolio investment outflow as a result of purchases of foreign securities by residents.*

### III.6.1 The current account

The **current account** recorded a deficit of CZK 79.4 billion in 2011 Q1–Q3. In year-on-year terms, the deficit fell by more than CZK 21 billion. The decline in the overall deficit was related solely to trade balance developments (see Chart III.6.1). The annual moving ratio of the current account to GDP thus decreased to 2.5% in Q3.

The **trade surplus** for Q1–Q3 rose by more than CZK 31 billion year on year to CZK 80.5 billion. The increase in the trade surplus was due to developments in real terms, more than one-half of which was offset, however, by the price effect associated with a negative annual change in the terms of trade. The gradual moderation in external demand growth was reflected in a slowdown in goods exports. However, its nominal annual growth rate for the first three quarters exceeded 12% despite year-on-year appreciation of the koruna. The annual nominal growth rate of imports followed a similar downward trend as a result of the high import intensity of exports. Goods imports were also dampened by subdued total domestic demand, while high energy commodity prices acted in the opposite direction. Turning to the commodity structure, growth in the machinery and transport equipment surplus was the biggest contributor to the increase in the overall surplus. By contrast, an increase in the deficit on mineral fuels was the strongest factor acting in the opposite direction (see Chart III.6.2). The year-on-year rise in the trade surplus accelerated further during 2011 Q4, exceeding CZK 24 billion for October to November.

In the first three quarters of 2011 the **balance of services** (see Chart III.6.3) ended in a surplus of CZK 51.3 billion. However, it recorded a year-on-year decline of more than CZK 7 billion. The overall surplus was linked chiefly with a surplus on travel. Travel was also the biggest contributor to the year-on-year decline in the overall surplus, owing to a decrease in credits from private travel and an increase in debits on business travel abroad. A fall in the surplus on transport services, due to rapid growth in debits, was offset by a rise in the surplus on other services due to faster growth in credits than in debits, especially for computer services.

In contrast to the goods and services surplus, the **income balance** ended the first three quarters in a deficit of CZK 217.2 billion, representing only a slight year-on-year increase. The deficit on direct investment income of CZK 205.7 billion, linked chiefly with income in the form of dividends paid to non-residents and estimated reinvested earnings in the Czech Republic, was the largest component of the overall balance (see Chart III.6.4). The balances on portfolio investment income and compensation of employees (representing mainly wages) also recorded slight deficits. The only component to end in a surplus and act against the widening of the overall deficit was other investment income, comprising income on CNB international reserves and interest on bank deposits.

**Current transfers** recorded a surplus of CZK 6 billion in Q1–Q3, representing a slight year-on-year decrease. The government transfers surplus reached CZK 18.2 billion, due almost exclusively to a surplus on transfers between the Czech Republic and the EU budget. However, roughly two-thirds of the surplus was offset by a deficit on transfers of other sectors.

### III.6.2 The capital account

The **capital account** also ended in a slight surplus (CZK 3.3 billion). The year-on-year decline in the surplus of more than CZK 23 billion was due chiefly to significantly lower credits. This was chiefly a result of low credits from capital transfers, comprising mainly transfers from EU funds, which reached only CZK 1.8 billion. The decline in the overall surplus was also due to a fall in credits from trading in emission allowances.

### III.6.3 The financial account

The **financial account** ended 2011 Q1–Q3 in a net surplus of CZK 78.4 billion (see Chart III.6.5), due mainly to net inflows of direct investment and other investment. However, these surpluses were partly offset by a net portfolio investment outflow.

**Direct investment** recorded a net surplus of CZK 54.4 billion in Q1–Q3 (see Chart III.6.6), down by almost CZK 66 billion year on year owing mainly to a lower inflow of foreign direct investment into the Czech Republic. The overall inflow into the Czech Republic was CZK 64.5 billion and was linked almost exclusively with reinvested earnings. The year-on-year decrease was due to lower other capital investment, connected with credit relationships between affiliated corporations, and to declines in equity capital in some corporations in the Czech Republic. Reinvested earnings were also the largest component of direct investment of domestic corporations abroad. With regard to industries, the foreign capital inflow (excluding reinvestment) was channelled primarily into electricity, gas and water supply. Capital outflows abroad went mainly to manufacture of motor vehicles.

CHART III.6.4

**INCOME BALANCE**

**The year-on-year changes in the components of the income balance were only very modest in 2011 Q1–Q3**
(accumulation since start of year in CZK billions)

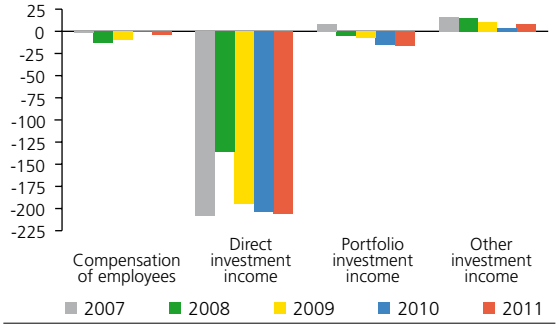



CHART III.6.5

**FINANCIAL ACCOUNT**

**The financial account surplus decreased in 2011 Q3, owing mainly to an outflow of portfolio investment**
(annual moving totals in CZK billions)

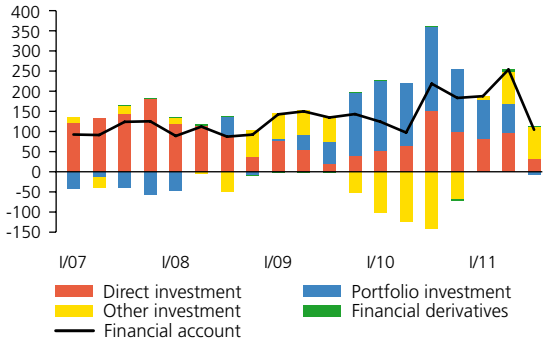



CHART III.6.6

**DIRECT INVESTMENT**

**The direct investment surplus in 2011 Q1–Q3 was mainly a result of earnings reinvested in the Czech Republic**
(CZK billions)

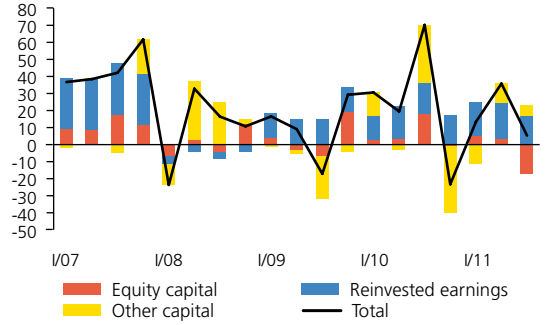


CHART III.6.7

PORTFOLIO INVESTMENT

**Portfolio investment recorded a net outflow in 2011 Q1–Q3, owing mainly to purchases of foreign securities by residents**
(CZK billions)

