INFLATION REPORT / IV

2010

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 11 November 2010 and contains the information available as of 22 October 2010.

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 at http://www.cnb.cz. 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.

Chart I.1

FULFILMENT OF THE INFLATION TARGET

Headline inflation increased in 2010 Q3, reaching the CNB's inflation target from below
(annual percentage changes)

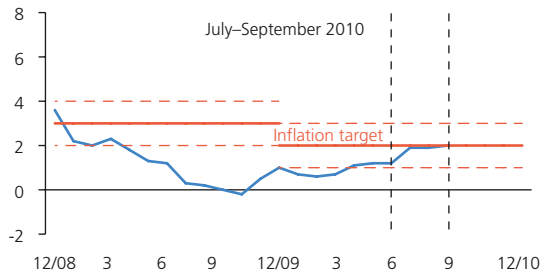


Chart I.2

HEADLINE INFLATION FORECAST

According to the forecast headline inflation is slightly below the inflation target
(annual percentage changes)

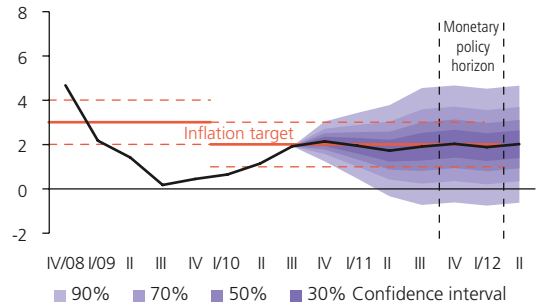
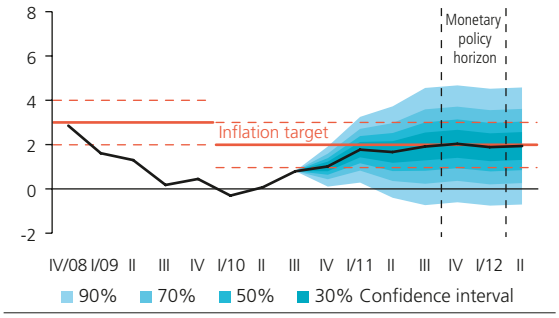


Chart I.3

MONETARY-POLICY RELEVANT INFLATION FORECAST

Monetary-policy relevant inflation will keep rising and will converge to the inflation target in the first half of next year
(annual percentage changes)



I. SUMMARY

Annual growth of the Czech economy is currently rising, but it will weaken next year, owing, among other things, to government austerity measures. Inflation will fluctuate close to the inflation target over the next two years. Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual rise in rates at the longer end of the forecast.

In 2010 Q2, the Czech economy recorded a marked upturn in annual growth, rising by 2.4% thanks mainly to gradual replenishment of inventories. Slightly positive contributions were also made by government consumption, net exports and – surprisingly – household consumption, whose growth can be explained only partially by the more favourable labour market situation. A further, albeit more modest, pick-up in annual growth is expected in 2010 Q3, driven by all GDP components except net exports, whose decline is due, among other things, to imports of photovoltaic cells. A recovery is now also apparent on the labour market, where the annual decline in employment moderated and the general unemployment rate decreased in 2010 Q2. The seasonally adjusted registered unemployment rate also recorded a modest decline in Q2 and Q3.

In 2010 Q3, headline inflation increased, reaching the CNB's inflation target from below (see Chart I.1). The increase in inflation was chiefly due to rising food and regulated price inflation. Slowing growth in fuel prices acted in the opposite direction. Import prices of consumer goods are currently weakly anti-inflationary (unlike import prices of commodities). This reflects the recent appreciation of the koruna, which is more than offsetting the rise in foreign producer price inflation. Inflation pressures from the domestic economy are neutral at present. Producers' margins remain narrow, and their gradual rise to the equilibrium level will help monetary-policy relevant inflation to return to the target at the forecast horizon.

Higher-than-expected economic growth in 2010 H1 in Germany and Slovakia suggests a stronger **external demand** recovery this year. Nonetheless, the forecast expects external economic growth to slow again in the coming years in connection with fiscal consolidation in Europe. The market outlook for interest rates in the euro area declined further at the long end. In reaction to the good results in the euro area, amid uncertainty regarding the sustainability of growth in the USA, the euro-dollar exchange rate corrected its previous depreciation and, according to the present outlook, should fluctuate between USD 1.3–1.4 over the next two years. The price of oil increased owing to the depreciation of dollar and is expected to rise slightly further as the global recovery continues.

Headline inflation will be close to the inflation target over the entire forecast horizon (see Chart I.2). Nominal costs of firms will start rising slowly as a result of gradually increasing growth in wages in the business sector and a modest recovery in economic activity,

whereas import prices will have an anti-inflationary effect until mid-2011 because of the recent appreciation of the koruna. Food price inflation will further accelerate in the period ahead owing to a sharp rise in agricultural producer prices and growth in regulated prices due to rising electricity prices. Conversely, the year-on-year growth in fuel prices will moderate. Adjusted inflation excluding fuels will be negative until 2011 H2 and will then rise gradually.

Monetary-policy relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, will keep rising over the forecast horizon and will converge to the inflation target in 2011 H1 (see Chart I.3). The effects of this year's changes to indirect taxes will subside in this period and monetary-policy relevant inflation will again be the same as headline inflation.

Consistent with the forecast is stability of market **interest rates** close to their current levels initially, followed by a gradual rise in rates at the longer end of the forecast (see Chart 1.4). The low interest rate level will, among other things, reflect the effects of fiscal consolidation in 2011 and the still low foreign interest rates over the forecast horizon. According to the forecast, the **exchange rate of the koruna** against the euro will appreciate gradually owing to a positive interest rate differential, a favourable goods and services balance in 2011 and renewed real convergence in the longer run (see Chart I.5)

Expected economic growth will be 2.3% this year, according to the forecast. In 2011, GDP growth will slow to 1.2% (see Chart I.6). This will be due to fiscal consolidation, slowing external demand growth and the unwinding of the effect of replenishment of inventories and investment in solar power stations. In 2012, domestic economic activity will rise again – this time more robustly – as domestic consumption recovers and external demand growth increases.

The **labour market** has probably overcome the worst impacts of the crisis, but with employment falling in the government sector and economic growth slowing it cannot be expected to recover markedly even in 2011. Following a switch from an annual decline in employment to annual growth at the start of 2011, employment growth will fluctuate around zero for several quarters. The general unemployment rate should decrease only gradually over the following two years. Wages will show mixed developments – wage growth in the business sector will increase over the next two years, whereas wages in the non-business sector will fall in 2011 and return to just modest growth in 2012.

At its meeting in November the Bank Board decided by a majority vote **to leave interest rates unchanged**. The risks to the new forecast were assessed as being balanced overall. Higher growth in world commodity prices and domestic agricultural producer prices are a mild upside risk to inflation. By contrast, higher-than-expected anti-inflationary effects of fiscal consolidation in the world pose a mild downside risk to inflation.

CHART I.4

INTEREST RATE FORECAST

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

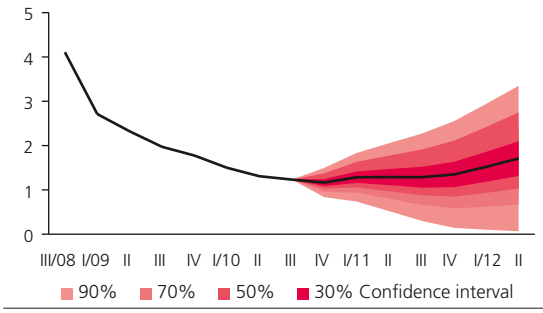


CHART I.5

EXCHANGE RATE FORECAST

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

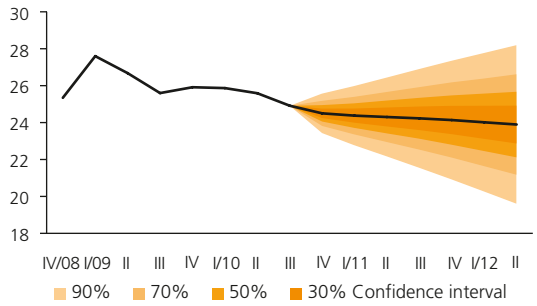


CHART I.6

GDP GROWTH FORECAST

GDP growth will weaken next year, owing, among other things, to government austerity measures
(annual percentage changes; seasonally adjusted)

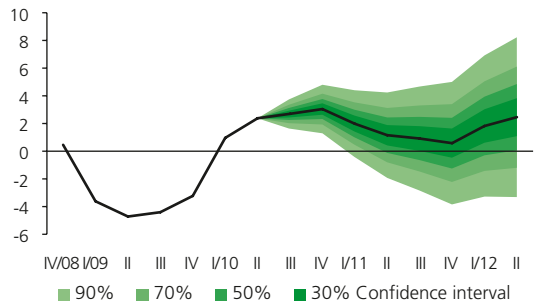


CHART II.1.1

EFFECTIVE GDP IN THE EURO AREA

Based on data for 2010 H1, strong year-on-year economic growth is expected throughout this year, while the growth will slow slightly next year

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

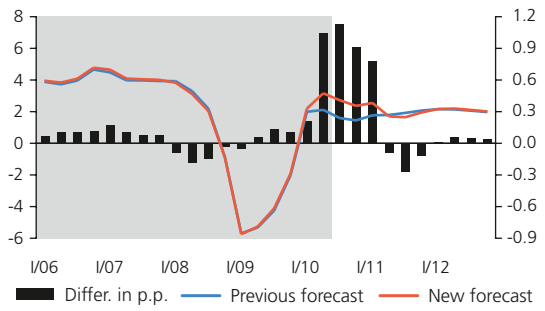


CHART II.1.2

EFFECTIVE PPI IN THE EURO AREA

The outlook for industrial producer price inflation increased further in response to the growth of commodity and energy prices

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

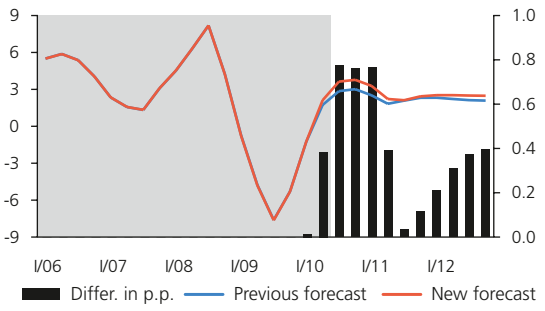
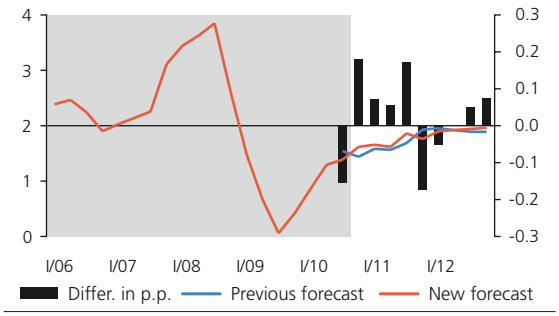


CHART II.1.3

EFFECTIVE CPI IN THE EURO AREA

Inflation will gradually return to the price stability limit, which according to the ECB lies below but close to 2%

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



II. THE FORECAST AND THE CHANGES AND RISKS TO IT

II.1 EXTERNAL ASSUMPTIONS OF THE FORECAST

Good results in 2010 H1 (especially in Germany and Slovakia) led to an increase in expected effective GDP growth in the euro area for the whole of 2010. In subsequent years, however, expected GDP growth will slow as a result of fiscal consolidation. Despite a still rising outlook for industrial producer prices, the perceived inflation pressures on consumer prices are only moderate and the market outlook for 3M EURIBOR rates is continuing to decrease. The euro corrected its previous depreciation caused by the fiscal problems in Greece and appreciated in reaction to the euro area's favourable economic results. The price of oil increased owing to the depreciation of the dollar and is expected to rise slightly further as the global recovery continues.

The outlook for economic activity in the effective euro area suggests a continuing recovery over the next two years (see Chart II.1.1).[1] Good results in Germany and Slovakia (the Czech Republic's largest trading partners) in 2010 Q2 supported the optimism regarding growth in the rest of the year. Positive signals are also coming from rising industrial production and the euro area trade surplus as a result of renewed global demand. However, the significant revision of the outlook for economic activity relates only to this year. The trend over the next two years should be rather more subdued owing to the expected fiscal consolidation in almost all euro area countries. Growth of 2.6%, 2% and 2.1% is assumed for 2010, 2011 and 2012 respectively.

The increased **outlook for growth in the effective indicator of producer prices in the euro area** (see Chart II.1.2) is due to the same factors that are stimulating economic growth in the euro area. Faster growth in the global economy, and hence also in industrial production (chiefly in Germany), led to a rapid rise in prices of industrial raw materials, energy and intermediate products. As a result, industrial producer prices rose mainly in the first half of this year. Nevertheless, further developments are expected to reflect the slowdown in global commodity price inflation and fiscal restrictions, which will dampen economic growth in the euro area. Overall, the effective indicator of producer prices for this year was revised upwards by 0.5 percentage point, and annual growth is thus expected to reach 2.1%. Growth of 2.5% is expected for both the following years.

The outlook for **consumer price inflation abroad** in the coming years is gradually converging to the ECB's definition of price stability (below but close 2%). Expected annual growth in the effective CPI of

1 The outlook for external variables, which we take from Consensus Forecasts and from prices of market contracts, was updated on 11 October 2010. The grey areas in the charts divide the known past from the outlook. This convention is used throughout this Report.

the euro area (see Chart II.1.3) is virtually the same as in the previous forecast, i.e. as yet it is unaffected by the higher outlook for commodity and industrial producer prices. Consumer prices are therefore expected to rise by 1.3% this year, 1.7% in 2011 and 1.9% in 2012.

The **3M EURIBOR path** probably reflects expectations of another round of quantitative easing following from the Fed's and the BoE's communications, although no such considerations were heard from the ECB. The slope of the implied 3M EURIBOR curve thus declined further (see Chart II.1.4). At the start of the forecast horizon the interest rate outlook copies the prediction of the previous forecast, but the expected three-month rate then rises only slightly, to 1.5% at the end of 2012 (compared to 1.8% in the previous forecast). These market expectations are in line with the view of the CF analysts. Most of them do not currently expect the ECB's key rate to go up in the first three quarters of 2011. The first increase is therefore expected beyond this horizon. The inflation pressures, which are still viewed as weak despite the rising global commodity prices, are also facilitating a postponement of the monetary policy tightening in the euro area. If the Fed and the BoE introduce further quantitative easing, it will probably influence the ECB's decision-making.

The **euro-dollar exchange rate** appreciated quickly in September and early October, offsetting previous losses resulting from the "Greek crisis" (see Chart II.1.5). The stronger euro was fostered by Germany's good export performance and positive economic developments in the euro area amid concerns regarding the sustainability of the economic recovery in the USA. According to the October CF, the dollar-euro exchange rate should be 1.38 on average in 2010 Q4. A gradual correction toward USD 1.30 against the euro is expected thereafter, but the euro is about 9% stronger on average than in the previous forecast over the entire horizon.

Based on market outlooks, further gradual growth in the **price of Brent oil** is expected from the current level of around USD 82 a barrel to USD 90 a barrel at the end of 2012 (see Chart II.1.6). The petrol price outlook follows a similar path. Compared to the assumption in the previous forecast this represents an upward revision of around 10%, reflecting current market developments. The price of oil started rising sharply in September response to the weakening of the dollar. The market outlooks are broadly in line with the expectations of the CF analysts, who also expect (WTI) oil prices to rise. Underlying the expected rise is an expected continuing global economic recovery this year and the next.

CHART II.1.4

3M EURIBOR

The market outlook for rate growth is decreasing again amid expectations of a further possible monetary easing internationally
(in %; differences in p.p. – right-hand scale)

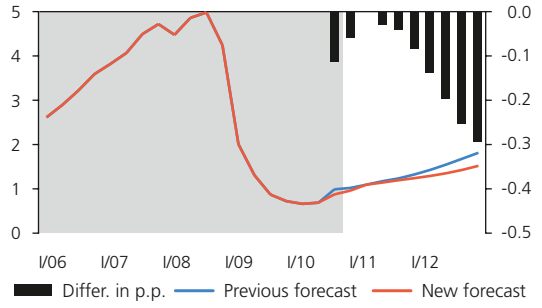


CHART II.1.5

EURO-DOLLAR EXCHANGE RATE

The outlook for the euro against the dollar shifted to a stronger level as a result of recent developments
(USD/EUR; differences in % – right-hand scale)

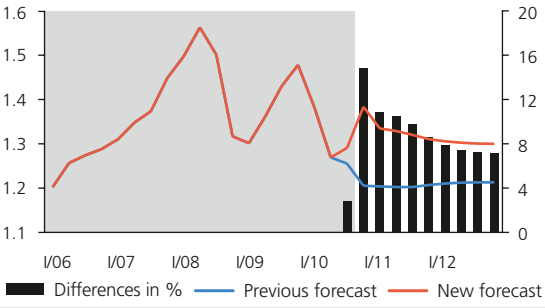


CHART II.1.6

PRICE OF BRENT CRUDE OIL

The price of oil increased in response to the weakening of the dollar; further growth is expected as the global economy recovers
(USD/barrel; differences in % – right-hand scale)

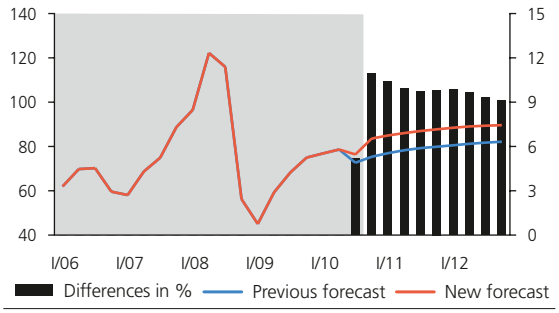


CHART II.2.1

HEADLINE INFLATION AND MONETARY-POLICY RELEVANT INFLATION

Headline inflation will be affected by changes to indirect taxes until the start of 2011
(annual percentage changes)

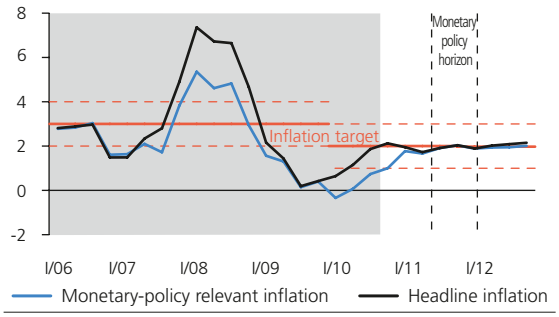


CHART II.2.2

REGULATED PRICES AND FUEL PRICES

Regulated price inflation will rise next year as a result of a surge in electricity prices
(annual percentage changes; excluding first-round effects of indirect tax changes)

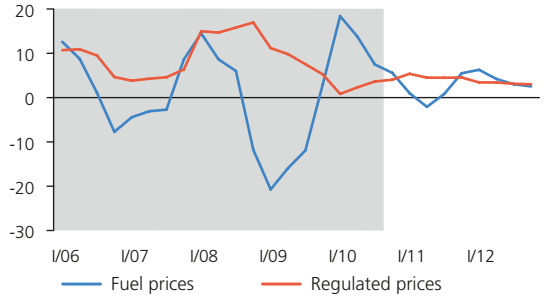


TABLE II.2.1

FORECAST OF ADMINISTRATIVE EFFECTS

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

	2009 actual		2010 forecast		2011 forecast		2012 forecast	
Regulated prices – total *	5.0	0.96	4.2	0.71	4.5	0.79	3.0	0.54
of which (selected items):								
Regulated rents	27.6	0.56	17.0	0.23	8.5	0.13	9.5	0.16
Electricity	11.4	0.46	-2.5	-0.09	10.0	0.35	3.0	0.11
Natural gas	-11.7	-0.33	6.7	0.16	4.0	0.10	2.0	0.05
Heat	3.9	0.13	4.0	0.09	2.0	0.05	2.0	0.05
Healthcare	-5.2	-0.10	9.0	0.18	2.0	0.04	2.0	0.04
First-round impacts of tax changes		0.00		1.02		0.00		0.14

* Incl. effects of indirect tax changes

II.2 THE FORECAST

Headline inflation was 1.9% on average in 2010 Q3 and monetary-policy relevant inflation was 0.8%. The import cost pressures on consumer prices are currently slightly anti-inflationary owing to the recent exchange rate appreciation. No domestic inflationary pressures are apparent at present despite the ongoing recovery in economic activity. At the forecast horizon, headline inflation will fluctuate close to the 2% target. Monetary-policy relevant inflation will converge to the inflation target in 2011 H1. This will be fostered by gradually strengthening pressures from the domestic economy linked with a pick-up in the currently low wage growth. These pressures will be partly offset by appreciation of the exchange rate, which will outweigh the effect of rising prices abroad. Owing to replenishment of inventories, higher external demand, rising household consumption and a marked increase in investment in construction of solar power stations, GDP growth should be 2.3% in 2010. In 2011, it should slow to 1.2%, among other things as a result of fiscal consolidation. The nominal exchange rate of the koruna is modestly appreciating over the forecast horizon. Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual rise in rates at the longer end of the forecast.

Annual **headline inflation** was 1.9% in 2010 Q3. Monetary-policy relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, was 0.8%. In the coming quarters, annual headline inflation will be around the inflation target (see Chart II.2.1). Monetary-policy relevant inflation will increase further and will converge to the inflation target in 2011 H1. The return of monetary-policy relevant inflation to the target will be fostered by regulated and food prices at the short end of the forecast and by a gradual upswing in pressures from the domestic economy and the unwinding of the anti-inflationary effect of import prices of consumer goods at the longer end.

Annual **regulated price inflation** rose to 3.6% in 2010 Q3, owing mainly to growth in natural gas prices and regulated health care items (termination of payments of regulatory fees by regional authorities). A further rise in regulated price inflation is forecasted for 2011 Q1 due to a surge in electricity prices (see Chart II.2.2). Up to the end of 2011 regulated price inflation should fluctuate between 4.5% and 5.5%, with a subsequent slowdown in 2012 (see Table II.2.1). Growth in regulated rents, an increase in electricity prices in 2011 and a gradual rise in other energy prices will be the main sources of growth in regulated prices in 2011 and 2012.

A rise in **indirect taxes** will affect annual inflation throughout 2010 and partly also in 2011. Both VAT rates were raised by 1 percentage point in January 2010, and excise duties on fuels, spirits, beer and cigarettes were also increased. Overall, we estimate the first-round effects of the tax changes in 2010 at 1.1 percentage points. The forecast assumes no changes to indirect taxes in 2011. At the start of 2012 it

assumes a harmonisation increase in excise duties on cigarettes with a contribution to inflation of just above 0.1 percentage point.

Net inflation turned positive in year-on-year terms in 2010 Q3, reaching 0.3% (see Chart II.2.3). This was due to food prices, which switched from annual decreases to relatively high annual increases. A gradual rise in domestic cost pressures and an increase in commodity prices (including agricultural producer prices), together with a steady increase in producers' currently squeezed margins, will foster rising net inflation. At the start of the forecast horizon, these effects will be partly dampened by exchange rate appreciation and later also by a renewed slowdown in food prices. Annual net inflation will thus reach 1.5% in 2011 Q4 and converge to 2% in 2012 Q4.

Annual **adjusted inflation excluding fuels** remained negative at a broadly unchanged level in Q3. The low values of adjusted inflation excluding fuels are in line with the anti-inflationary external cost pressures (a decline in import prices excluding food and energy), subdued domestic cost pressures and weak domestic demand squeezing businesses' margins. An upward change in adjusted inflation excluding fuels will come only slowly and this inflation component is not expected to turn positive in annual terms until 2011 Q3. Adjusted inflation excluding fuels will then continue rising toward the 2% level, but will not reach it until the end of 2012.

Annual **food price inflation** rose sharply in 2010 Q3. In addition to base effects, this was mainly due to renewed growth in agricultural producer prices. The current rise in consumer food prices is lower than that in agricultural prices, as a result, among other things, of still falling prices in the food industry. Looking ahead, another important factor is that food sellers, who reacted only partially to the decrease in input prices, increased their margins in the past. Sellers therefore have room to absorb rising costs. This is a different situation from that in the other components of net inflation. This factor will suppress the increase in food price inflation over the forecast horizon, which, however, will be quite significant anyway (see Chart II.2.4). The forecast is for food price inflation of 3.4% at the end of this year (excluding tax changes) and around 4% in 2011. Once the effect of the current rise in agricultural commodity prices has dropped out, annual food price inflation will start falling in 2011 Q4 to just below 2% and will stay at this level throughout 2012.

Annual **fuel price inflation** moderated in 2010 Q3 and will slow in the next two quarters as well (see Chart II.2.5). Fuel prices will subsequently rise only slowly until the end of the forecast period. This forecast is based on market outlooks for oil and petrol prices and on the expected evolution of the koruna-dollar exchange rate.

Interest rates on the financial market were flat in 2010 Q3. Consistent with the forecast is stability of market interest rates close to their current levels initially, followed by a gradual rise in rates at the longer end of the forecast (see Chart II.2.6). The low interest rate level will

CHART II.2.3

NET INFLATION AND ADJUSTED INFLATION EXCLUDING FUELS

Adjusted inflation excluding fuels will return to positive values only gradually
(annual percentage changes)

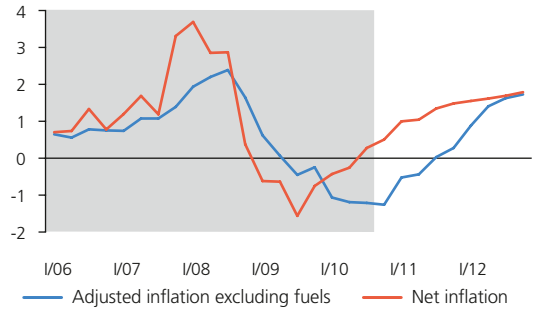


CHART II.2.4

FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

The current sharp growth in agricultural producer prices will affect food prices
(annual percentage changes)

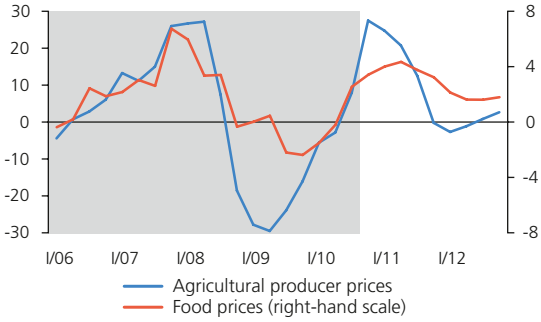


CHART II.2.5

FUEL PRICES AND OIL PRICES

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

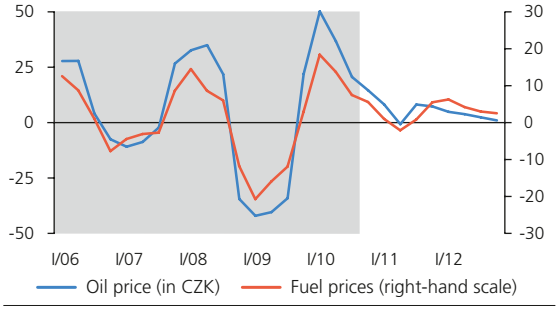


CHART II.2.6

INTEREST RATE FORECAST

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

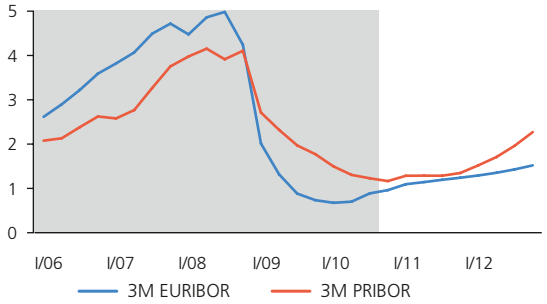


CHART II.2.7

EXCHANGE RATE FORECAST

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

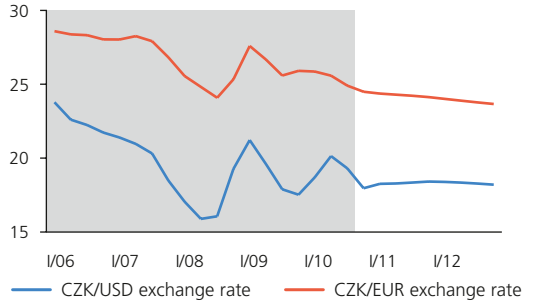
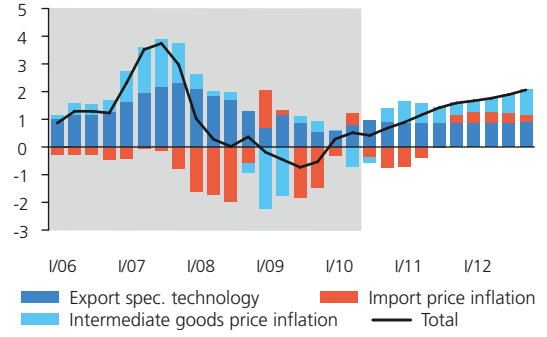


CHART II.2.8

COSTS IN THE CONSUMER SECTOR

Pressures from the domestic economy will be partly offset by a renewed anti-inflationary effect of import prices
(quarterly percentage changes; contributions in p.p.; annualised)



reflect, among other things, the effects of fiscal consolidation in 2011 and the still low foreign interest rates over the forecast horizon.

The **koruna-euro exchange** rate appreciated in Q3, owing mainly to short-term investors' sentiment and news of an upgraded outlook for the Czech Republic's rating. The short-term forecast for 2010 Q4 assumes an average exchange rate of CZK 24.5 against the euro. The exchange rate continues to appreciate gradually over the forecast horizon (see Chart II.2.7). This is due above all to a low outlook for foreign interest rates, which will result in a positive interest rate differential persisting over most of the forecast period. The appreciation of the koruna will also be affected by a positive outlook for the goods and services balance in 2011 and renewed real convergence as from 2012. By contrast, fiscal consolidation will act generally towards a slightly weaker exchange rate path, as the effect of lower domestic interest rates will outweigh the assumed decline in the sovereign risk premium.

The inflation forecast described above and the interest rate path consistent with it reflect an assessment of the current economic situation and its outlook. Based on the observed data, we estimate that quarterly growth in **nominal marginal costs in the consumer goods sector** will be slightly positive in 2010 Q3 (see Chart II.2.8). Import prices are currently slightly anti-inflationary as a result of a marked exchange rate appreciation, which more than offsets the increasing inflation abroad. Pressures from the domestic economy, approximated by intermediate goods price inflation, are not apparent. The estimated evolution of export-specific technology is linked to the persisting difference in the evolution of prices of tradables and non-tradables (the Balassa-Samuelson effect) and traditionally fosters higher inflation.

At the start of the forecast horizon nominal marginal cost growth in the consumer sector is moderate. Domestic inflation pressures are slightly positive until mid-2011, reflecting the recovering domestic economic activity, which, however, is dampened by the expected fiscal consolidation. Import prices will remain anti-inflationary, despite assumed growth in industrial producer prices in the euro area and world prices of commodities, since the effect of the strong exchange rate will prevail. In addition to renewed growth in external demand, the forecast expects inflationary import prices and concurrent growth in inflation pressures from the domestic economy from 2011 H2 onwards.

Nominal marginal costs in the intermediate goods sector edged up quarter on quarter in 2010 Q3, as nominal wage growth was only partly offset by growth in labour-augmenting technology (see Chart II.2.9). This is consistent with the observed rise in whole-economy labour productivity. The currently neutral contribution of the price of capital reflects the still low economic activity. Domestic cost pressures will start to increase gradually owing to wage growth and, as from 2012, a more robust recovery in economic activity. Accordingly, the currently declining nominal unit wage costs will switch to annual growth during 2011. The negative contribution of the price of capital

in 2011 is due to slower growth in external demand and investment (as a result of slowing construction of solar power stations).

From the future perspective, we assess the overall inflation pressures – proxied by the **gap in profit mark-ups in the consumer goods sector** – as being slightly inflationary in 2010 Q3. This assessment is consistent with the squeezing of producers' profit margins in 2008–2009 below their long-term level. The gap in profit mark-ups in the consumer sector is therefore negative at the beginning of the forecast horizon (see Chart II.2.10). It will narrow gradually at the forecast horizon, fostering higher inflation. However, margins will return to their long-term level not only through a gradual increase in prices, but also as a result of slow growth in costs.