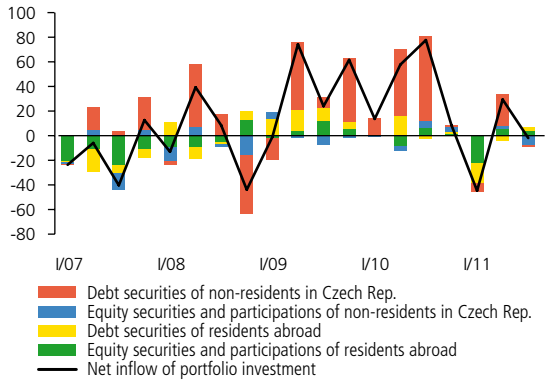
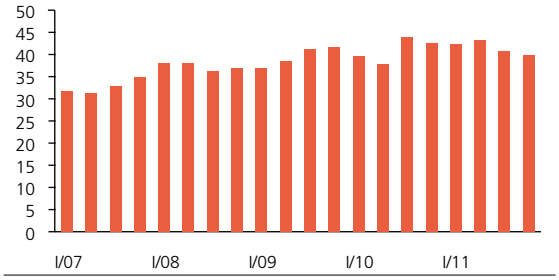



CHART III.6.8

CNB INTERNATIONAL RESERVES

**The CNB's international reserves decreased slightly in dollar terms in 2011 Q4 compared to the previous quarter**
(USD billions)




By contrast, **portfolio investment** recorded a net outflow of CZK 17.2 billion amid a marked annual change in flows (see Chart III.6.7). The year-on-year change in its balance of CZK 166 billion was connected with the absence of government bond issues abroad, a fall in non-residents' interest in koruna government bonds and renewed investor interest in foreign securities. The most significant transactions were purchases of foreign securities by residents, which reached almost CZK 31 billion. Purchases of foreign bonds slightly outweighed purchases of equity securities. Purchases also dominated foreign investor transactions in domestic securities. However, they were connected only with demand for debt securities. By contrast, holdings of domestic shares by foreign investors edged down.

Settlement of **financial derivatives** recorded a net inflow of CZK 5.5 billion. The balance rose by more than CZK 6 billion year on year amid a shift from deficit to surplus.

**Other investment** also recorded a net inflow in 2011 Q1–Q3 (CZK 35.7 billion). The overall surplus was due mostly to a net inflow of almost CZK 43 billion in the financial corporations sector, linked chiefly with a rise in its short-term foreign liabilities. The net inflow in the financial corporations sector was also the biggest contributor to a marked change in other investment flows. Investment in the government sector also ended in a very small surplus associated with drawdown of EIB loans. However, the overall inflow was partly offset by a net capital outflow from the corporate sector due to rapid growth in loans provided and deposits abroad.

The CNB's **international reserves** totalled CZK 795.6 billion at the end of 2011 Q4, representing a quarter-on-quarter increase of almost CZK 50 billion due mainly to valuation changes. In dollar terms, by contrast, the reserves declined by USD 0.8 billion to USD 39.9 billion in the same period (see Chart III.6.8). The CNB's international reserves covered almost 43% of all external debt liabilities of domestic entities at the end of Q3.

## III.7 THE EXTERNAL ENVIRONMENT

*Annual GDP growth in the euro area slowed further in 2011 Q3 and a quarter-on-quarter decline is now expected for Q4. Inflation slowed in December thanks to lower energy price growth. The ECB cut its key interest rate twice in 2011 Q4 (by 0.5 percentage point overall to 1%) and provided almost EUR 490 billion in long-term (three-year) liquidity to euro area commercial banks in December. In the USA, annual GDP growth slowed further despite a rise in private consumption, which could be supported in the future by the current improvement in the labour market situation. Inflation pressures persisted in the USA in late 2011, but the recent marked appreciation of the dollar and the gradual unwinding of past energy and commodity price increases should gradually dampen them. Prices of food commodities and industrial metals fell significantly in 2011 H2, but energy prices remain high.*

### III.7.1 The euro area

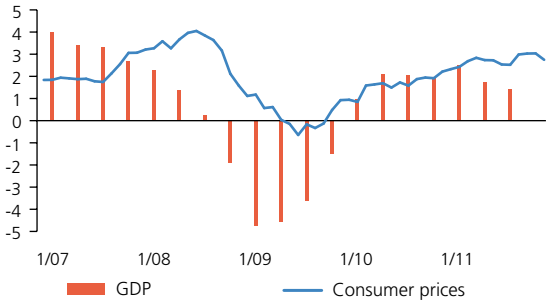
**Annual GDP growth in the euro area** slowed by a further 0.3 percentage point to 1.4% in 2011 Q3 (see Chart III.7.1). Growth in household consumption and investment remained low and growth in government consumption declined. At 0.2%, the quarterly rate of economic growth was again low. A slowdown in annual GDP growth and a quarterly decline are mostly expected in Q4. The monthly data for the first two months of Q4 bear out these expectations. The annual growth rates of industrial production and retail turnover decreased or were negative, and the month-on-month growth was below zero.

**Euro area economic growth expectations for 2012** have deteriorated significantly in recent months. Compared to October, the January Consensus Forecasts decreased the forecast for economic growth by almost 1 percentage point to -0.3%, with the estimates for fixed investment and consumption falling in particular. The ECB also cut its GDP growth expectations by 1 percentage point to 0.3% in December, and the European Commission lowered its estimate by the same amount to 0.5%. In addition to the weaker estimates for the economy this year, there was an increase in the uncertainty related to future developments. The latest European summit of 9 December 2011 (like the previous high-level meetings) failed to quell doubts about the euro area's ability to overcome the current debt crisis or to produce a clear and credible plan for saving Greece and other troubled countries. The full wording of the budget discipline pact whose principles were agreed at the summit is the subject of intensive negotiations, the outcome of which remains shrouded in uncertainty. Moreover, hopes for an end to the debt crisis were complicated by a rating downgrade of nine euro area countries on 13 January and subsequently of the EFSF (European Financial Stability Facility) by Standard & Poor's. However, the lower ratings have so far not affected the government bond yields of the countries concerned.

CHART III.7.1

GDP AND INFLATION IN THE EURO AREA

**GDP growth slowed further in 2011 Q3, while inflation decreased slightly at the end of 2011**
(annual percentage changes; source: Datastream)



**Annual inflation in the euro area** fell by 0.3 percentage point to 2.7% in December, mainly because of lower growth in energy prices. The January CF expects inflation to remain above 2% in Q1 and to fall below this level in the following quarter. Inflation should continue to decline moderately throughout the year. In January, the ECB Governing Council decided to leave the key interest rate unchanged at 1% following two rate cuts of 0.25 percentage point in November and December. The financial markets expect the rate to come down further during 2012 H1, probably to as low as 0.5%. The ECB also expects inflation to stay above 2% in the next few months and then fall below this level, as weak economic growth will lead to an absence of inflation pressures. For 2012 as a whole, the ECB (like the January CF) expects inflation of around 1.9%. A moderation in inflation is confirmed by low money supply growth, as the annual growth rate of M3 fell to 2% in November.

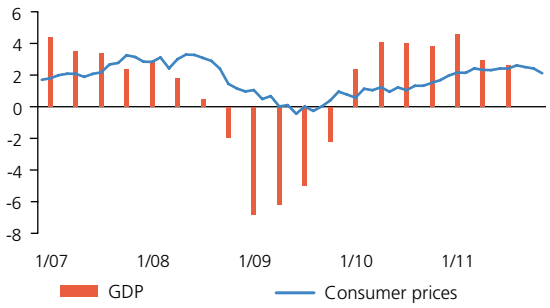
The first ECB auction to **provide long-term liquidity** to the banking sector through a new three-year facility took place at the end of December 2011. The auction met with exceptionally strong demand from euro area commercial banks, which borrowed almost EUR 490 billion from the ECB.

Chart III.7.2

GDP AND INFLATION IN GERMANY

**Economic growth and inflation are both slowing**

(annual percentage changes; source: Datastream)




Annual **economic growth in Germany** has been slowing gradually from the strong levels recorded in early 2011 and reached 2.6% in 2011 Q3 (see Chart III.7.2). At 0.5%, quarterly GDP growth was 0.2 percentage point higher than in 2011 Q2. The acceleration in economic activity was due chiefly to a pick-up in household consumption and fixed investment. Although exports are still increasing at a solid pace (2.5% quarter on quarter), their growth rate decreased in Q3. Macroeconomic indicators available with a smaller lag suggest a further slowdown in economic growth in Germany in 2011 Q4. Data for the first two months of 2011 Q4 indicate a decline in the growth rate of industrial production from 8.2% in Q3 to only 3.6%. At the same time, growth in new industrial orders has slowed. Retail and wholesale sales decreased month on month in October and November. By contrast, an increase in construction output and a decline in the unemployment rate of 0.1 percentage point to 5.5% (the lowest level since Germany's unification) in November supported economic growth. Inflation slowed at the close of the year.

Leading indicators – the PMI and Ifo indicators for December and the ZEW indicator for January – indicate stabilisation of economic activity. However, the OECD index continued to fall and remains below its long-term average. Although the outlook for German economic growth is much more favourable than the euro area average, the January CF expects a slowdown from 3.0% in 2011 to 0.5% in 2012. The Deutsche Bundesbank December forecast estimates growth of 0.6% assuming that the euro area debt crisis does not deepen any further. According to the Ifo December outlook, GDP growth will not exceed 0.6%. The downward trend should be reversed in 2012 Q4. All the institutions expect economic growth to recover in 2013.

The **annual growth of the Slovak economy** slowed slightly to 3.2% in 2011 Q3 (see Chart III.7.3). The positive balance of net exports increased, but the decline in domestic demand intensified. Quarterly economic growth was flat at 0.8%. Annual and quarterly economic growth is expected to moderate further in Q4, owing chiefly to falling external demand. These estimates are supported by data on industrial production and retail sales in October and November. Unemployment also increased slightly in October and November compared to Q3. The January CF considerably decreased its forecast for Slovak economic growth for 2012 from 2.7% to 1.1% compared to the October CF. Expected demand for Slovak exports, and consequently also the forecasts for industrial production, investment and consumption, were revised downwards.

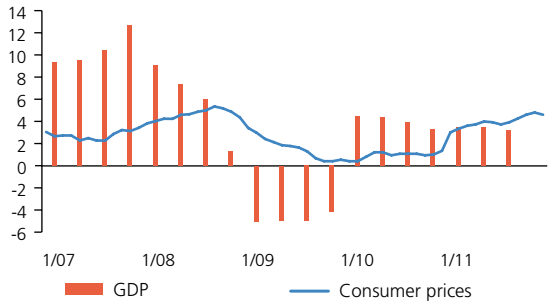
Compared to Q3, **inflation in Slovakia** increased by 0.6 percentage point to 4.7% on average in Q4. This was due mainly to higher energy prices and prices in transport, financial services and some other services. In December, however, inflation declined moderately.

CHART III.7.3

GDP AND INFLATION IN SLOVAKIA

**GDP growth weakened slightly in 2011 Q3, while inflation decreased in December**

(annual percentage changes; source: Datastream)




### III.7.2 The United States

The **quarterly GDP growth rate in the USA** increased slightly to 0.5% in 2011 Q3. A rise in private consumption (especially purchases of motor vehicles) and corporate fixed investment were the main sources of growth. The trade deficit fell slightly thanks to increasing goods exports and slowing imports. Investment in inventories was strongly negative. Federal government consumption grew at the same pace as in Q2 (by 0.5% quarter on quarter), while local government consumption decreased somewhat. In year-on-year terms, GDP growth slowed only slightly to 1.5% (see Chart III.7.4).

The 2011 Q4 data are mostly favourable. The increase in jobs was solid and the unemployment rate fell to 8.5%, the lowest figure in almost three years. In December, the number of new applications for unemployment benefits was the lowest since June 2008. By contrast, a widening trade deficit in November (due to higher imports and lower exports), as well as a modest decrease in industrial production in November, will have a negative impact on economic growth in Q4. Falling disposable income in recent months was one of the causes of the only gradual rise in retail sales in 2011 Q4. Surprisingly, these adverse signals are not reflected in the results of business surveys, which are positive and have a rising tendency. The **January CF** increased the estimate for US economic growth in 2012 to 2.2% (from 1.9% in October). By contrast, the OECD, the European Commission and the Fed revised their predictions downwards.

In October and November, annual **headline inflation** decreased slightly to 3.5%, although core inflation was the highest since the end of 2008 (2.1%). Prices of housing, health care and clothing were the main sources of inflation. CF expects inflation in the USA to average 1.9% this year and 1.8% next year. The FOMC left its key interest rate unchanged at 0–0.25%.

CHART III.7.4

GDP AND INFLATION IN THE USA

**Annual GDP growth slowed further in 2011 Q3, while inflation decreased slightly in 2011 Q4**

(annual percentage changes; source: Datastream)

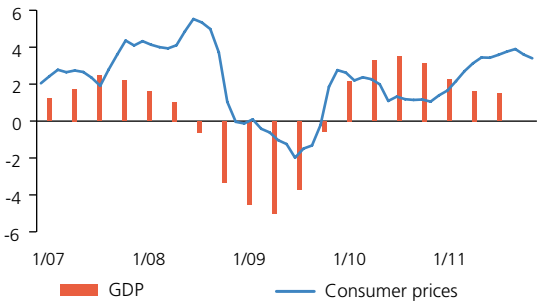
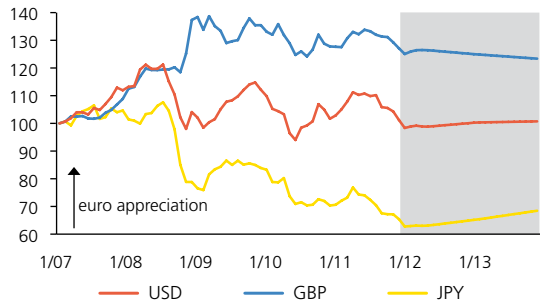


CHART III.7.5

EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

**The euro weakened further against major currencies in 2011 Q4**
(January 2007 = 100; source: Datastream, outlook from CF)




### III.7.3 The exchange rate of the euro against the dollar and other major currencies

The **exchange rate of the euro against major world currencies** depreciated further in 2011 Q4 (see Chart III.7.5). In addition to the escalating euro area debt crisis, the lack of confidence in the single European currency is now being exacerbated by signs of economic recession. The euro started to depreciate against the dollar in early November when it turned out that a consensus on Greek debt restructuring would be difficult to achieve. A deterioration in dollar liquidity in European markets thus prompted the world's major central banks to agree to change the conditions of foreign exchange swaps. The December EU summit, which produced many long-term fiscal stability measures, had also been anticipated with hope. However, stronger short-term steps had been expected, and the euro weakened further against the dollar. However, a number of steps taken by the European Central Bank, including the provision of euro and foreign currency liquidity, acted against an escalation of the crisis. By the end of the year the euro had weakened to less than USD 1.3. The biggest depreciation, exceeding 7% year on year, was recorded against the Japanese yen.