Whole-economy **labour productivity**, which increased in 2010 Q1 for the first time since the economic crisis started, continued to grow in Q2 (at a slightly higher pace). This growth was due most of all to faster annual GDP growth. At the same time, labour productivity was positively affected by the still negative annual change in employment. Following a temporary decline in whole-economy productivity growth during 2010 due to lower GDP growth and a slight recovery in employment, we expect it to rise again at the long end of the forecast.

After having cooled significantly at the start of 2010, growth in the average **nominal wage in the business sector** edged up in Q2. The forecast expects the average wage to grow by 2.6% on average in 2010. Average wage growth will then pick up in the years ahead. It will increase by 3.6% in 2011 and its growth rate will be another 1.2 percentage points higher in 2012 (see Chart II.2.11). The faster wage growth in the business sector will reflect mainly the recovery in economic activity.

The average **wage in the non-business sector** will rise by only 0.9% this year, owing to the austerity measures adopted by the government at the end of last year. According to the available information, wages and salaries in the non-business sector are expected to decline by around 3.5% next year as a result of fiscal consolidation. This decline will be largely due to a drop in employment in this sector amid a decrease in the average wage of 1.7%. In 2012, average wage growth in the non-business sector will recover only slightly, to 0.5% year on year. Nevertheless, wages in the non-business sector continue to be surrounded by a large degree of uncertainty regarding the future fiscal consolidation.

In 2010 Q2, real GDP rose by 2.4% year on year, i.e. it picked up considerably compared to Q1. The previous forecast had expected growth of just 1.8% in Q2. In quarter-on-quarter terms, GDP increased by 3.6% in Q2. Gross capital formation was the biggest contributor to annual GDP growth, thanks to investment in inventories, while the contribution of fixed investment remained negative. The other GDP expenditure components – net exports and household and government

CHART II.2.9

COSTS IN THE INTERMEDIATE GOODS SECTOR

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

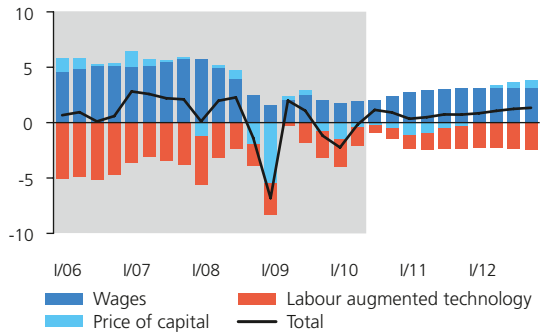


CHART II.2.10

GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

Corporate profit mark-ups are gradually returning to the equilibrium level at the forecast horizon
(percentages)

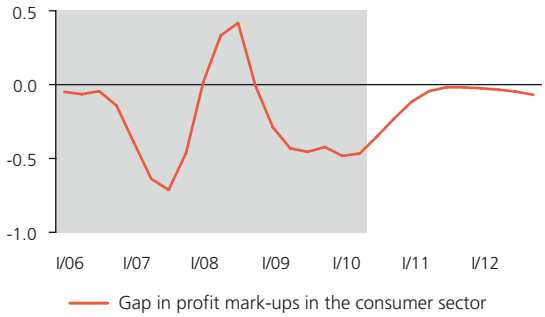


CHART II.2.11

AVERAGE NOMINAL WAGE

Wage growth in the business sector will start to pick up in 2011, while that in the non-business sector will decline
(annual percentage changes; seasonally adjusted)

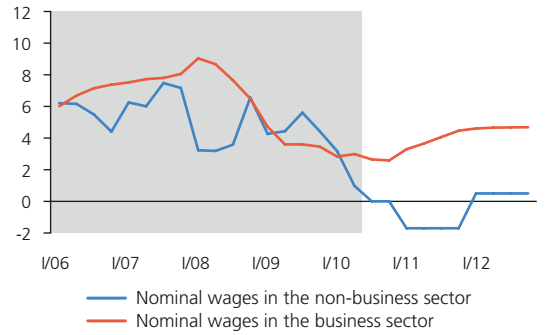


CHART II.2.12

STRUCTURE OF ANNUAL GDP GROWTH

Gross capital formation will remain the biggest contributor to annual GDP growth in the near future
(annual percentage changes; contributions in p.p.; seasonally adjusted)

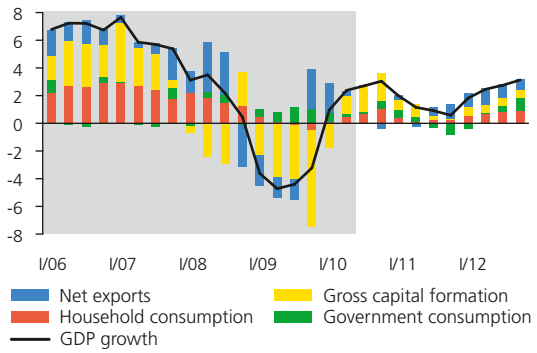


CHART II.2.13

GDP GROWTH FORECAST

After recovering this year, GDP growth will slow in 2011 as a result of fiscal consolidation
(percentage changes; seasonally adjusted)

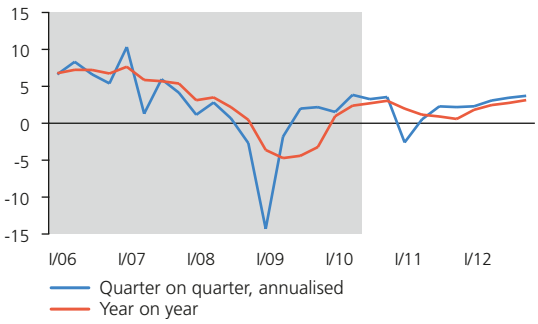


CHART II.2.14

AGGREGATE EMPLOYMENT

The employment recovery at the forecast horizon will be fitful
(annual percentage changes)

consumption – made slightly positive contributions to the growth in economic activity.

Growth in economic activity probably slowed slightly in quarter-on-quarter terms in 2010 Q3 (see Chart II.2.13). This was due above all to quarterly declines in household consumption and net exports. By contrast, government consumption and gross capital formation are expected to pick up in quarter-on-quarter terms. According to the current forecast, expected annual GDP growth is 2.7% for Q3 and 2.3% for 2010 as a whole. The GDP growth rate will slow to 1.2% in 2011, reflecting developments in all components of domestic demand. The expected slowdown, or decline, in household and government consumption in 2011 reflects the assumed impact of government austerity measures. Investment reflects the fading effect of replenishment of inventories. By contrast, the contribution of net exports will be slightly more favourable than in 2010 owing to a sharper slowdown in domestic demand than in exports. All expenditure components of GDP are expected to recover in 2012, above all household consumption thanks to rising growth in wages and exports as a result of a pick-up in external demand. For 2012 as a whole, real GDP growth will increase to 2.5%.

The impact of the economic crisis on the **labour market**, which was reflected in a decline in employment and a rise in the unemployment rate, probably peaked in 2010 Q1. Data from Q2 onwards suggest a change for the better.

The annual decline in **employment** slowed further in Q2 as a result of the accelerating economic recovery. It will switch to annual growth at the start of 2011 (employment has already changed to growth in quarter-on-quarter terms when adjusted for seasonal effects). A partial recovery in employment is occurring in connection with the recovery in export-oriented industrial production. Moreover, the services sector, which has a larger weight in total employment (59%) and significantly slowed the decline in employment last year, will probably no longer be greatly affected by the fading recession. However, following two quarters of annual growth, employment will start declining weakly again at the forecast horizon as a result of government austerity measures. This decline will last until 2012 Q2 (see Chart II.2.14).

The seasonally adjusted general **unemployment** rate probably peaked in 2010 Q1. Developments in Q2 are suggesting a change in the previous negative trend. Registered unemployment also declined slightly in 2010 Q1 and Q2. The forecast assumes a gradual decline in the general unemployment rate, which will amount to 7.5% in 2010 and 7.1% and 6.8% in the following two years (see Chart II.2.15). This forecast reflects the fading decline in employment as well as an expected decrease in the labour force due to a falling rate of economic activity and a shrinking working age population. By contrast, fiscal measures will act towards a higher unemployment rate, which should directly foster an increase in unemployment of around 0.2 percentage point at the start of 2011. However, this effect will gradually fade.

The rise in annual growth in **household consumption** observed during 2010 (partly in connection with the gradually improving labour market situation) will probably not continue into next year. Growth in disposable income and consumption will be slowed in 2011 by government austerity measures. Real consumption will also be adversely affected by inflation, as the consumption deflator will rise faster during 2011. As a result of these factors, real consumption will rise by just 0.4% in 2011. Household consumption will return to faster annual growth during 2012 (see Chart II.2.16).

The cyclical pattern of household consumption is determined to the largest degree by total wages and salaries. Continuing slight growth in the average wage and a moderating decline in employment have been fostering annual growth in wage income since 2010 Q2 (see Chart II.2.17). In the years ahead, the forecast expects a gradual pick-up in growth of wages and salaries due to faster growth in the average wage in the business sector, while a decline in wages in the non-business sector will act in the opposite direction. Employment will make a positive contribution in 2012. Social benefits are another significant component of income. As a result of a slight decline in employment, they will contribute positively to gross **disposable income** growth until the end of 2011. The contribution of operating surplus and mixed income relating to the profits of small businesses will be slightly positive over the forecast horizon. Current taxes and social benefits will negatively affect disposable income especially in 2011, reflecting the impact of government austerity measures. However, gross disposable income growth will start to rise in 2011, creating conditions for a gradual recovery in nominal consumption growth.

Households will smooth consumption by continuing to reduce their **saving rate** until mid-2011. The saving rate will gradually return to higher levels in the longer run. This consumption smoothing will be reflected first in faster growth in consumption expenditure than in gross disposable income and, by contrast, in consumption growth lagging behind income in 2012.

The buoyant growth in real **government consumption** observed in previous quarters slowed considerably in 2010 Q2 to 0.9% in quarter-on-quarter terms. The forecast expects the same figure in 2010 Q3. Government consumption will decline year on year in real terms in 2011, owing mainly to budget austerity measures. It will return to real growth in 2012.

Gross capital formation rose by 6.7% year on year in 2010 Q2. This represents a major change compared to the deep declines seen in the previous five quarters. The growth was due solely to additions to inventories, whereas fixed investment continued to decline in year-on-year terms. The forecast expects gross capital formation to grow by 8.9% year on year in 2010 Q3. We still expect higher additions to inventories stemming from the recovery in demand to foster a pick-up in aggregate investment in 2010. However, gross capital formation growth will slow significantly at the start of 2011 because

CHART II.2.15

GENERAL UNEMPLOYMENT RATE

The unemployment rate has peaked and will fall gradually in the next few quarters
(percentages; seasonally adjusted)

CHART II.2.16

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Government austerity measures will lead to a slowdown in household consumption growth and a fall in government consumption
(annual percentage changes; seasonally adjusted)

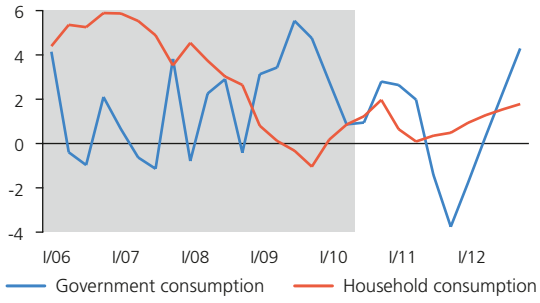


CHART II.2.17

NOMINAL DISPOSABLE INCOME

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

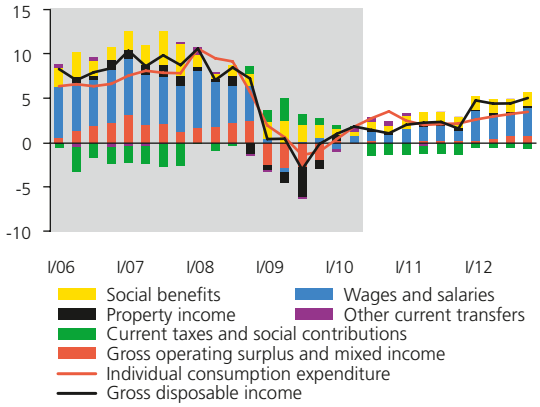


CHART II.2.18

GROSS CAPITAL FORMATION

Total investment will keep rising in the remainder of 2010 owing to renewal of inventories
(annual percentage changes; seasonally adjusted)

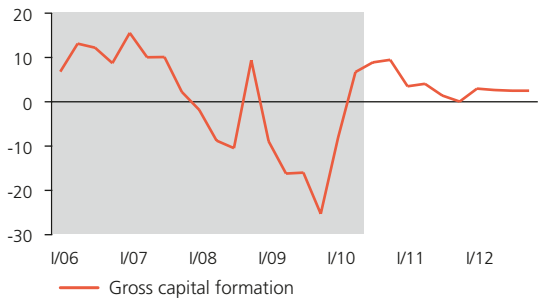


CHART 1 (BOX)

IMPORTS AND EXPORTS OF PHOTOVOLTAIC PANELS

High demand for solar panels was reflected in very high import volumes in late 2009 and in the second half of 2010
(CZK billions)

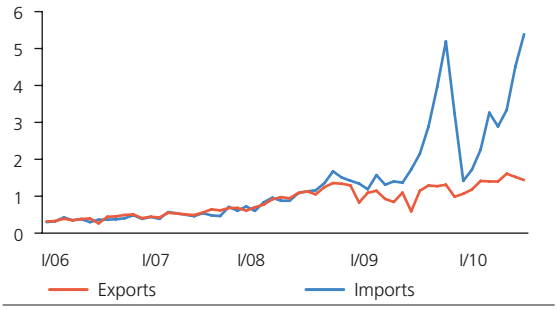
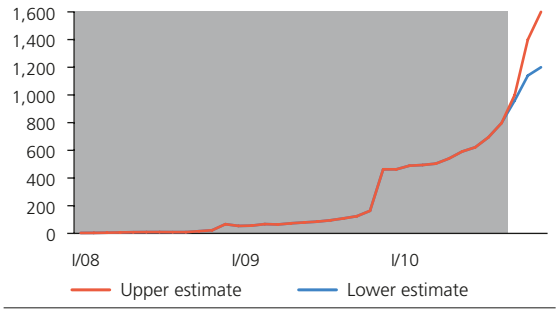


CHART 2 (BOX)

INSTALLED CAPACITY OF SOLAR POWER STATIONS

Installed capacity will continue to surge
(MW)



of the fading effect of construction of photovoltaic power stations (see Box 1) and the weakening contribution of changes in inventories. Fixed investment will start to rise slowly but steadily in the remainder of 2011. Overall, therefore, the forecast assumes subdued growth in investment activity in the coming two years (see Chart II.2.18).

BOX 1
The effect of new photovoltaic power station installations on economic activity

The current development of photovoltaic power stations, which is largely temporary in nature owing to the way state regulation is configured, is noticeably affecting foreign trade, investment and economic activity.

Imports of photovoltaic cells started to surge after their prices dropped sharply in 2009. The largest difference between imports and exports occurred in late 2009. Net imports amounted to CZK 14.8 billion for the whole year. Data on net imports for the first eight months of 2010 are also showing an upward tendency, with net imports amounting to CZK 13.7 billion (see Chart 1). This is in line with data from the Energy Regulatory Office (ERO) regarding installed capacity of solar power stations (see Chart 2). In 2009, most installations took place in December, and the data and published estimates for 2010 suggest that most installations will again be made in the second half of the year. The estimates for installed capacity at the end of 2010 range between 1,200 MW (Czech Photovoltaic Industry Association) and 1,600 MW (ERO upper estimate).

If we assume that most net imports of photovoltaic cells were used for new installations in 2009, we can quantify the import intensity of installing 1W, which was around CZK 37. Assuming that prices will decline by a further 15%, we estimate the effect of net nominal imports of photovoltaic cells on the trade balance at CZK 23–36 billion in 2010. We assume that most imports this year will take place in the second half of the year.

When quantifying the impacts on the domestic economy, the level of investment stemming from new installations must be estimated. If we increase the estimated average import price of photovoltaic cells to include sellers' margins and VAT, we get a price very close to the published weighted average price of photovoltaic cells in the Czech Republic of about CZK 46 per W.[2] However, photovoltaic cells account for only part of the overall installation costs. Assuming that the average

2 http://www.renewableenergyworld.com/rea/news/article/2010/08/strong-pv-demand-in-2009-2010-and-2011

cost of photovoltaic cells accounts for about 75% of the total investment, the average costs per 1W come to around CZK 63 for 2009 and CZK 53 for 2010. According to these calculations, solar power station installations increased the volume of nominal fixed investment by CZK 25 billion in 2009, and for 2010 we expect an effect of CZK 39–60 billion. The net effect on GDP is therefore estimated at 0.3% of nominal GDP in 2009 and 0.4–0.7% of nominal GDP in 2010.