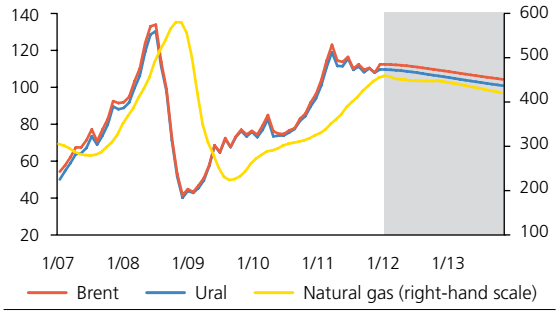
The depreciation trend against world currencies intensified in the **first half of January 2012**, with the euro falling to a 15-month low against the US dollar and an 11-year low against the Japanese yen in the first week of January. The exchange rate was also influenced by the rating downgrades of many euro area countries. Only four countries, including Germany as the strongest economy, maintained the highest rating (AAA). Further downgrades were not ruled out by the rating agencies.

The **January CF** expects the euro to be broadly flat at USD 1.28 until the end of April 2012. At the two-year horizon, however, its exchange rate should return to the levels observed in December 2011. The euro is expected to appreciate against the Japanese yen and depreciate against the pound over the next two years.

CHART III.7.6

OIL AND NATURAL GAS PRICES IN USD

**The price of Brent crude oil remains high and the outlook expects it to fall only gradually**
(oil in USD/barrel; gas in USD/1,000 m³ – right-hand scale; source: IMF, Bloomberg)




### III.7.4 Prices of oil and other commodities

The **Brent crude oil price** has stayed within a wide, broadly horizontal range of USD 100–115 a barrel since August 2011 (see Chart III.7.6). In mid-December it dropped to a more than two-month low of USD 103 a barrel amid market concerns that euro area politicians would not be able to stop a fall into recession. However, the price decline reversed relatively quickly when Iran launched a naval exercise to test the possibility of closing the Straits of Hormuz.[38] A significant rise was

38 This was Iran's response to an embargo on its oil exports imposed by the USA, Japan and the EU (although EU countries have yet to agree on the final shape of the sanctions). According to Goldman Sachs analysts, however, the embargo as such should not have a large impact on global supply, as only some oil flows will be re-routed (Iran will reduce exports to Europe and increase exports to Asia).

also recorded in early January in response to favourable signals from Chinese industry and persisting tensions surrounding Iran's nuclear programme. The price of Brent crude jumped by another USD 6 to USD 113.7 a barrel and then fell only slightly during the first half of January. In koruna terms, the average monthly price of Brent crude oil has risen sharply since November owing to rapid appreciation of the US dollar vis-à-vis the koruna (see Chart III.7.7). In the first half of January, the koruna price was thus 14% above the previous peak reached in June 2008.

In December 2011, **extraction in OPEC countries** reached its highest level in more than three years (30.9 million barrels a day) owing chiefly to fast renewal of production in Libya. The OPEC extraction target for 2012 is 30 million barrels a day, which according to the IEA should be enough to cover expected consumption. Stocks of oil and oil products in OECD countries rose slightly in November but recorded a sharp (seasonal) decline in December according to preliminary data. They have been below the five-year average since February 2011, and the decline has deepened since August (owing mainly to inventories in Europe). Global demand was flat year on year in 2011 Q4 as a result of mild weather and slowing economic activity.

The **market outlook for the price** of Brent oil based on futures has moved about 8% higher than in the previous forecast. However, the markets view the latest price increase as temporary and do not expect problems with future supply. The futures curve thus remains downward-sloping and the price should be around USD 104 a barrel at the end of 2013. US WTI oil continues to sell at a considerably lower price than Brent. However, the spread decreased significantly in mid-November in response to news of an intended gradual solution to the logistical problems at the Cushing inland oil terminal. Since then the price difference between Brent and WTI has been "only" USD 8.5–10.5 a barrel.

The sharp fall in the average monthly **non-energy commodity index** halted in January. The rise in the index was due mainly to food commodity prices (see Chart III.7.8). The industrial metals index was virtually flat for the fourth consecutive month. Nevertheless, in mid-January both the overall index and the industrial metals sub-index were 22% below their February 2011 peaks. The food commodity index was roughly 16% below its February high. The forecast based on futures contracts expects only modest growth from the current levels, especially for food.

By contrast, the **energy commodity index** recorded no major decline in 2011 H2 and has been fluctuating around an only slightly falling trend after reaching a two and a half year high in April 2011. This trend is expected to continue in the near future. Natural gas prices should also start decreasing, so only the coal price outlook remains rising.

CHART III.7.7

OIL AND NATURAL GAS PRICES IN CZK

**The koruna price of Brent crude oil rose to a historical high**
(oil in CZK/litre; gas in CZK/m³; source: IMF, Bloomberg, CNB calculation)

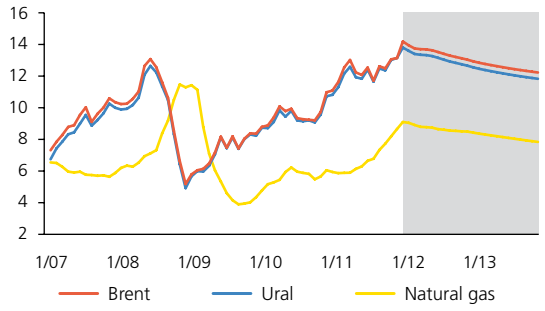
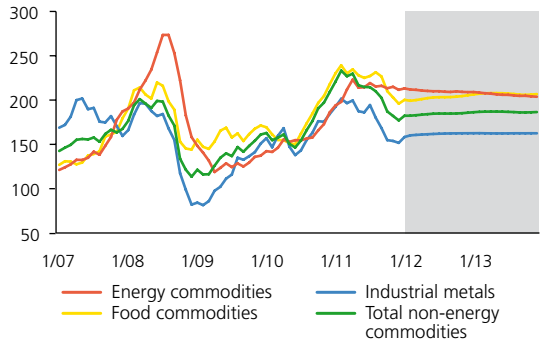



CHART III.7.8

COMMODITY PRICES

**The sharp fall in the non-energy commodity index halted in January 2012**
(2005 = 100; source: Bloomberg)




Note: The structure of the non-energy commodity indices corresponds to the composition of the Economist's commodity indices; the energy commodity index consists of Brent crude oil (0.4), coal (0.4) and natural gas (0.2).