Real **exports of goods and services** picked up significantly in 2010 Q2 in annual (13.1%) as well as quarterly terms (2.7%). However, we expect growth in exports to drop below 10% in 2010 H2 owing to a decline in external demand growth (see Chart II.2.19). Exports are expected to slow further next year and to accelerate again – though not too significantly – in 2012. This forecast reflects the profile of expected growth in economic activity in the effective euro area.

Owing to faster growth in exports, which traditionally contain a high proportion of imported intermediate products, **imports of goods and services** rose significantly in 2010 Q2 (by 13.8%). The forecast for import growth also reflects the forecast for exports (and also the fading effect of imports for construction of solar power stations at the start of 2011).

Amid significantly faster growth in imports than in exports, the contribution of **net exports** to annual GDP growth was only slightly positive in 2010 Q2 (0.4 percentage point). This is a substantially smaller figure than in the previous quarter. The contribution of net exports will fluctuate around zero until mid-2011. Thereafter, the contribution of net exports will gradually increase to around 1 percentage point.

As regards the balance of payments forecast, a significant rise in the **current account** deficit is expected, from roughly 1.0% of GDP in 2009 to around 2.7% of GDP in 2010 (see Table II.2.2). The increase in the current account deficit in 2010 is caused by a decrease in the overall trade surplus.[3] The year-on-year deterioration of the overall trade balance in 2010 is due to several concurrent factors (high imports for photovoltaic power stations, annual growth in prices of raw materials and a worsening of the machinery and equipment balance). In 2011 the forecast expects a slight improvement in the overall trade balance due to a slowdown in import growth stemming chiefly from a large year-on-year decline in imports for photovoltaic power stations (see Box 1) and to sluggish domestic demand growth caused by restrictive fiscal

3 In statistical terms, the deterioration of the overall trade balance has manifested itself (so far) in a shift from surplus to deficit in the services balance. Following an announced data revision (adjusting the trade balance for operations of non-residents), the trade balance will be significantly less favourable and the services balance will return to positive figures. At the same time, a decrease in the overall output surplus roughly equal in size to the errors and omissions reported hitherto cannot be ruled out, especially for 2009.

TABLE 1 (BOX)

ESTIMATE OF THE EFFECT OF PHOTOVOLTAIC ENERGY ON ECONOMIC ACTIVITY

Investment in solar panels significantly increased the volume of fixed investment in 2009 and 2010

	2009	2010 lower estimate	2010 upper estimate
Installed capacity (MW)	396	736	1,137
Net imports (imports – exports, CZK bn)	15	23	36
Net imports to 31 Aug. 2010		14	14
Net imports 1 Sep. 2010–31 Dec. 2010		10	22
Fixed investment (CZK bn)	25	39	60
Effect on nominal GDP	0.3%	0.4%	0.7%

CHART II.2.19

REAL EXPORTS AND IMPORTS

Export and import growth will slow in the coming quarters owing to the evolution of external demand

(annual percentage changes; annual changes in CZK bn.; seasonally adjusted)

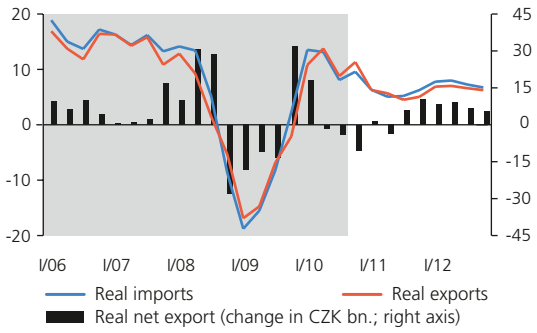


TABLE II.2.2

BALANCE OF PAYMENTS FORECAST

The current account deficit will increase in 2010

(CZK billions)

	2009 actual	2010 forec.	2011 forec.	2012 forec.
A. CURRENT ACCOUNT	-37.0	-100.0	-85.0	-100.0
Trade balance	180.6	180.0	230.0	240.0
Balance of services	27.0	-30.0	-35.0	-40.0
Income balance	-230.9	-240.0	-270.0	-290.0
Current transfers	-13.7	-10.0	-10.0	-10.0
B. CAPITAL ACCOUNT	41.0	38.0	48.0	48.0
C. FINANCIAL ACCOUNT	123.9	177.0	145.0	140.0
Direct investment	26.4	110.0	90.0	105.0
Portfolio investment	113.8	125.0	70.0	30.0
Financial derivatives	-7.7			
Other investment [a)]	-8.6	-58.0	-15.0	5.0
D. ERRORS AND OMISSIONS	-38.4			
E. CHANGE IN RESERVES (- = increase)	-60.6	-45.0	-55.0	-55.0

a) excluding operations of banking sector

Table II.2.3

FISCAL FORECAST

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

	2009 actual	2010 forec.	2011 forec.	2012 forec.
Government revenue	40.2	41.5	42.1	41.6
Government expenditure	45.9	46.8	46.2	45.6
of which: interest payments	1.3	1.5	1.5	1.5
GOVERNMENT BUDGET BALANCE	-5.8	-5.3	-4.2	-4.0
of which:				
primary balance [a)]	-4.5	-3.8	-2.7	-2.5
one-off measures	0.4	-0.2	-0.2	-0.1
ADJUSTED BUDGET BALANCE [b)]	-6.1	-5.0	-4.0	-3.9
Cyclical component (ESCB method) [c)]	0.0	-0.3	-0.8	-0.7
Structural balance (ESCB method) [c)]	-6.1	-4.8	-3.2	-3.2
Fiscal stance in p.p. (ESCB method) [d)]	-2.1	1.3	1.6	0.0
Cyclical component (EC method) [c)]	-0.8	-0.5	-0.5	-0.1
Structural balance (EC method) [c)]	-5.3	-4.5	-3.5	-3.8
Fiscal stance in p.p. (EC method) [d)]	-1.2	0.8	1.1	-0.3
Government debt	35.3	39.3	42.2	44.1

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

policy. In 2012, the overall trade balance can be expected to develop similarly as in 2011. The forecast expects the income deficit for 2010 to slightly exceed the level observed in 2009. The widening of the deficit is due to rising profits of non-residents from direct investment, flowing out in the form of dividends. In the next two years, the income balance will continue to worsen as a result of growing profits of non-residents from direct investment[4] and a worsening interest income balance.[5] The slight year-on-year decrease in the current transfers deficit this year is a result of a higher net inflow of EU funds.

The current account deficit will be financed by a continuing capital account surplus due to a rising inflow of EU funds and a net inflow of **direct investment** on the financial account. In 2010, the foreign direct investment inflow will increase significantly from the low level recorded in 2009. In the years ahead, the forecast expects a moderate decline in the overall direct investment balance. In addition to direct investment, inflow of **portfolio investment** is a significant source of capital, as in 2009; it is linked solely with debt capital flows. Over the next two years, however, the portfolio investment surplus will decrease substantially owing to renewed interest of residents in investment in foreign securities, a gradual decline in the need for external financing of fiscal deficits and a halt in the foreign expansion of power company ČEZ, which has so far been financed largely by bond issues abroad.

The future economic developments described above are reflected in the **government finance** outlook for 2010–2012 (see Table II.2.3). This outlook incorporates updated data on government finance in 2009 and newly also the budgetary measures for 2011 adopted in connection with the proposed state budget for next year, which the government submitted to the Chamber of Deputies (the lower house of parliament) in late September.

On 30 September, the CZSO submitted to Eurostat data on government finance in 2006–2009 under the ESA 95 methodology as part of the autumn government deficit and debt notifications. The general government deficit for 2009 was revised from 5.9% of GDP to 5.8% of GDP in this update.

The forecast assumes a decline in the **general government deficit** to 5.3% of GDP in 2010 as a result of the fiscal austerity measures approved last year. In 2011 the deficit should again fall markedly (to 4.2% of GDP), owing to the planned consolidation measures adopted in connection with the government's state budget proposal. The restrictive effect of these measures is reflected in the forecast mainly in government consumption (cuts in wages and the numbers

4 The forecast assumes the following distribution of non-residents' profits: 65% dividends and 35% reinvested earnings.
5 Due to a slight decline in residents' holdings of foreign debt securities and rapid growth in non-residents' holdings of domestic debt securities in 2010.

of non-business sector employees and in government sector non-investment expenditure) and household consumption (lower social transfers). The impact of the consolidation measures on the general government balance will be partly dampened by lower indirect tax income due to lower household consumption and by expenditure on unemployment benefits. The forecast also assumes that the better outlook for the general government balance and the related lower borrowing requirements will in the longer run cause the country's risk premium to decrease slightly, the supply side of the economy to strengthen somewhat and the conditions for private investment growth to improve. The overall effect of the planned consolidation measures on GDP growth in 2011 is quantified at -0.8 percentage point.

The forecast for 2012 is based on an assumption of unchanged fiscal policy from 2011 and expects a slight decrease in the government deficit to around 4% of GDP owing to accelerating economic growth, which will be reflected in a modest improvement in the cyclical component of the general government balance. The **structural deficit** of the government sector will be around 5% of GDP in 2010 and fall to roughly 3–4% of GDP in 2011–2012. According to the CNB forecast, the expected general government deficit will result in an increase in government debt from 35.3% of GDP in 2009 to 44.1% of GDP in 2012.

Additional (although as yet unspecified) **consolidation measures**, whose adoption should lead to the 3% reference value being achieved by 2013 (as stipulated in the excessive deficit procedure), are a downside risk to the general government deficit prediction for 2012. The possible measures include a rise in the reduced VAT rate as signalled by the government. This risk is described in the VAT sensitivity scenario (see section II.4.2).

TABLE II.2.4

FORECAST OF SELECTED VARIABLES

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

	2009 actual	2010 forec.	2011 forec.	2012 forec.
Real gross disposable income of households	-0.8	0.2	0.2	3.0
Total employment	-1.4	-1.1	0.1	0.2
Unemployment rate (in per cent)[a)]	6.7	7.5	7.1	6.8
Labour productivity	-3.0	3.5	1.0	2.4
Average nominal wage	4.0	2.3	2.6	4.0
Average nominal wage in business sector	3.2	2.6	3.6	4.8
Current account deficit (ratio to GDP in per cent)	-1.0	-2.7	-2.2	-2.5
M2	6.2	3.5	6.9	5.9

a) ILO methodology

CHART II.3.1

CHANGE IN THE HEADLINE INFLATION FORECAST

The changes in the headline inflation forecast are not significant
(annual percentage changes; differences in p.p. – right-hand scale)

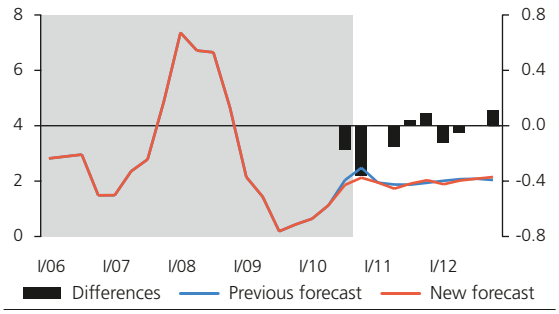


CHART II.3.2

CHANGE IN THE NET INFLATION FORECAST

The slight reduction in the net inflation forecast is due to the currently stronger exchange rate and the effects of fiscal consolidation next year
(annual percentage changes; differences in p.p. – right-hand scale)

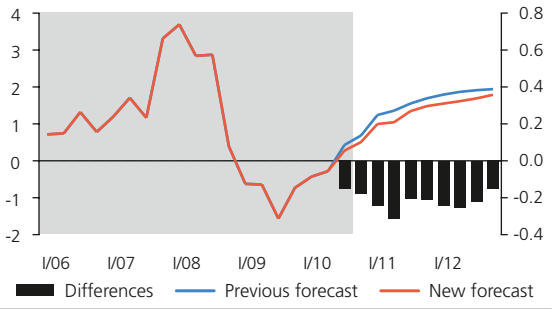
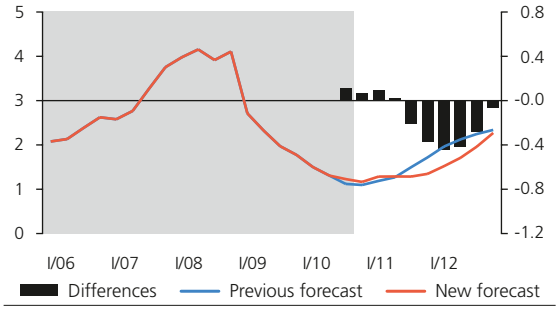


CHART II.3.3

CHANGE IN THE INTEREST RATE PATH

Change in the interest rate forecast become significant at the longer end of the forecast
(in %, differences in p.p. – right hand scale)



II.3 COMPARISON WITH THE PREVIOUS FORECAST

Compared to the previous forecast, the forecast for headline inflation is slightly lower for 2010 and the interest rate path is lower at the longer end of the forecast. The net inflation forecast has shifted slightly downwards. The change in the external outlook creates pressure for lower domestic interest rates and the government's austerity measures act in the same direction. Only at the start of the forecast horizon are these pressures offset by other factors. The annual GDP growth rate will be higher in 2010 but lower in 2011 as a result of fiscal consolidation and a slowdown in investment. The pace of wage growth in the business sector is little changed. The exchange rate is broadly in line with the previous prediction with the exception of stronger levels in the first two quarters.

The forecast for annual **headline inflation** at the end of 2010 lies below the previous prediction because of the currently low net inflation (see Chart II.3.1). The changes in the headline inflation forecast for 2011 and 2012 are negligible.

The outlook for **regulated price inflation** is slightly lower at the end of 2010 due to a decrease in the prediction for natural gas price growth. By contrast, the forecast for regulated price inflation in 2011 is higher owing to an expected surge in electricity prices.

The **net inflation** forecast is slightly lower than the previous prediction (see Chart II.3.2). This is due chiefly to the currently stronger exchange rate and also to weaker growth in real economic activity next year linked with fiscal consolidation.

The overall inflation pressures going forward – proxied by the **gap in profit mark-ups in the consumption sector** – are weaker at the shorter end of the forecast. This is due mainly to a fall in import costs stemming from the recent exchange rate appreciation. This effect outweighs slightly higher wage costs and higher growth in industrial producer prices in the effective euro area. As in the previous forecast, the mark-ups return gradually to equilibrium at the forecast horizon, hovering around the equilibrium level roughly from mid-2011.

All the main variables of the **external outlook** have changed compared to the previous forecast. The outlook for 3M EURIBOR rates is lower roughly from mid-2011, further postponing the expected interest rate growth in the euro area. The stronger external demand in 2010 Q2 and Q3 will gradually abate at the shorter end of the forecast. The outlook for industrial producer price inflation is higher over the entire forecast horizon, but its impact is weakened by appreciation of the koruna. The overall effect of the external outlook on domestic market rates is negligible in 2010 Q4 and acts towards a lower rate outlook at the longer forecast horizon.

The forecast for market **interest rates** is slightly higher at the shorter end but subsequently lies below the previous forecast (see Chart II.3.3).

The inflationary effect of the initial state stems from higher household consumption and an improved labour market situation together with a higher outlook for regulated price inflation. At the forecast horizon, however, the effects of fiscal consolidation and changes in the external economy gradually prevail (see Chart II.3.4). The recent exchange rate appreciation is also acting towards lower domestic interest rates.

The prediction of the nominal **koruna-euro exchange rate** changes only for the first two quarters (see Chart II.3.5). This is due to a stronger outlook for Q4 caused by recent exchange rate developments. Thereafter, the appreciation effect of lower foreign interest rates and a lower risk premium and the depreciation effect of domestic interest rates, reflecting the anti-inflationary impacts of fiscal consolidation, broadly offset each other.

The forecast for annual **GDP** growth is significantly higher for 2010 but lower for 2011 (see Chart II.3.6). The revision of GDP in 2010 is due chiefly to higher household consumption and gross capital formation. Investment in photovoltaic power stations is largely offset by imports because of its high import intensity. Nonetheless, we regard its net effect on GDP in 2010 as significant (see Box 1). The downward revision of total GDP in 2011 reflects the expected fiscal consolidation, the main factors being a strong decline in government expenditure and negative effects on household disposable income caused by falling wages in the non-business sector.