| | |
|---|---|
| CF | Consensus Forecasts |
| 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 |
| EFSF | European Financial Stability Facility |
| EIB | European Investment Bank |
| ERM II | Exchange Rate Mechanism |
| ESA 95 | European System of National Accounts |
| ESCB | European System of Central Banks |
| EU | European Union |
| EUR | euro |
| EURIBOR | Euro Interbank Offered Rate |
| Fed | US central bank |
| FOMC | Federal Open Market Committee |
| FMIE | Financial Market Inflation Expectations |
| 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 |
| Ifo | Institute for Economic Research |
| ILO | International Labour Organization |
| IMF | International Monetary Fund |
| IRI | Institute for Regional Information |
| IRS | interest rate swap |
| JPY | Japanese yen |
| LFS | Labour Force Survey |
| LIBOR | London Interbank Offered Rate |
| M1, M2, M3 | monetary aggregates |
| MLSA | Ministry of Labour and Social Affairs |
| OECD | Organisation for Economic Cooperation and Development |
| OPEC | Organization of the Petroleum Exporting Countries |
| PMI | Purchasing Managers Index |
| p.p. | percentage points |
| PPI | producer price index |
| PRIBOR | Prague Interbank Offered Rate |
| (1W, 1M, 1Y) | (one-week, one-month, one-year) |
| QPM | Quarterly Prediction Model |
| repo rate | repurchase agreement rate |
| USD | US dollar |
| VAT | value added tax |
| WTI | West Texas Intermediate |
| ZEW | Centre for European Economic Research |

| | | |
|---|---|---|
| **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 discretion:** Changes made intentionally by the government to general government revenue and expenditure that would otherwise follow an endogenous path determined by economic developments outside the government sector.

**Fiscal stance:** 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.

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

**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 total deposits with agreed maturity and redeemable at notice and repurchase agreements. The broad monetary aggregate M3 (harmonised with EU standards) comprises currency in circulation, overnight deposits, deposits with agreed maturity of up to two years, deposits redeemable at notice of up to three months, repurchase agreements, money market fund shares/units and issued debt securities with maturity of up to two years.

**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.

**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 transaction 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. Formerly also referred to as property transfer prices in CNB publications.

**Property asking prices:** Property sale asking prices in estate agencies. Asking prices should be higher than transaction prices. Property asking prices in the Czech Republic are published, for example, by the CZSO and the Institute for Regional Information (IRI). Formerly also referred to as property supply prices in CNB publications.

**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.

**Technological growth:** The situation where the volume of production rises without an increase in the production factors of labour or capital. Growth in technology thus causes the real volume of production to rise given a constant price of production, or the output price to fall relative to input prices given a constant real volume of production.

**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 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| **DEMAND AND SUPPLY** | | | | | | | | | | | | |
| *Gross domestic product* | | | | | | | | | | | | |
| GDP | CZK bn, constant p., seas. adjusted | 2,787.1 | 2,915.1 | 3,114.1 | 3,339.3 | 3,530.3 | 3,632.5 | 3,467.6 | 3,557.0 | **3,616.7** | **3,616.7** | **3,685.0** |
| GDP | %, y-o-y, real terms, seas. adjusted | 3.8 | 4.6 | 6.8 | 7.2 | 5.7 | 2.9 | -4.5 | 2.6 | **1.7** | **0.0** | **1.9** |
| Household consumption | %, y-o-y, real terms, seas. adjusted | 5.3 | 3.1 | 3.0 | 4.4 | 4.1 | 3.0 | -0.4 | 0.5 | **-0.5** | **0.3** | **1.0** |
| Government consumption | %, y-o-y, real terms, seas. adjusted | 6.0 | -3.3 | 1.6 | -0.6 | 0.4 | 1.2 | 3.8 | 0.6 | **-1.5** | **0.3** | **-0.3** |
| Gross capital formation | %, y-o-y, real terms, seas. adjusted | -0.9 | 6.4 | 4.4 | 10.9 | 15.4 | 1.3 | -20.5 | 5.6 | **1.2** | **1.0** | **1.7** |
| Exports of goods and services | %, y-o-y, real terms, seas. adjusted | 7.6 | 13.2 | 11.8 | 14.2 | 11.2 | 3.6 | -9.7 | 16.0 | **12.4** | **1.9** | **8.0** |
| Imports of goods and services | %, y-o-y, real terms, seas. adjusted | 7.4 | 9.6 | 6.0 | 11.1 | 12.8 | 2.4 | -11.4 | 15.7 | **10.0** | **2.6** | **6.8** |
| Net exports | CZK bn, constant p., seas. adjusted | -66.9 | -17.7 | 85.2 | 156.4 | 139.3 | 175.1 | 198.7 | 237.8 | **327.5** | **313.1** | **372.7** |
| *Coincidence indicators* | | | | | | | | | | | | |
| Industrial production | %, y-o-y, real terms | 1.6 | 10.4 | 3.9 | 8.3 | 10.6 | -1.8 | -13.6 | 10.3 | - | - | - |
| Construction output | %, y-o-y, real terms | 9.3 | 8.8 | 5.2 | 6.0 | 7.1 | 0.0 | -0.9 | -7.1 | - | - | - |
| Receipts in retail sales | %, y-o-y, real terms | 7.2 | 3.8 | 8.1 | 10.8 | 10.0 | 2.7 | -4.7 | 1.3 | - | - | - |
| **PRICES** | | | | | | | | | | | | |
| *Main price indicators* | | | | | | | | | | | | |
| Inflation rate | %, end-of-period | 0.1 | 2.8 | 1.9 | 2.5 | 2.8 | 6.3 | 1.0 | 1.5 | 1.9 | - | - |
| Consumer Price Index | %, y-o-y, average | 0.1 | 2.8 | 1.9 | 2.5 | 2.8 | 6.4 | 1.1 | 1.5 | 1.9 | **3.2** | **1.5** |
| Administered prices (17.15%)* | %, y-o-y, average | 0.6 | 3.5 | 5.7 | 9.3 | 4.8 | 15.6 | 8.4 | 2.6 | 4.7 | **8.6** | **3.0** |
| Net inflation (82.85%)* | %, y-o-y, average | 0.0 | 1.8 | 0.7 | 0.4 | 1.7 | 2.4 | -0.9 | 0.0 | 1.3 | **0.9** | **1.4** |
| Food prices (including alcoholic beverages and tobacco) (25.63%)* | %, y-o-y, average | -1.2 | 2.8 | 0.0 | -0.2 | 3.8 | 3.0 | -0.9 | 0.9 | 3.9 | **1.2** | **1.0** |
| Adjusted inflation excluding fuels (53.52%)* | %, y-o-y, average | 0.6 | 1.2 | 0.7 | 0.6 | 0.7 | 2.0 | 0.0 | -1.2 | -0.7 | **0.4** | **1.8** |
| Fuel prices (3.70%)* | %, y-o-y, average | 1.5 | 4.5 | 7.8 | 3.7 | -0.3 | 4.3 | -11.1 | 11.8 | 9.9 | **4.7** | **-1.2** |
| Monetary-policy inflation (excluding tax changes) | %, y-o-y, average | 0.1 | 2.0 | 1.8 | 2.3 | 2.2 | 4.4 | 0.9 | 0.4 | 1.9 | **2.0** | **1.6** |
| GDP deflator | %, y-o-y, seas. adjusted | 0.9 | 4.0 | -0.3 | 0.5 | 3.3 | 1.9 | 2.0 | -1.7 | **-0.3** | **1.9** | **1.2** |
| *Partial price indicators* | | | | | | | | | | | | |
| Producer prices | %, y-o-y, average | -0.3 | 5.6 | 3.1 | 1.4 | 4.1 | 4.5 | -3.1 | 1.2 | 5.6 | **2.6** | **1.8** |
| Agricultural prices | %, y-o-y, average | -4.5 | 9.6 | -9.8 | 1.3 | 16.4 | 10.8 | -24.3 | 5.6 | 20.0 | **-2.9** | **0.6** |
| Construction work prices | %, y-o-y, average | 2.2 | 3.7 | 3.0 | 2.9 | 3.9 | 4.5 | 1.3 | -0.2 | -0.5 | - | - |
| Brent crude oil | %, y-o-y, average | 15.5 | 32.7 | 42.3 | 20.0 | 11.1 | 34.5 | -36.7 | 28.7 | 39.5 | **0.2** | **-4.2** |
| **LABOUR MARKET** | | | | | | | | | | | | |
| Average monthly wage | %, y-o-y, nominal terms | 5.8 | 6.3 | 5.0 | 6.6 | 7.2 | 7.8 | 3.3 | 1.9 | **2.4** | **2.5** | **3.2** |
| Average monthly wage | %, y-o-y, real terms | 5.7 | 3.4 | 3.0 | 4.0 | 4.3 | 1.4 | 2.3 | 0.4 | **0.4** | **-0.7** | **1.8** |
| Number of employees | %, y-o-y | -2.0 | -0.2 | 2.2 | 1.2 | 1.9 | 1.7 | -2.1 | -2.1 | **0.3** | **-0.2** | **0.0** |
| Nominal unit labour costs | %, y-o-y | 1.5 | 3.7 | 0.6 | 0.2 | 2.4 | 4.3 | 2.7 | -3.1 | **0.2** | **2.1** | **1.3** |
| Nominal unit labour costs in industry | %, y-o-y | -1.2 | 1.2 | -7.2 | -7.2 | 2.4 | -3.3 | 0.1 | -7.9 | - | - | - |
| Aggregate labour productivity | %, y-o-y | 3.8 | 5.1 | 4.6 | 5.6 | 3.5 | 0.8 | -3.5 | 4.5 | **1.5** | **0.0** | **1.9** |
| ILO general unemployment rate | %, average, age 15–64 | 7.8 | 8.4 | 8.0 | 7.2 | 5.4 | 4.4 | 6.7 | 7.4 | **6.8** | **6.8** | **6.8** |
| Registered unemployment rate | %, average | - | 10.0 | 9.5 | 8.6 | 7.0 | 5.8 | 8.3 | 9.3 | 8.9 | **8.8** | **9.0** |
| **PUBLIC FINANCE** | | | | | | | | | | | | |
| Public finance deficit (ESA95) | CZK bn, current p. | -179.8 | -82.9 | -101.1 | -79.2 | -26.7 | -85.0 | -217.7 | -180.7 | **-144.1** | **-132.2** | **-154.7** |
| Public finance deficit / GDP** | %, nominal terms | -6.7 | -2.8 | -3.2 | -2.4 | -0.7 | -2.2 | -5.8 | -4.8 | **-3.8** | **-3.4** | **-3.8** |
| Public debt (ESA95) | CZK bn, current p. | 768.2 | 847.8 | 885.4 | 948.1 | 1,023.4 | 1,104.3 | 1,285.7 | 1,417.7 | **1,559.4** | **1,677.5** | **1,825.9** |
| Public debt / GDP** | %, nominal terms | 28.6 | 28.9 | 28.4 | 28.3 | 27.9 | 28.7 | 34.4 | 37.6 | **40.7** | **43.0** | **45.4** |
| **EXTERNAL RELATIONS** | | | | | | | | | | | | |
| *Current account* | | | | | | | | | | | | |
| Trade balance | CZK bn, current p. | -69.8 | -13.4 | 48.6 | 59.3 | 46.9 | 25.7 | 87.3 | 53.8 | **114.5** | **90.0** | **110.0** |
| Trade balance / GDP | %, nominal terms | -2.6 | -0.5 | 1.6 | 1.8 | 1.3 | 0.7 | 2.3 | 1.4 | **3.0** | **2.3** | **2.7** |
| Balance of services | CZK bn, current p. | 13.2 | 16.6 | 37.9 | 49.0 | 59.2 | 73.9 | 73.9 | 75.3 | **65.3** | **60.0** | **65.0** |
| Current account | CZK bn, current p. | -160.6 | -147.5 | -30.9 | -67.1 | -156.9 | -81.3 | -89.3 | -116.4 | **-80.4** | **-110.0** | **-95.0** |
| Current account / GDP | %, nominal terms | -6.0 | -5.0 | -1.0 | -2.0 | -4.3 | -2.1 | -2.4 | -3.1 | **-2.1** | **-2.8** | **-2.4** |
| *Foreign direct investment* | | | | | | | | | | | | |
| Direct investment | CZK bn, current p. | 53.5 | 101.8 | 279.6 | 90.3 | 179.1 | 36.3 | 37.7 | 97.0 | **72.0** | **65.0** | **65.0** |
| *Exchange rates* | | | | | | | | | | | | |
| CZK/USD | average | 28.2 | 25.7 | 24.0 | 22.6 | 20.3 | 17.1 | 19.1 | 19.1 | 17.7 | **19.3** | **18.6** |
| CZK/EUR | average | 31.8 | 31.9 | 29.8 | 28.3 | 27.8 | 25.0 | 26.5 | 25.3 | 24.6 | **24.9** | **24.3** |
| CZK/EUR | %, y-o-y, real (CPI euro area), avg. | - | 0.0 | -6.3 | -5.1 | -2.2 | -12.5 | 5.4 | -4.5 | -1.9 | **0.1** | **-1.8** |
| CZK/EUR | %, y-o-y, real (PPI euro area), avg. | - | -3.1 | -5.5 | -1.3 | -3.9 | -8.8 | 4.3 | -3.1 | -2.3 | **0.6** | **-2.3** |
| *Foreign trade prices* | | | | | | | | | | | | |
| Prices of exports of goods | %, y-o-y, average | 0.8 | 3.6 | -1.5 | -1.2 | 1.4 | -4.6 | 0.2 | -1.0 | **1.7** | **2.7** | **-0.2** |
| Prices of imports of goods | %, y-o-y, average | -0.3 | 1.6 | -0.5 | 0.3 | -1.0 | -3.3 | -3.5 | 2.0 | **4.3** | **3.4** | **-1.7** |
| **MONEY AND INTEREST RATES** | | | | | | | | | | | | |
| M2 | %, y-o-y, average | 4.1 | 7.7 | 5.3 | 8.9 | 11.2 | 8.4 | 6.3 | 4.0 | 3.4 | **6.1** | **5.2** |
| 2W repo rate | %, end-of-period | 2.00 | 2.50 | 2.00 | 2.50 | 3.50 | 2.25 | 1.00 | 0.75 | 0.75 | - | - |
| 3M PRIBOR | %, average | 2.3 | 2.4 | 2.0 | 2.3 | 3.1 | 4.0 | 2.2 | 1.3 | 1.2 | **1.0** | **0.9** |