The higher forecast for **household consumption** is due mainly to surprisingly high figures for 2010 Q2 and an upward revision of the data for Q1. The higher consumption compared to the previous forecast is partly explained by the improved labour market situation, but data uncertainties in this area persist (see Box 2 in section III.3). The consumption outlook for 2011 is lower because of fiscal consolidation.

The currently much stronger quarterly growth rates of **gross capital formation** are due to high investment in solar power stations and a generally more favourable overall trend in real economic activity, reflected in replenishment of inventories. However, the forecast expects a sharp drop in investment at the start of 2011 owing to a fall in investment in photovoltaic energy, followed by renewed growth as in the previous forecast.

The growth rates of **exports and imports** have been revised upwards in quarterly terms. The higher exports are due above all to strong quarterly improvements in external demand as a result of higher GDP growth in Germany and Slovakia. The stronger imports in 2010 are due to the high import intensity of exports and in H2 also to sizeable imports of solar panels. As in the case of investment, therefore, imports will fall sharply at the start of 2011. The growth rates of exports and imports at the longer end of the forecast are similar to the previous forecast.

CHART II.3.4

DECOMPOSITION OF CHANGES IN THE INTEREST RATE FORECAST

The effect of the initial state is gradually outweighed by the start of the fiscal consolidation and the new external outlook
(3M PRIBOR; percentage points)

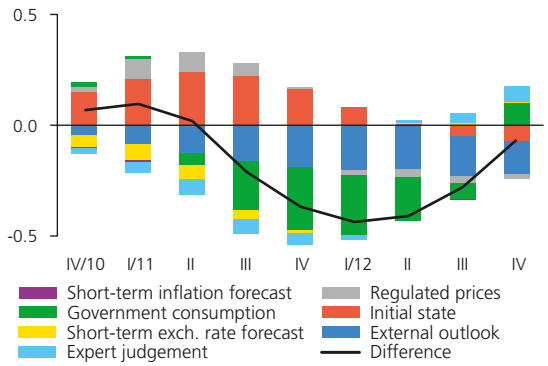


CHART II.3.5

CHANGE IN THE EXCHANGE RATE FORECAST

With the exception of the shorter end, the changes in the exchange rate forecast are insignificant
(CZK/EUR; differences in CZK – right-hand scale)

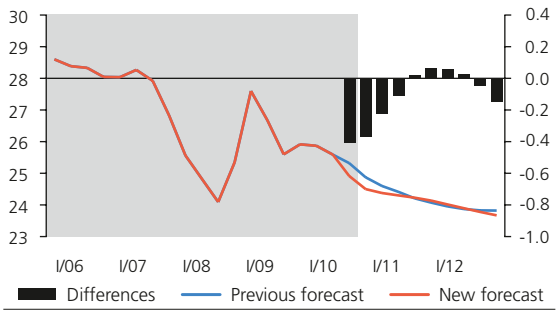


CHART II.3.6

CHANGE IN THE GDP FORECAST

The forecast for annual GDP growth is higher for 2010, while the growth for 2011 is lower
(annual percentage changes; differences in p.p. – right-hand scale)

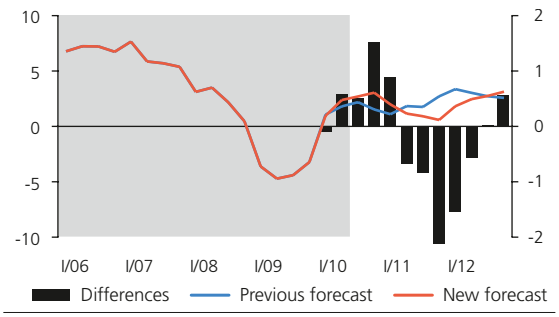
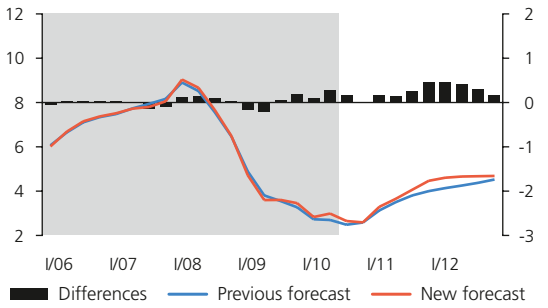


CHART II.3.7

CHANGE IN THE NOMINAL WAGE FORECAST

Changes in forecast of the nominal wage in the business sector are insignificant

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



The forecast for average **nominal wage growth** in the business sector is little changed, i.e. low and only gradually rising growth rates are still expected (see Chart II.3.7). A more pronounced acceleration in 2011 will be prevented by a slowdown in real economic activity. Consequently, we do not expect wage growth to recover more strongly until 2012.

II.4 SENSITIVITY ANALYSES

No significant risk leading to the creation of a fully-fledged alternative scenario was identified in the forecasting process. As usual an exchange rate sensitivity scenario was drawn up. Sensitivity scenario for an increase in the reduced VAT rate in 2012 was also prepared.

II.4.1 Exchange rate sensitivity scenario

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

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

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

Table II.4.1

EXCHANGE RATE SENSITIVITY SCENARIO

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

	CPI inflation (y-o-y in %)	3M PRIBOR (% p.a.)	GDP (y-o-y in %)	Nominal exchange rate (CZK/EUR)
IV/10	0.0	0.0	-0.2	-0.7
I/11	-0.1	-0.3	-0.2	-0.3
II/11	-0.1	-0.4	-0.1	-0.1
III/11	-0.2	-0.3	0.0	0.0
IV/11	-0.2	-0.1	0.2	0.0
I/12	-0.1	0.0	0.3	-0.1
II/12	-0.1	0.0	0.2	-0.1
III/12	0.0	0.1	0.1	-0.1
IV/12	0.0	0.0	0.0	-0.1

II.4.2 VAT sensitivity scenario

The sensitivity scenario of **higher VAT** involves an increase in the reduced VAT rate from 10% to 14% in 2012. This scenario reflects considerations relating to fiscal consolidation and future pension system reform. The first-round effect of the increase in the reduced VAT rate on inflation is 1 percentage point.

The first-round effects of indirect tax changes are not included in monetary-policy relevant inflation, so the higher VAT does not have a direct impact on interest rates in the simulation. Rates respond only to a slight decrease in monetary-policy relevant inflation caused by a slowdown in GDP growth and fall slightly in 2012 H2 (see Table II.4.2). The increase in the VAT rate affects economic activity above all through a decline in household consumption expenditure caused by lower real disposable income. Whole-year GDP growth declines by 0.4 percentage point in 2012 compared to the baseline.

Table II.4.2

VAT SENSITIVITY SCENARIO

An increase in the reduced VAT rate in 2010 will foster higher headline inflation, slower GDP growth and slightly lower interest rates
(deviations from baseline scenario)

	CPI inflation (y-o-y in %)	3M PRIBOR (% p.a.)	GDP (y-o-y in %)	Nominal exchange rate (CZK/EUR)	Household consumption (y-o-y in %)
IV/10	0.0	0.0	0.0	0.0	0.0
I/11	0.0	0.0	0.0	0.0	0.0
II/11	0.0	0.0	0.0	0.0	0.0
III/11	0.0	0.0	0.0	0.0	0.0
IV/11	0.0	0.0	-0.1	0.0	-0.2
I/12	1.0	0.0	-0.2	0.0	-0.5
II/12	1.0	-0.1	-0.3	0.0	-0.8
III/12	0.9	-0.1	-0.4	0.0	-1.2
IV/12	0.9	-0.2	-0.5	0.0	-1.4

TABLE II.5.1

EXPECTED INDICATORS OF FMIE AND CORPORATIONS

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

	6/10	7/10	8/10	9/10	10/10
FMIE:					
CPI	2.2	2.3	2.5	2.6	2.5
CPI, 3Y horizon	2.5	2.5	2.5	2.5	2.5
Real GDP in 2010	1.7	1.7	1.8	1.9	1.9
Real GDP in 2011	2.4	2.4	2.3	2.2	2.1
Nominal wages in 2010	2.3	2.4	2.3	2.2	2.3
Nominal wages in 2011	3.6	3.6	3.5	3.2	2.7
CZK/EUR exchange rate (level)	24.6	24.6	24.4	24.2	24.1
2W repo rate (in per cent)	1.3	1.3	1.3	1.3	1.3
1Y PRIBOR (in per cent)	2.2	2.3	2.3	2.2	2.3
Corporations:					
CPI	2.1			2.4	
CPI, 3Y horizon	2.5			2.3	

CHART II.5.1

PERCEIVED AND EXPECTED INFLATION

The inflation expectations of households have increased since the start of the year but are still relatively low
(source: European Commission Business and Consumer Survey)

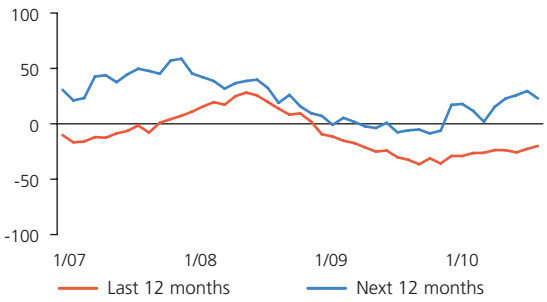


TABLE II.5.2

CF EXPECTED INDICATORS

The CF analysts expect accelerating economic growth of around 2%
(at 1Y; annual percentage changes unless otherwise indicated)

	6/10	7/10	8/10	9/10	10/10
Real GDP in 2010	1.6	1.6	1.6	1.8	1.8
Real GDP in 2011	2.6	2.6	2.3	2.2	2.2
Nominal wages in 2010	2.5	2.5	2.3	2.3	2.4
Nominal wages in 2011	4.1	3.8	3.6	3.4	3.3
CZK/EUR exchange rate (level)	24.9	24.9	24.8	24.5	24.4
3M PRIBOR (in per cent)	1.7	1.8	1.6	1.7	2.0

II.5 FORECASTS BY OTHER ENTITIES

Inflation expectations increased in Q3 at the one-year horizon and are above the inflation target of 2% at both monitored horizons. The analysts expect a slight acceleration of GDP growth in 2011 and appreciation of the koruna exchange rate and an increase in the CNB's key rates in the following 12 months. Almost all the analysts were expecting stable key rates before the CNB Bank Board meeting in November.

Inflation expected by financial market analysts[6] and business managers at the one-year horizon increased in 2010 Q3 and was just above the CNB's 2% inflation target valid from January 2010 (see Table II.5.1). However, the analysts lowered their forecast slightly in the October survey. Analysts' inflation expectations at the three-year horizon were flat, while business managers revised theirs downwards slightly. Nonetheless, these longer-term expectations also remain above the CNB's target.

The indicator of **inflation perceived by households** has long been negative (see Chart II.5.1).[7] This means that households on average felt that prices tended not to rise over the last 12 months. The indicator of expected inflation has been positive since the start of 2010. This suggests that the number of respondents who expect prices to rise more rapidly over the next 12 months is slightly higher than the number of those who expect prices to stay the same or increase more slowly than in the past.

Both the FMIE and CF analysts expect GDP to increase modestly this year (by just under 2%) and to pick up pace in 2011 (see Tables II.5.1 and II.5.2). This is the biggest difference from the CNB's forecast, which expects a significant effect of fiscal consolidation and fading investment in photovoltaic power stations in 2011. Wage growth should develop similarly despite the planned government austerity measures and wage cuts in the public sector. Compared to the exchange rate of the koruna observed at the end of October, both the mostly domestic analysts participating in the FMIE and the mostly foreign analysts participating in the CF expect a stronger exchange rate (by around 1.6% and 0.5% respectively). The interest rate forecasts were little changed. Before the November meeting of the CNB Bank Board, eleven analysts participating in the FMIE survey were expecting key rates to remain unchanged after this meeting and one analyst was expecting them to go up by 0.25 percentage point. Almost all the analysts expect rates to rise at the one-year horizon compared to the current level. Their estimates for the repo rate range between 0.75% and 1.75%.

6 The CNB monitors the expectations of financial market analysts regarding key macroeconomic indicators and the inflation expectations of business managers by means of statistical surveys. Table II.5.1 shows average values from these surveys.
7 The CNB draws on the qualitative assessment of past and future inflation by households collected as part of the European Commission Business and Consumer Survey (see Box 2 in the July 2007 Inflation Report).

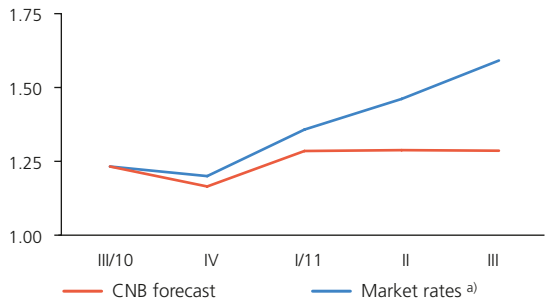
Compared to the CNB's new forecast, the analysts expect slightly lower real GDP growth in 2010 but considerably higher figures in 2011. Inflation expected by the analysts at the one-year horizon is also higher. The exchange rate prediction at the one-year horizon is the same as the CNB forecast in the case of the FMIE analysts and 1.1% weaker according to CF analysts. The analysts' expectations regarding the 2W repo rate at the one-year horizon are slightly higher than the level implied by the 3M PRIBOR path consistent with the CNB forecast.

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

CHART II.5.2

FRA RATES VERSUS THE CNB FORECAST

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



a) for 2010 Q3 and 2010 Q4 the 3M PRIBOR and for 2011 Q1–2011 Q3 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 22 October 2010

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 INFLATION

Annual headline inflation reached 2% in September and was thus at the same level as the CNB's target valid since the beginning of 2010. Monetary-policy relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, stood at 0.9% in September. The increase in annual inflation in 2010 Q3 was chiefly a result of faster annual growth in both food prices and, to a lesser extent, regulated prices. Changes to indirect taxes and regulated prices were again the biggest contributors to annual inflation. Market prices, as measured by net inflation, showed only moderate growth amid still subdued economic activity and falling import prices of final products for the consumer market.

III.1.1 Fulfilment of the inflation target

Headline inflation was roughly at the CNB's inflation target level in 2010 Q3 (see Chart III.1.1). This section of the Inflation Report briefly analyses the contribution of the CNB's monetary policy to this situation.

In order to assess the effect of monetary policy on the fulfilment of the inflation target one needs **to analyse retrospectively the forecasts** and the Bank Board's decisions based thereon in the past. To assess the fulfilment of the inflation target in 2010 Q3, we have to examine above all the period roughly from January 2009 to September 2009 (referred to as the "key period"), as monetary policy is focused on hitting the inflation target at the 12–18 month horizon. For the sake of clarity, the analysis of the accuracy of the forecasts is limited here to a comparison of the Inflation Report II/2009 forecast with subsequent inflation.

The **Inflation Report II/2009 forecast** expected headline inflation in 2009 to continue the decline that had started at the end of 2008, but to remain positive. Inflation was expected to fall in reaction to a sharp decline in demand, slowing growth in regulated prices and the unwinding of the effect of changes to indirect taxes. Inflation was expected to start rising gradually at the end of 2009, owing mainly to an expected modest recovery in economic activity. The forecast predicted that headline inflation would be in the lower half of the tolerance band around the new 2% inflation target in 2010 Q3 (see Chart III.1.1).

Headline **inflation in reality** was lower than forecasted in 2009 H2. In 2010, headline inflation was close to the forecast, but the individual consumer price categories showed considerable deviations in both directions. Regulated prices and indirect tax changes valid since 1 January 2010, which could not have been captured by the forecast because they were not decided on until 2009 H2, acted

CHART III.1.1

FORECAST VERSUS ACTUAL INFLATION

Inflation was just above the IR II/2009 forecast in 2010 Q3
(annual percentage changes)

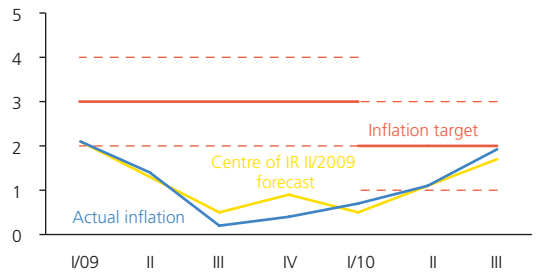


TABLE III.1.1

FULFILMENT OF THE INFLATION FORECAST

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

	IR II/2009 forecast	2010 Q3 outturn	Contribution to total difference [b)]
CONSUMER PRICES	1.7	1.9	0.2
Breakdown into contributions:			
regulated prices	-0.3	3.6	0.7
first-round impacts of changes to indirect taxes	0.0	1.0	1.0
food prices[a)]	2.1	2.3	0.0
fuel prices[a)]	6.4	7.0	0.0
adjusted inflation excl. fuels[a)]	1.8	-1.2	-1.6

a) excluding the first-round impacts of changes to indirect taxes
b) owing to rounding, the sum of the contributions need not be equal to the total difference

in the inflationary direction. By contrast, adjusted inflation excluding fuels, which was affected by falling import prices and the previous contraction in economic activity, acted in the direction of lower inflation (see Table III.1.1).