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

| 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QI | QII | QIII | QIV | QI | QII | QIII | QIV | QI | QII | QIII | QIV | QI | QII | QIII | QIV | QI | QII | QIII | QIV |
| | | | | | | | | | | | | | | | | | | | |
| 870.5 | 860.9 | 864.3 | 872.0 | 878.6 | 887.1 | 893.1 | 898.3 | 903.2 | 904.9 | 904.1 | **904.4** | **903.5** | **901.2** | **902.9** | **909.1** | **913.7** | **918.6** | **923.8** | **928.9** |
| -3.7 | -5.8 | -5.5 | -3.1 | 0.9 | 3.0 | 3.3 | 3.0 | 2.8 | 2.0 | 1.2 | **0.7** | **0.0** | **-0.4** | **-0.1** | **0.5** | **1.1** | **1.9** | **2.3** | **2.2** |
| 2.2 | -0.4 | -1.8 | -1.4 | 0.3 | 0.4 | 0.7 | 0.7 | -0.3 | -0.3 | -0.4 | **-0.9** | **-0.5** | **0.0** | **0.7** | **1.2** | **0.9** | **0.9** | **1.0** | **1.2** |
| 4.6 | 3.2 | 4.2 | 3.2 | 1.5 | 1.5 | 0.4 | -1.1 | -0.4 | -1.0 | -3.0 | **-1.5** | **-1.2** | **-0.2** | **0.8** | **1.8** | **1.2** | **0.2** | **-0.8** | **-1.9** |
| -16.6 | -23.1 | -23.4 | -18.7 | -9.9 | 7.4 | 17.9 | 8.6 | 7.8 | 2.8 | -6.6 | **1.8** | **2.1** | **0.1** | **0.3** | **1.5** | **1.6** | **1.8** | **1.8** | **1.7** |
| -17.5 | -16.4 | -7.1 | 4.0 | 14.8 | 17.3 | 16.7 | 15.3 | 18.5 | 13.2 | 8.8 | **9.6** | **2.1** | **2.7** | **0.9** | **1.8** | **4.6** | **7.9** | **9.7** | **9.8** |
| -17.3 | -17.9 | -9.4 | 0.9 | 10.0 | 17.2 | 20.3 | 15.1 | 17.9 | 11.3 | 3.1 | **8.7** | **2.1** | **3.4** | **1.9** | **3.0** | **4.7** | **6.7** | **7.8** | **8.0** |
| 34.4 | 49.8 | 51.5 | 63.0 | 65.2 | 59.2 | 39.6 | 73.8 | 80.6 | 78.6 | 81.5 | **86.9** | **81.9** | **75.9** | **75.3** | **79.9** | **85.0** | **90.4** | **95.9** | **101.4** |
| | | | | | | | | | | | | | | | | | | | |
| -19.0 | -19.0 | -13.2 | -2.1 | 6.9 | 11.5 | 10.7 | 11.8 | 12.3 | 9.0 | 3.7 | - | - | - | - | - | - | - | - | - |
| -10.8 | 1.2 | 0.3 | 2.0 | -22.7 | -8.3 | -2.8 | -2.1 | 7.0 | -4.8 | -9.7 | - | - | - | - | - | - | - | - | - |
| -4.3 | -5.1 | -5.4 | -4.0 | -0.2 | 2.1 | 1.6 | 1.5 | 4.8 | 1.2 | 0.5 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 5.0 | 3.7 | 2.1 | 1.0 | 0.7 | 0.6 | 1.1 | 1.5 | 1.7 | 1.9 | 1.8 | 1.9 | - | - | - | - | - | - | - | - |
| 2.2 | 1.4 | 0.2 | 0.4 | 0.7 | 1.1 | 1.9 | 2.1 | 1.7 | 1.8 | 1.7 | 2.4 | **3.3** | **3.2** | **3.2** | **3.0** | **1.5** | **1.5** | **1.4** | **1.4** |
| 11.2 | 9.8 | 7.5 | 5.2 | 0.8 | 2.3 | 3.6 | 3.8 | 4.4 | 4.0 | 4.5 | 5.9 | **9.4** | **9.4** | **8.3** | **7.4** | **3.2** | **3.0** | **2.9** | **2.8** |
| -0.6 | -0.6 | -1.5 | -0.7 | -0.5 | -0.3 | 0.3 | 0.4 | 1.0 | 1.2 | 1.2 | 1.7 | **1.1** | **0.7** | **1.0** | **0.8** | **1.3** | **1.4** | **1.5** | **1.5** |
| | | | | | | | | | | | | | | | | | | | |
| 0.0 | 0.4 | -2.0 | -2.2 | -1.4 | -0.2 | 2.3 | 2.8 | 3.2 | 4.1 | 3.6 | 4.5 | **2.3** | **1.2** | **0.9** | **0.2** | **1.0** | **1.1** | **1.1** | **0.9** |
| | | | | | | | | | | | | | | | | | | | |
| 0.6 | 0.1 | -0.5 | -0.2 | -1.1 | -1.2 | -1.2 | -1.3 | -0.8 | -0.8 | -0.7 | -0.4 | **-0.1** | **0.3** | **0.7** | **0.9** | **1.5** | **1.8** | **1.9** | **2.1** |
| -20.5 | -15.7 | -11.8 | 3.7 | 18.1 | 13.3 | 7.0 | 8.7 | 10.8 | 9.1 | 9.5 | 10.2 | **6.8** | **3.4** | **4.6** | **3.8** | **0.2** | **-1.2** | **-1.6** | **-2.1** |
| 1.6 | 1.3 | 0.2 | 0.4 | -0.3 | 0.1 | 0.8 | 1.0 | 1.6 | 1.7 | 1.7 | 2.4 | **2.3** | **2.0** | **2.0** | **1.8** | **1.6** | **1.6** | **1.7** | **1.7** |
| 3.7 | 2.2 | 0.3 | 1.6 | -2.6 | -1.0 | -0.8 | -2.4 | -1.0 | -0.9 | -0.1 | **0.8** | **3.0** | **1.8** | **1.3** | **1.4** | **-0.3** | **1.4** | **1.9** | **2.0** |
| | | | | | | | | | | | | | | | | | | | |
| -1.1 | -3.6 | -5.2 | -2.6 | -1.4 | 1.3 | 2.2 | 3.0 | 5.4 | 6.0 | 5.6 | 5.2 | **3.6** | **2.0** | **2.5** | **2.5** | **2.0** | **2.0** | **1.8** | **1.6** |
| -27.8 | -29.5 | -23.8 | -16.0 | -5.6 | -2.8 | 8.2 | 22.7 | 27.9 | 30.1 | 16.6 | 5.4 | **-2.0** | **-6.3** | **-2.7** | **-0.3** | **-1.5** | **-0.5** | **1.7** | **2.9** |
| 2.8 | 1.4 | 0.5 | 0.3 | 0.1 | -0.2 | -0.3 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | - | - | - | - | - | - | - | - |
| -53.3 | -51.5 | -41.1 | 33.3 | 70.5 | 33.1 | 11.8 | 15.8 | 36.7 | 49.0 | 48.0 | 26.2 | **7.7** | **-4.3** | **-1.8** | **0.4** | **-3.5** | **-4.3** | **-4.6** | **-4.6** |