External economic factors contributed significantly to domestic inflation. Owing to the global financial and economic crisis, external demand, inflation and interest rates were lower throughout 2009 than assumed in the forecast and therefore acted in the direction of lower inflation. Later, however, external demand and inflation fluctuated at higher levels. These factors thus joined oil prices, which were higher than forecasted over the entire forecast horizon (see Table III.1.2).

Real interest rates also differed from the assumptions of the forecast. The slightly tighter real interest rates in 2009 turned easier following the lowering of monetary policy rates. The **exchange rate** was close to its forecasted values until mid-2010 (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 unexpectedly strong external economic contraction in 2009 spilled over to the domestic economy mainly via the export channel. The monetary policy response to this involved a sharper reduction in monetary policy rates than forecasted in Inflation Report II/2009 (see Table III.1.3). The forecast of a falling inflation path until the end of 2009 materialised, although its decline was somewhat deeper. Thanks to a recovery in economic activity in 2010 and changes to indirect taxes, inflation was very close to the inflation target in 2010 Q3.

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 January 2009 and September 2009 the Bank Board assessed the risks of the forecasts as balanced in the first two quarters of the period under review. At the remaining two meetings, the risks were assessed as being anti-inflationary. The Bank Board's decisions led on average to slightly easier monetary policy settings than implied by the forecasts. This was due mainly to the Bank Board's decision to lower monetary policy rates in May 2009 even though the forecast at that time implied that they should be left unchanged. However, even this decrease in rates did not prevent monetary-policy relevant inflation from staying below the CNB's target (the target was lowered to 2% in 2010). From this perspective, based on current knowledge, it seems that monetary policy should have been even easier during 2009.

Table III.1.2

FULFILMENT OF THE EXTERNAL ASSUMPTIONS

External factors contributed to the lower inflation in 2009
(annual percentage changes unless otherwise indicated)

		II/09	III/09	IV/09	I/10	II/10	III/10
GDP in euro area[a), b), c)]	p	-3.5	-4.3	-3.2	-1.4	0.3	1.6
	o	-5.3	-4.1	-1.9	2.2	3.2	-
PPI in euro area[b), c)]	p	-1.8	-4.0	-1.7	0.3	1.3	1.7
	o	-4.8	-7.6	-5.3	-1.2	2.1	3.6
3M EURIBOR	p	1.2	1.0	1.0	1.2	1.5	1.8
(percentages)	o	1.3	0.9	0.7	0.7	0.7	0.9
USD/EUR exchange rate	p	1.33	1.31	1.32	1.32	1.33	1.33
(levels)	o	1.36	1.43	1.48	1.38	1.27	1.29
Brent crude oil price	p	52.1	55.3	58.2	60.6	62.7	64.3
(USD/barrel)	o	59.3	68.3	75.0	76.8	78.6	76.4

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

Table III.1.3

FULFILMENT OF THE FORECAST FOR KEY VARIABLES

The forecast had not predicted such a sharp slowdown in domestic economic activity in 2009

		II/09	III/09	IV/09	I/10	II/10	III/10
3M PRIBOR	p	2.4	2.1	1.7	1.8	2.0	2.1
(percentages)	o	2.2	2.0	1.8	1.5	1.3	1.2
CZK/EUR exchange rate	p	26.6	26.1	26.0	25.9	25.9	25.9
(levels)	o	26.7	25.6	25.9	25.9	25.6	24.9
Real GDP [a)]	p	-2.4	-2.7	-1.9	0.2	0.7	1.6
(annual perc. changes)	o	-4.7	-4.4	-3.2	1.0	2.4	-
Nominal wages [b)]	p	3.2	1.8	1.1	1.5	2.4	3.6
(annual perc. changes)	o	3.2	4.6	5.2	2.2	2.4	-

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

CHART III.1.2

INFLATION

Annual inflation increased further in 2010 Q3
(annual percentage changes)

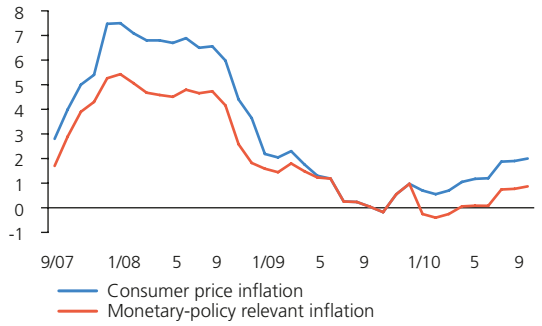


CHART III.1.3

INFLATION COMPONENTS

Food prices and regulated prices contributed to the increase in inflation
(annual percentage changes; excluding indirect tax changes)

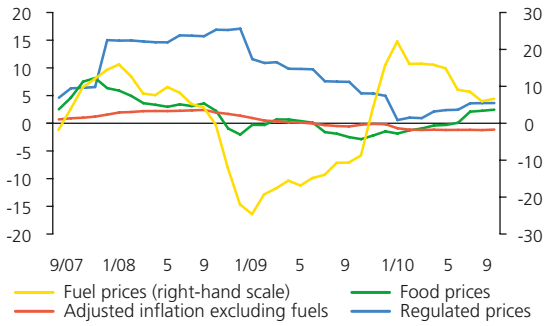
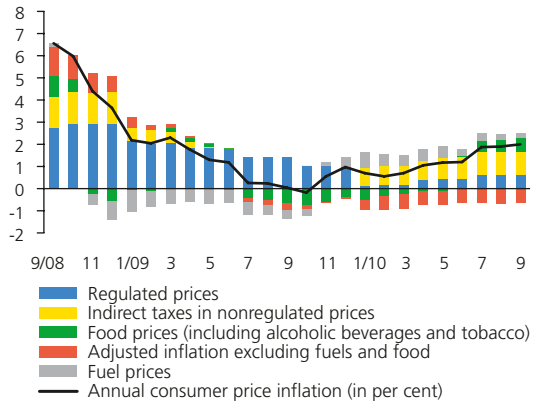


CHART III.1.4

STRUCTURE OF INFLATION

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



III.1.2 Current inflation

Annual inflation[8] increased further in 2010 Q3. At 2%, inflation in September was 0.8 percentage point higher than in June (see Chart III.1.2). This increase was due mainly to rises in annual food price inflation and, to a lesser extent, regulated prices. These changes were partially offset by a slowdown in annual fuel price inflation (see Chart III.1.3).

Turning to the **structure of annual inflation** (see Chart III.1.4), inflation continued to be affected mainly by administrative factors, i.e. the effects of changes to indirect taxes and regulated prices. The contribution of market prices was generally less significant.

Administrative effects were dominated by the **changes to indirect taxes** implemented on 1 January 2010. These measures included increases in both VAT rates of 1 percentage point and a rise in excise duties on fuels, beer, spirits and cigarettes. Overall, the September annual inflation figure was affected by the first-round effects of the changes to indirect taxes totalling 1.1 percentage point (see Chart III.1.4). **Monetary-policy relevant inflation** was therefore 0.9%. The following text assesses the evolution of the main components of inflation excluding the effect of tax changes.

The rise in annual **regulated price inflation** (from 2.4% in June to 3.7% in September) mainly reflected a July increase in prices of natural gas for households of 4.2% and increases in health care prices (particularly the termination of payments of regulatory fees by regional authorities). However, the annual growth in regulated prices again chiefly reflected rapid growth in regulated rents (of 17.1% in September), followed by a year-on-year increase in health care prices (of 9% in September).

Market prices, as measured by net inflation, also showed modest annual growth (of 0.3%) after a decline lasting more than one year. This change was due to faster growth in food prices, while adjusted inflation excluding fuels remained at strongly negative levels. Overall, market prices thus confirmed a significant effect of the still subdued demand and the absence of cost-push inflationary pressures from the domestic economy. The anti-inflationary effect of the so far mostly falling import prices of final products for the consumer market also helped to maintain low inflation. The fast annual growth in world prices of raw materials has so far passed through – via oil prices – only to consumer prices of fuels.

The renewed rise in market prices was fostered by **food prices**, whose annual growth increased from 0.1% in June to 2.5% in September (see Chart III.1.5). Their evolution reflected, with a lag, the rise in agricultural producer prices (see section III.2.2 *Producer prices*). The increase was also due in large measure to base effects.

8 As measured by annual growth in consumer prices.

Unlike food prices, annual **adjusted inflation excluding fuels** remained strongly negative in 2010 Q3, staying broadly unchanged for the second consecutive quarter (-1.1% in September; see Chart III.1.6). As in the previous quarter, both its segments recorded only minor changes in price developments. Annual growth in prices of nontradable commodities, consisting mainly of services, remained close to its historical low. Its slight increase in September (of 0.1 percentage point to 1.1%) mainly reflected faster growth in financial services prices. Annual growth in prices of nontradable commodities excluding fuels stayed strongly negative in 2010 Q3 (-4.3% in September). The biggest annual decline in prices was again recorded in the transport category, above all in transport equipment.

Fuel prices, which are affected primarily by oil prices and the koruna-dollar exchange rate, were again the fastest growing component of inflation. However, their annual growth decreased further in Q3 (to 6.6% in September; adjusted for tax effects). The slowdown in annual fuel price growth was mostly due to base effects until mid-2010. Fuel prices showed constant month-on-month growth in this period. In Q3, however, fuel prices decreased month on month (by 3% overall) in connection with the current month-on-month fall in world oil and petrol prices on ARA exchanges as expressed in koruna (i.e. including the effect of the koruna-dollar exchange rate). Including the effect of indirect tax increases, fuel prices rose by 11.8% year on year in September.

Consumer prices broken down by the major **categories of the consumer basket** rose the fastest in the health category (by 7.4% in September, including the effect of tax changes). However, the biggest contributors to annual inflation in 2010 Q3 (see Chart III.1.7) were the categories of food and non-alcoholic beverages (owing to stronger growth in food prices) and housing (mainly because of rent deregulation). The contribution of alcoholic beverages and tobacco prices, which were affected by the increase in excise duties, was also significant.

By international comparison, consumer prices as measured by the **HICP** continued to rise more slowly in the Czech Republic than on average in the EU countries in 2010 Q3, although the difference decreased. According to Eurostat's latest estimate, the HICP in the Czech Republic increased from 1% in June to 1.8% in September, while the average figure for the EU countries was around 2% in both Q2 and Q3.

CHART III.1.5

FOOD PRICES

Food price inflation increased appreciably in 2010 Q3
(annual percentage changes)

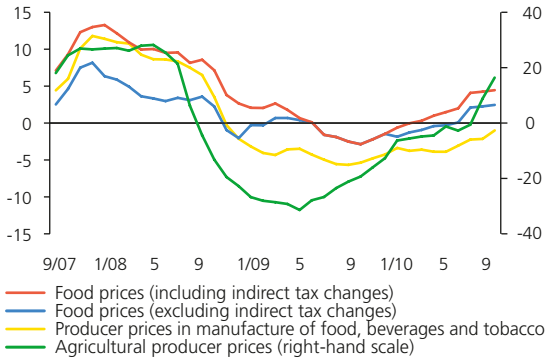


CHART III.1.6

ADJUSTED INFLATION EXCLUDING FUELS

Annual adjusted inflation excluding fuels remained negative, stagnating at the level of the previous two quarters
(annual percentage changes)

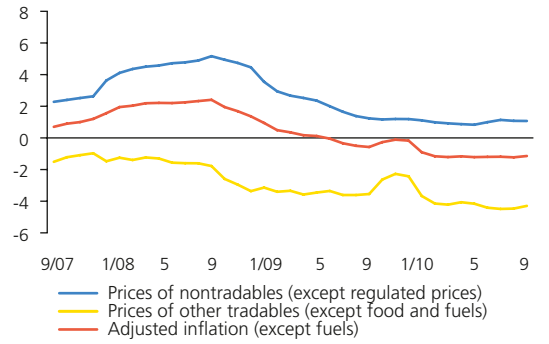


CHART III.1.7

CONSUMER BASKET PRICES

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

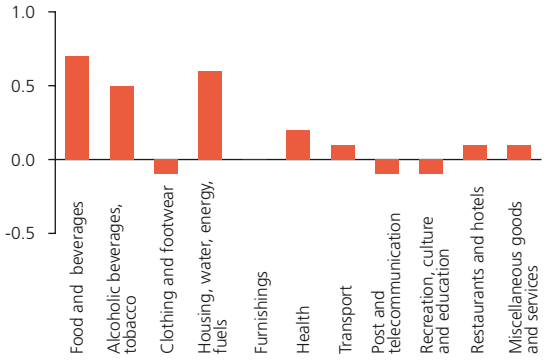


CHART III.2.1

IMPORT PRICES AND PRODUCER PRICES

Import prices and industrial and agricultural producer prices rose in 2010 Q3
(annual percentage changes)

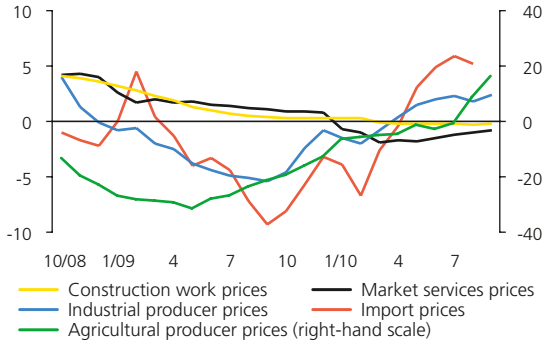


CHART III.2.2

IMPORT PRICES

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

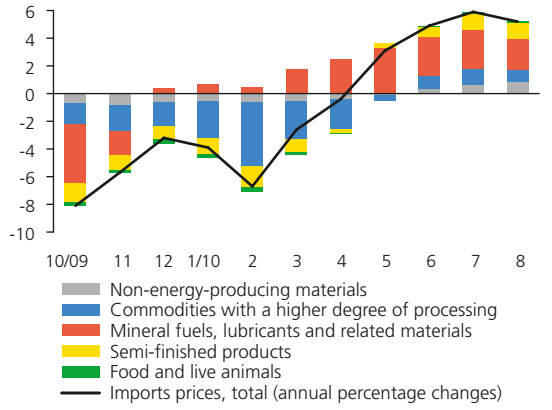
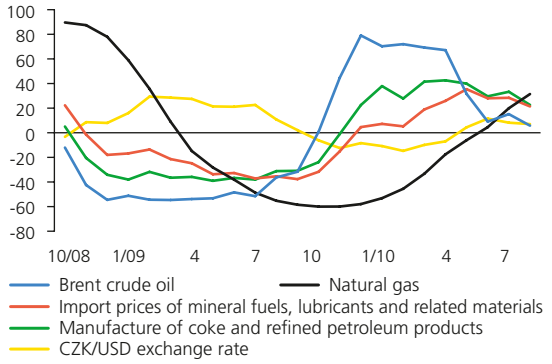


CHART III.2.3

MINERAL FUELS

Natural gas prices also contributed to the fast growth in import prices of energy-producing materials
(annual percentage changes)



III.2 IMPORT PRICES AND PRODUCER PRICES

Annual import price inflation strengthened further owing to faster or renewed price growth in most import categories, especially non-energy-producing commodities. Import prices were now rising year on year in most categories. The growth in prices of imported energy-producing and non-energy-producing materials and semi-finished products was reflected most of all in prices of producers at the early stages of the production chain. Overall, annual industrial producer price inflation thus rose further in 2010 Q3; however, prices of high-value-added products mostly kept falling or showed only a modest rise. Agricultural producer prices saw renewed annual growth. Only prices of construction work and market services continued falling amid still low domestic demand.

III.2.1 Import prices

Import prices in the first two months of 2010 Q3 showed a continued recovery in annual growth, observed since May this year. According to the latest available data from August, import prices were now rising in most commodity categories and their overall annual increase was 5.2% (see Chart III.2.1).