| | | | | | | | | | | | | | | | | | | | |
| 2.2 | 2.5 | 4.1 | 4.6 | 2.6 | 2.7 | 1.9 | 0.6 | 2.1 | 2.2 | 2.4 | **2.8** | **2.7** | **2.5** | **2.4** | **2.4** | **2.7** | **3.1** | **3.4** | **3.7** |
| 0.1 | 1.1 | 4.0 | 4.2 | 1.9 | 1.5 | 0.0 | -1.5 | 0.4 | 0.4 | 0.6 | **0.3** | **-0.6** | **-0.7** | **-0.8** | **-0.5** | **1.2** | **1.6** | **1.9** | **2.2** |
| -0.9 | -1.8 | -2.8 | -2.9 | -3.2 | -2.6 | -1.3 | -1.5 | -0.1 | 0.5 | 0.2 | **0.6** | **0.3** | **-0.2** | **-0.4** | **-0.4** | **-0.3** | **-0.1** | **0.1** | **0.1** |
| 2.1 | 3.0 | 4.1 | 1.6 | -3.4 | -3.9 | -1.7 | -3.4 | -1.4 | 0.4 | -0.6 | **2.1** | **2.5** | **2.3** | **1.9** | **1.5** | **1.3** | **1.0** | **1.2** | **1.6** |
| -2.7 | 1.8 | 4.1 | -2.8 | -11.0 | -10.4 | -5.4 | -5.2 | -3.6 | -2.0 | -2.1 | - | - | - | - | - | - | - | - | - |
| -4.3 | -5.1 | -4.3 | -0.3 | 4.4 | 5.7 | 3.7 | 4.1 | 2.9 | 2.0 | 1.2 | **0.3** | **-0.3** | **-0.4** | **0.1** | **0.8** | **1.3** | **1.9** | **2.2** | **2.1** |
| 5.8 | 6.4 | 7.4 | 7.3 | 8.2 | 7.2 | 7.1 | 7.0 | 7.3 | 6.8 | 6.6 | **6.5** | **6.9** | **6.7** | **6.9** | **6.8** | **7.0** | **6.7** | **6.8** | **6.7** |
| 7.5 | 8.1 | 8.7 | 9.0 | 10.1 | 9.1 | 8.8 | 9.1 | 9.8 | 8.7 | 8.4 | 8.5 | **9.1** | **8.6** | **8.7** | **8.9** | **9.7** | **8.9** | **8.7** | **8.8** |
| | | | | | | | | | | | | | | | | | | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 21.6 | 27.9 | 19.6 | 18.3 | 31.0 | 22.9 | -4.5 | 4.4 | 34.1 | 26.6 | 19.8 | **34.0** | **30.0** | **24.0** | **13.0** | **23.0** | **34.0** | **28.0** | **19.0** | **29.0** |
| 2.4 | 3.0 | 2.1 | 1.9 | 3.6 | 2.4 | -0.5 | 0.4 | 3.8 | 2.8 | 2.0 | **3.4** | **3.3** | **2.4** | **1.3** | **2.3** | **3.7** | **2.8** | **1.9** | **2.7** |
| 18.1 | 17.7 | 18.8 | 19.3 | 18.3 | 24.8 | 15.3 | 16.9 | 13.7 | 21.1 | 16.5 | **14.0** | **13.0** | **20.0** | **14.0** | **13.0** | **14.0** | **21.0** | **16.0** | **14.0** |
| 9.1 | -48.7 | -34.8 | -14.8 | 13.9 | -27.6 | -87.0 | -15.7 | 21.4 | -58.6 | -42.2 | **-1.0** | **17.0** | **-47.0** | **-71.0** | **-9.0** | **18.0** | **-44.0** | **-65.0** | **-4.0** |
| 1.0 | -5.2 | -3.7 | -1.5 | 1.6 | -2.9 | -9.1 | -1.6 | 2.4 | -6.1 | -4.3 | **-0.1** | **1.9** | **-4.8** | **-7.2** | **-0.9** | **1.9** | **-4.3** | **-6.4** | **-0.4** |
| | | | | | | | | | | | | | | | | | | | |
| 16.5 | 9.0 | -17.1 | 29.3 | 30.6 | 19.5 | 70.2 | -23.3 | 13.3 | 35.8 | 5.3 | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | |
| 21.2 | 19.6 | 17.9 | 17.5 | 18.7 | 20.1 | 19.3 | 18.2 | 17.8 | 16.9 | 17.3 | 18.8 | **19.9** | **19.4** | **19.1** | **18.9** | **18.7** | **18.6** | **18.6** | **18.5** |
| 27.6 | 26.7 | 25.6 | 25.9 | 25.9 | 25.6 | 24.9 | 24.8 | 24.4 | 24.3 | 24.4 | 25.3 | **25.5** | **24.9** | **24.6** | **24.5** | **24.4** | **24.3** | **24.3** | **24.3** |
| 7.4 | 6.7 | 6.1 | 2.1 | -6.1 | -4.0 | -3.1 | -4.7 | -5.2 | -4.1 | -1.0 | 2.6 | **3.7** | **1.3** | **-0.3** | **-4.3** | **-4.2** | **-1.9** | **-0.8** | **-0.1** |
| 8.5 | 6.1 | 3.4 | -0.6 | -6.1 | -3.3 | -1.1 | -2.8 | -4.9 | -4.6 | -1.8 | 2.0 | **4.0** | **2.1** | **0.2** | **-3.9** | **-4.7** | **-2.5** | **-1.3** | **-0.6** |
| | | | | | | | | | | | | | | | | | | | |
| 5.2 | 1.3 | -2.2 | -3.5 | -6.6 | -0.3 | 2.2 | 1.0 | 0.8 | -0.1 | 1.6 | **4.7** | **5.3** | **3.3** | **2.6** | **-0.3** | **-1.6** | **-0.4** | **0.3** | **0.7** |
| 1.6 | -2.9 | -7.0 | -5.7 | -4.5 | 2.5 | 5.8 | 4.7 | 4.7 | 2.4 | 3.4 | **6.6** | **6.6** | **4.6** | **3.2** | **-0.5** | **-2.9** | **-1.9** | **-1.1** | **-0.7** |
| | | | | | | | | | | | | | | | | | | | |
| 8.8 | 7.5 | 4.6 | 4.1 | 2.8 | 4.8 | 4.7 | 3.8 | 3.0 | 2.0 | 3.6 | 4.9 | **7.6** | **6.4** | **5.3** | **5.0** | **3.5** | **5.3** | **6.0** | **5.9** |
| 1.75 | 1.50 | 1.25 | 1.00 | 1.00 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | - | - | - | - | - | - | - | - |
| 2.7 | 2.3 | 2.0 | 1.8 | 1.5 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | **1.2** | **1.1** | **1.0** | **0.8** | **0.8** | **0.8** | **0.9** | **1.1** |

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