The more than 5% annual rise in import prices in the first two months of 2010 Q3 was again due most of all to **import prices of mineral fuels** (see Chart III.2.2), although their annual growth rate has been falling since June as a result of slowing world oil price growth. Whereas in April 2010 world oil prices recorded annual growth of over 60% following a sharp rise in 2009 Q4, the following four months saw a rapid slowdown to below 10%. The impact of the high oil prices on import prices of mineral fuels was, however, partly offset by falling world prices of natural gas until May, which as a rule follow oil prices with a lag. Since June, natural gas prices have also been contributing to the annual growth in import prices of energy-producing materials, which was thus still high in August (21.4%). This was also due to year-on-year depreciation of the koruna-dollar exchange rate (see Chart III.2.3). Overall, the contribution of import prices of energy-producing materials to total import price inflation is decreasing; in August it was 2.2 percentage points.

The changes in oil prices passed through, with a lag, to prices of imported **chemicals**, whose growth slowed appreciably in August. However, a more important role was played by faster growth in import prices of **semi-finished products** (5.3% in August), caused by growth in world prices of commodities (particularly metals) amid continued growth in global demand and year-on-year depreciation of the exchange rate against the dollar. The **non-energy-producing materials** category also saw a sharp upswing in annual import price inflation (to 30%); in May their prices had still been falling (see Table III.2.1). After declining for a year, prices of imported **food** also switched to annual growth as a result of rising prices of agricultural and food commodities on world markets.

Import prices of **commodities with a high degree of processing** followed a similar path, particularly in the imported machinery and transport equipment category. Their contribution to annual import price inflation was a significant 0.9 percentage point in August. The upswing in import prices in this category was probably due to slower year-on-year appreciation of the koruna-euro exchange rate together with a pick-up in foreign producer prices.

III.2.2 Producer prices

Industrial producer prices

The annual growth in **industrial producer prices**, which started in April this year, continued into 2010 Q3. It accelerated further, reaching 2.4% in September, up by 0.4 percentage point from June (see Chart III.2.4). This was again due mainly to rapid growth in commodity prices, which strongly affected prices of producers at the early stages of the production chain. By contrast, prices in most of other branches of manufacturing continued falling year on year, or recorded only modest growth, showing only very modest shifts towards a weaker decline or stronger rise. In this respect, producer prices continued to show no signs of inflationary pressures. Businesses created room for profit generation by reducing their personnel cost-output ratios rather than by raising their prices.

The fastest price growth was again recorded in the **manufacture of coke and refined petroleum products**, although the growth slowed considerably owing to the evolution of oil prices in international markets (to 24.7% in September; see Chart III.2.3). However, their contribution to annual industrial producer price inflation was still significant, reaching 1.2 percentage points in September. Annual inflation also decreased in the chemical industry, where many producers are heavily dependent on oil products (see Chart III.2.6).

The contribution of producer prices in the **manufacture of basic metals** to industrial producer price inflation remained significant as well. Unlike in primary oil processing, inflation in this industry continued rising considerably (by 4.3 percentage points compared to June to 10.3% in September). This was due mainly to rising prices of imported metal-based semi-finished products (see Chart III.2.5). Prices in **mining and quarrying** rose quickly as well in Q3 (by 7.5% in September), but their contribution to industrial producer price inflation was less significant. The continuing upswing in prices in the above-mentioned industries was due to increased world demand for energy-producing and non-energy-producing materials. This resulted in relatively fast annual growth in prices of semi-finished products in Q3 (of 5.4% in September), while in the other industrial producer price categories prices were mostly falling or only slightly rising.[9]

9 In September, prices fell by 1.6% year on year in the capital goods category, rose by 0.2% in the durable goods category and dropped by 2% in the non-durable goods category. Only prices in the energy category recorded marked growth (of 5.6%).

TABLE III.2.1

STRUCTURE OF IMPORT PRICE DEVELOPMENTS

Prices were now rising in most import categories
(annual percentage changes)

	5/10	6/10	7/10	8/10
IMPORTS, TOTAL	3.1	4.9	5.9	5.2
of which:				
food and live animals	-0.3	1.1	2.8	3.2
beverages and tobacco	-2.9	-1.9	-2.5	-2.6
crude materials inedible, except fuels	-3.6	10.4	19.5	29.3
mineral fuels and related products	35.4	28.0	28.4	21.4
animal and vegetable oils	-9.7	-3.0	3.5	3.7
chemicals and related products	0.2	2.0	2.9	1.2
manufactured goods classified chiefly by material	1.5	3.3	5.1	5.3
machinery and transport equipment	-0.1	2.2	2.4	2.0
miscellaneous manufactured articles	-2.8	-0.7	0.3	-0.1

CHART III.2.4

INDUSTRIAL PRODUCER PRICES

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

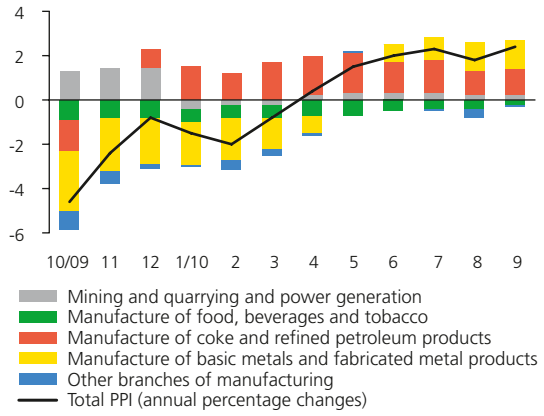


CHART III.2.5

METAL PRICES

Rapidly rising import prices of semi-finished products affected producer prices in the basic metals category
(annual percentage changes)

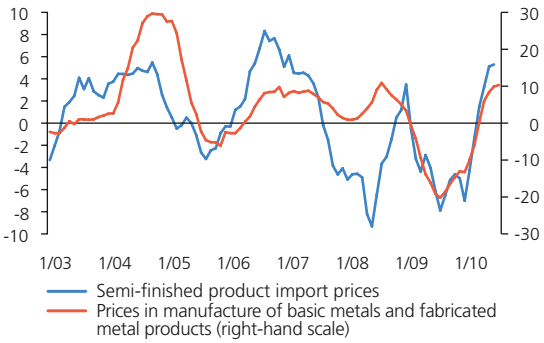


CHART III.2.6

MANUFACTURING

Many branches of manufacturing recorded slightly slower price declines
(annual percentage changes; selected branches)

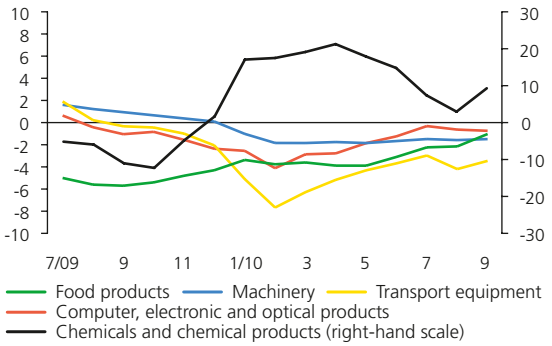


CHART III.2.7

AGRICULTURAL PRODUCER PRICES

Agricultural producer prices recorded a marked upswing in growth
(annual percentage changes)

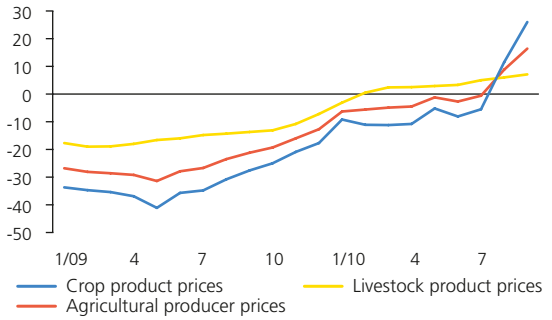
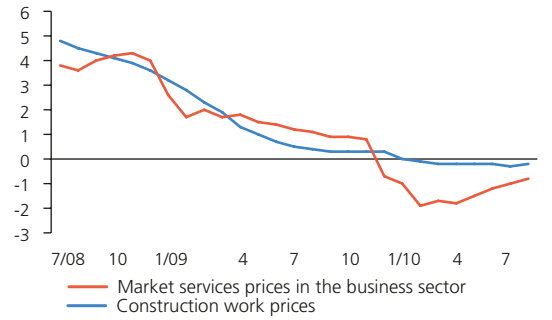


CHART III.2.8

OTHER PRICE CATEGORIES

Prices of construction work and market services kept declining year on year in 2010 Q3
(annual percentage changes)



Prices in the **other branches of manufacturing**, consisting mostly of producers of high-value-added products, were generally falling year on year in 2010 Q3.[10] However, a very modest shift toward weaker annual declines or stronger growth was apparent (see Chart III.2.6). Producer prices also remained on the decline in the **electricity, gas and steam industry** in 2010 Q3 (down by 1.1% year on year in September). Their trend so far during 2010 reflects the reduced demand for electricity in the European market as a result of the previous contraction in economic activity on both the domestic and Europe scale.

Agricultural producer prices

The gradual moderation of the annual decline in **agricultural producer prices**, observed since mid-2009, turned into pronounced annual growth in August 2010, which then strengthened further to 16.4% in September (see Chart III.2.7). This path was observed for crop product prices, which rose in September by a significant 26%. Growth in livestock product prices had been renewed back in February this year and was slower in subsequent months than in the case of crop products (7.1% in September).

The situation described above was linked mainly with the upswing in growth of **agricultural commodity prices on world markets** observed since 2009 H2. As regards domestic prices, the renewed growth in world prices of these commodities was only partly offset by the year-on-year appreciation of the koruna-euro exchange rate this year. The upswing in world prices of agricultural commodities was caused by the global economic recovery. Another, short-term factor was the worse harvests recorded by many major producers this year owing to unfavourable weather conditions. The above factors fostered a large increase in world prices of crop products, particularly cereals, in July and August this year.

Other producer prices

Prices of construction work and market services continued to indicate persisting weak domestic demand in 2010 Q3. **Construction work prices** remained at the previous quarter's very low negative levels in Q3 (-0.2% in September; see Chart III.2.8). The main cause can again be seen in weak demand for construction investment in all economic sectors. However, prices of materials and products consumed in construction continued rising year on year, albeit at a slower rate than in the previous quarter (2.2% in September). Their renewed price growth in 2010 Q2 was probably due in part to an upswing in prices of imported semi-finished products.

10 One-half of these industries showed annual price decreases and the other half mostly only modest increases. A sizeable fall in prices persisted in the manufacture of transport equipment (of 3.5% year on year in September).

Prices of market services also continued falling year on year in September. However, the decline was much weaker than in June (down by 0.7 percentage point to -0.8%). Most branches of market services contributed to this change, particularly freight transport, where inflation increased in connection with the economic recovery. Prices of postal and financial services increased as well. In addition, numerous other branches showed weakening annual declines in prices to insignificant levels; only in advertising services and market research was the decline still relatively deep (5.8% year on year).

CHART III.3.1

GROSS DOMESTIC PRODUCT

GDP growth increased further in 2010 Q2
(annual and quarterly percentage changes at constant prices; seasonally adjusted data)

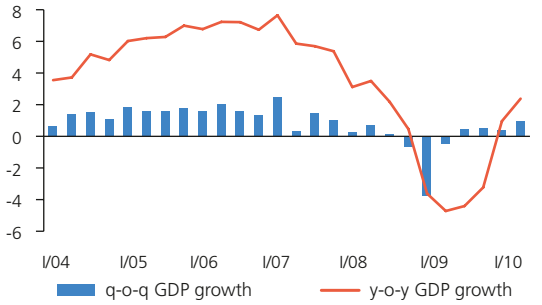


CHART III.3.2

STRUCTURE OF ANNUAL GDP GROWTH

Change in inventories made the largest contribution to the GDP growth
(contributions in percentage points)

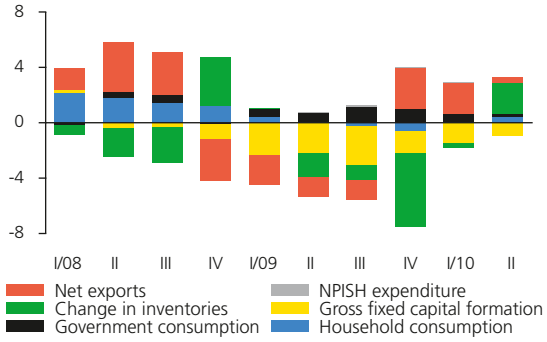
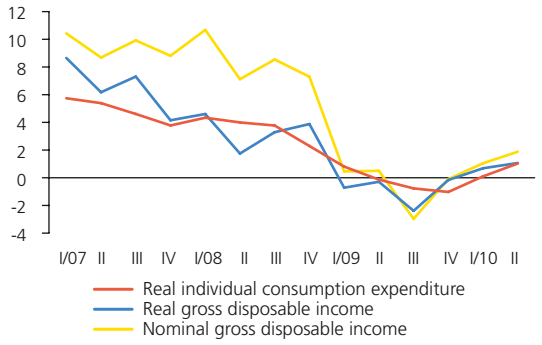


CHART III.3.3

HOUSEHOLD CONSUMPTION EXPENDITURE

The recovery in household consumption growth continued into 2010 Q2
(annual percentage changes)



III.3 DEMAND AND OUTPUT

Annual real GDP growth increased by 1.4 percentage points to 2.4% in 2010 Q2.[11] *Quarter-on-quarter growth (0.9%) was also faster than in the previous quarter. The largest contributor to the annual GDP growth was gross capital formation and, within it, change in inventories. Contributions to GDP growth came also from final consumption expenditure and net exports. On the supply side, the continuing economic growth was due mainly to industry, but the contributions of the other economic sectors, except construction, were positive as well.*

III.3.1 Domestic demand

Domestic demand returned to growth in 2010 Q2 after falling year on year for more than 12 months. This change was due most of all to a sharp year-on-year change in additions to inventories, which made a large positive contribution to demand growth (see Chart III.3.2). The demand growth was also supported – to a much lesser extent – by household and government consumption. Only fixed investment continued to decline, although it did so more weakly than in the previous quarter.

Final consumption

According to the first CZSO estimate, **household consumption** continued to recover gradually in 2010 Q2 after having contracted noticeably in the crisis year 2009 (see Chart III.3.3). Following a slight rise in Q1, real household consumption expenditure increased by 0.8% year on year in Q2. Growth was particularly visible for durable goods (6.7% year on year) and services; in the other categories it was weak (see Box 2).

The recovery in growth in household consumption expenditure in 2010 H1 was fostered by renewed growth in household income, reflecting a modest improvement of the labour market situation amid gradually strengthening economic output. **Nominal gross disposable income** has been rising gradually since the start of 2010, and in Q2 its annual growth reached 1.9% (see Chart III.3.4). Its real annual growth was 1.1%.

The improvement in gross disposable income in 2010 Q2 was due most of all to renewed growth in **wages and salaries** (see Chart III.3.4), thanks to a slight rise in average wage growth in the business sector amid improving demand for labour. The shift in gross disposable income developments towards positive values was also caused significantly by a slowing annual decline in the second most significant component

11 The assessment of the evolution of GDP expenditure and GDP sources is based on seasonally adjusted data from the CZSO's national accounts.

of household income – gross operating surplus and mixed income – and also in property income compared to 2009. At the same time, rather surprisingly, taxes and social contributions continued to fall on the household current expenditure side in Q2.

In the downward phase of the cycle households were offsetting the impact of their declining income on consumption expenditure by **saving** less. In 2010 H1, the downward trend in gross saving halted and the gross saving rate stabilised just below 10%[12] in Q2. However, it remained well below the pre-crisis level (see Chart III.3.5). Consumer credit growth, however, showed a continuing downward trend, indicating persisting prudent behaviour by households and banks in an environment of still uncertain prospects for the economy and the labour market.

Based on **leading indicators**, subdued annual growth in household consumption can be expected in the near future. The seasonally adjusted August retail sales data reveal continuing real growth, although this growth is so far being driven only by increased sales in the automotive segment; the negative contribution of the rest of the sector is gradually decreasing, however. Subdued growth in household consumption is also supported by the results of the CZSO consumer confidence survey, which are indicating stagnation, or a halt in the gradual improving trend, in this indicator in Q3 (see Chart III.3.14). Deteriorations were recorded mainly in consumers' expectations regarding unemployment and the overall economic situation in the next twelve months.

General government expenditure on final consumption rose by 0.9% year on year in real terms in 2010 Q2. This represents a further substantial slowdown in government expenditure growth compared to 2010 Q1.

BOX 2
An analysis of household consumption

The latest data on household consumption in 2010 H1 are well above the previous forecast, and this deviation can be explained only partially by the more favourable labour market situation. The aim of this box is to compare the individual statistics on household consumption and identify the differences between them.

Like the other GDP components, household consumption (the highest-weight expenditure component of GDP) is subject to revisions after the first estimate is released (see Chart 1). The magnitude of the revisions in 2006–2010 varies over time. In some periods it even exceeds 2 percentage points.

12 Data seasonally adjusted by the CNB.

CHART III.3.4

DISPOSABLE INCOME

The pick-up in household consumption expenditure was fostered by renewed growth in wages and salaries
(annual percentage changes; contributions in percentage points; current prices)

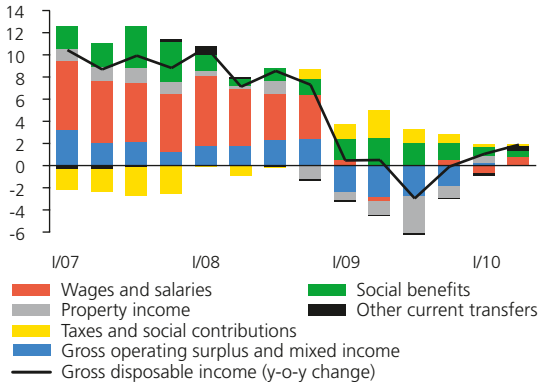


CHART III.3.5

GROSS SAVING RATE

The decline in the gross saving rate halted well below the crisis level
(percentages; source: CZSO, seasonally adjusted CNB data)

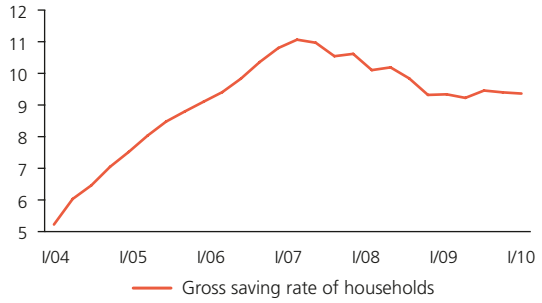


CHART 1 (BOX)

MAGNITUDE OF REVISIONS OF HOUSEHOLD CONSUMPTION

The magnitude of the past revisions varies, sometimes exceeding 2 percentage points
(constant prices; seasonally adjusted; annual percentage changes)

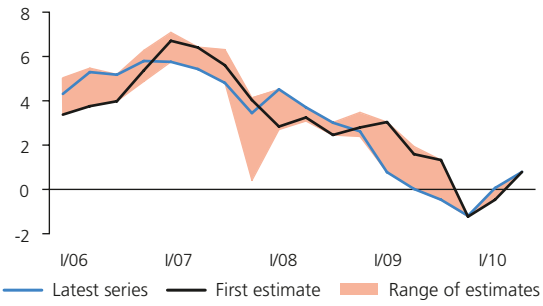


CHART 2 (BOX)

HOUSEHOLD CONSUMPTION EXPENDITURE ACCORDING TO THE HOUSEHOLD BUDGET SURVEY

According to the Household Budget Survey, consumer spending started to fall only this year, doing so in the retail sector including transport
(constant prices; annual percentage changes; contributions in percentage points)

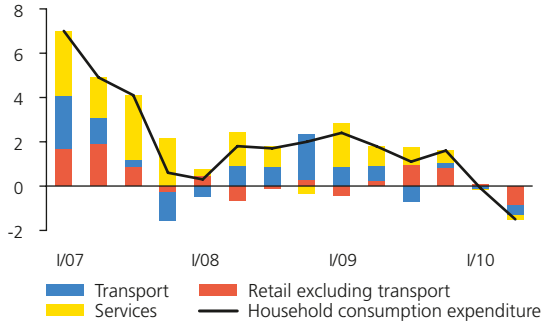


CHART 3 (BOX)

RETAIL SALES AND HOUSEHOLD CONSUMPTION

In recent quarters, consumption has been developing in line with sales in the retail sector including the automotive segment, driven by car sales
(constant prices; quarterly percentage changes)

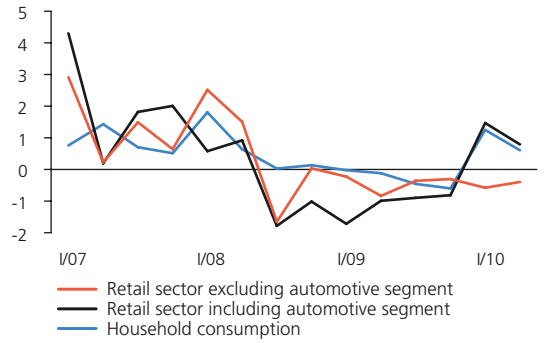
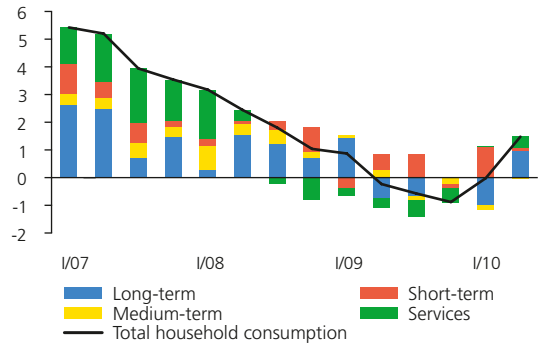


CHART 4 (BOX)

HOUSEHOLD CONSUMPTION ACCORDING TO THE NATIONAL ACCOUNTS BROKEN DOWN BY DURABILITY

According to the national accounts, expenditure on durable goods and services is growing in particular
(constant prices; annual percentage changes; contributions in percentage points)



Future GDP data revisions thus constitute one of the general uncertainties of the forecast.

When estimating household final consumption expenditure in previous years, the CZSO mainly used outputs from the Household Budget Survey at both quarterly and annual frequency. These statistics provide data for the national accounts in the required COICOP[13] breakdown and document the consumption behaviour of a sample of about 3,000 households. However, the real household consumption expenditure data from the household budget statistics show a different household consumption profile than the data reported under the national accounts methodology (see Chart 2). According to the Household Budget Survey, there was no real fall in household consumption expenditure during 2009 and a marked annual decline was recorded only in 2010 Q2. This decline was caused chiefly by a decrease in spending in the retail sector including transport.

As these statistics started to differ in trend from the supply side represented by the retail sales statistics, the CZSO updated its methodology starting with the estimate of consumption in the national accounts for 2009 Q4 and used the retail sales statistics to a larger extent when estimating individual household consumption. The CZSO explained this methodological change by stating that the set of households surveyed was less representative, especially at quarterly frequency. Chart 3 shows that from this period onwards the quarterly time series for household consumption is almost identical to the time series for retail sales including the automotive segment, which this year has seen noticeable growth driven by increased vehicle sales. By contrast, retail sales excluding the automotive segment have this year continued falling year on year, indicating more subdued demand compared to household consumption from the national accounts.

Household consumption according to the national accounts broken down by durability shows that the structure of household consumption reported by the CZSO in the last three quarters is roughly in line with retail sales including the automotive segment. The sharp increase in the automotive segment in the national accounts data is probably reflected in durable goods, which made a significant positive contribution at constant prices in 2010 Q2, thereby helping household consumption to extricate itself from year-on-year decline. The contribution of non-durable goods in the first two quarters of this year was also significant, but their retail sales are still showing a noticeable decline.

13 The international standard *Classification of Individual Consumption by Purpose*, which is used in the national accounts system.

Investment

Investment activity in the economy remained very low in 2010 Q2. A further moderation of the year-on-year decline in **fixed investment** to 4.3% in Q2 reflected mainly base effects (see Chart III.3.6). As in the previous quarter, the still weak investment in conditions of improving aggregate demand was due mainly to uncertainty regarding future demand, as well as to still relatively low capacity utilisation and to banks' prudent approach to lending.

The effects of these factors continued to be most pronounced in the **non-financial corporations** sector, which accounted for one-half of total investment. The year-on-year decline in investment in this sector was still relatively high (8.7% in Q2),[14] but was about half that recorded in 2009 H2.[15] In Q2, the most pronounced decrease was recorded for investment in machinery and equipment (14% year on year), whereas the decline in investment in transport equipment was less than 3%. The September results of the CNB business survey indicate no significant changes in the investment activity of the non-financial corporations sector in the near future.[16]

A more marked change was recorded in the **household sector**, where the annual decline in investment was close to zero (-0.5%) in 2010 Q2. This was mostly due to a recovery in annual growth in investment in dwellings, which accounts for a large proportion of total household investment (growth of 6.4% in Q2; see Chart III.3.7). It seems, however, that no major strengthening of the favourable tendencies in demand for investment in dwellings can be expected in the near future. This assumption is supported by a strong decrease in the number of housing completions and housing starts, reflecting above all uncertainty on this market from developers' point of view, owing to a large "stock" of completed unsold apartments. At the same time, one must still take into account the prudent approach of banks in providing new mortgage loans and the only slowly changing conditions on the labour market.

In 2010 Q2, the overall decline in major investments by non-financial corporations and households was only partially offset by growth in **general government investment** (of 1.1%), which is probably linked mostly with infrastructure development. Fixed investment by financial institutions and by the non-profit sector increased as well, but its contribution to the overall change in investment was insignificant.

The real year-on-year and quarter-on-quarter change in additions to **inventories** showed a further significant increase in 2010 Q2 and its

14 Constant prices; CNB calculation.

15 Investment in the non-financial corporations sector had dropped by 18.6% year on year in 2009 Q3 and by 20.5% in 2009 Q4.

16 According to the latest CNB survey, 68% of respondents in manufacturing expect no change in investment expenditure in the next 12 months, whereas most respondents in construction and freight transport expect investment expenditure to fall. The main factors limiting future investment expenditure are uncertainty regarding future demand and shortages of own funds (60% and 50% respectively for respondents in manufacturing).

CHART III.3.6

FIXED CAPITAL FORMATION

The decline in fixed investment moderated in 2010 Q2

(annual percentage changes; contributions in percentage points; constant 2000 prices)

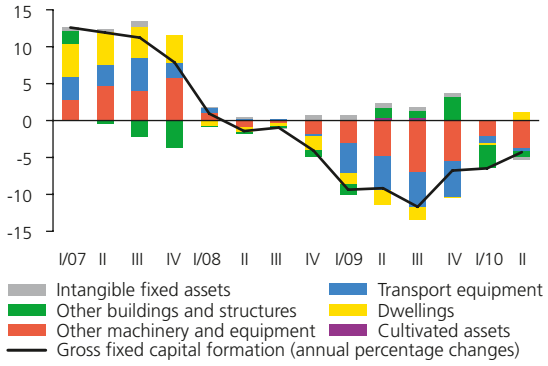


CHART III.3.7

INVESTMENT IN DWELLINGS

Investment in dwellings increased year on year in 2010 Q2 after a longer period of decline

(annual percentage changes)

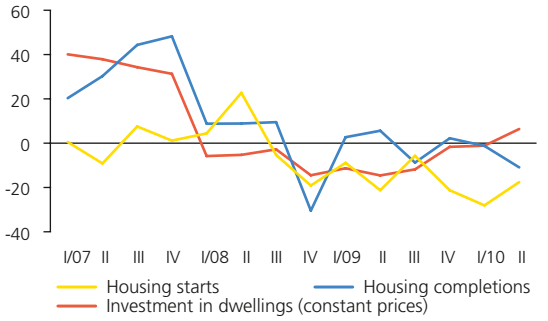


CHART III.3.8

NET EXTERNAL DEMAND

Net exports decreased slightly year on year in 2010 Q2

(CZK billions; constant 2000 prices; seasonally adjusted data)

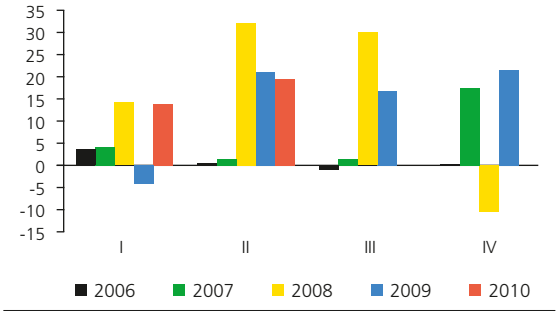


CHART III.3.9

EXPORTS AND IMPORTS

Foreign trade turnover continued to grow rapidly in 2010 Q2
(annual percentage changes; percentage points; constant prices; seasonally adjusted data)

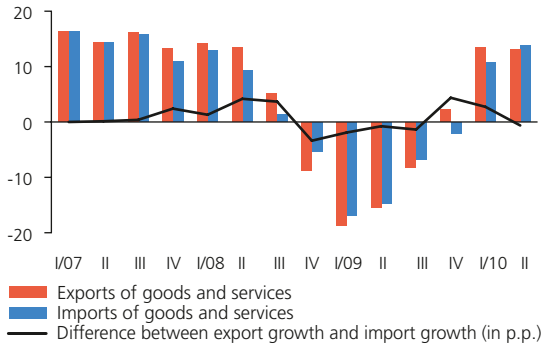


CHART III.3.10

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

Gross value added grew in all segments except construction in 2010 Q2
(contributions in percentage points; annual percentage changes)

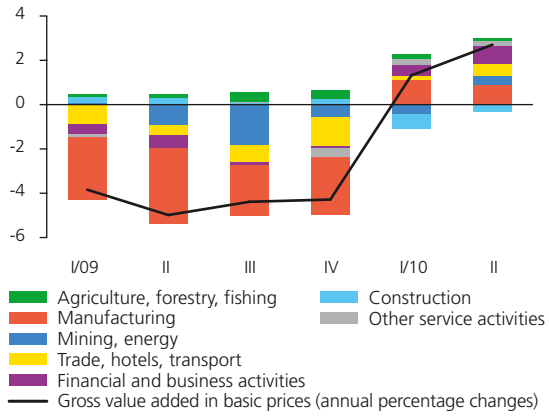
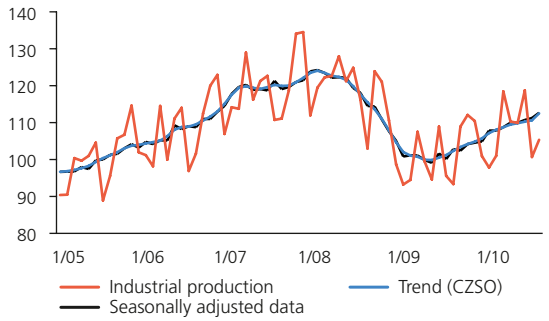


CHART III.3.11

INDUSTRIAL PRODUCTION

Industrial production rose continuously
(basic index; year 2005 = 100)



contribution to GDP growth was the highest of all the GDP expenditure components (see Chart III.3.2). The sharp upswing in additions to inventories in 2010 H1 was probably associated with growth in external demand and the gradual renewal of pre-crisis inventories in industry and in export-oriented branches.

III.3.2 Net external demand

The favourable trend in **net exports of goods and services**,[17] visible in the previous two quarters, halted in 2010 Q2. Net exports recorded a surplus of CZK 19.5 billion, falling slightly (by CZK 1.5 billion) after two quarters of marked annual growth. In quarter-on-quarter terms, however, they increased by almost CZK 6 billion (see Chart III.3.8).

The slight year-on-year decline in the net export surplus was due mainly to a marked pick-up in **total imports**, which increased by 13.8% in 2010 Q2, a rise of 3 percentage points on the previous quarter (see Chart III.3.9).

Total exports maintained a high rate of annual growth, which slowed only slightly (by 0.4 percentage point to 13.1%). Their level suggested a recovery in the output of the Czech Republic's major trading partner countries and also producers' ability to channel part of production to other markets. Despite the continuing high growth rate, the volume of exports at constant prices was still below the pre-crisis level. As in the previous two quarters, the annual export growth rate was also partly affected by the low base of the previous year, when the year-on-year export contraction resulting from the global crisis had reached double-digit values.

III.3.3 Output

On the output side, the continuing recovery of the Czech economy from the contraction caused by the global financial and economic crisis was reflected in a further increase in **gross value added** at basic prices. It recorded a fourth consecutive quarter-on-quarter increase and, as in Q1, it also showed a year-on-year rise (of 2.7%), although this was again due largely to a low base in 2009 (see Chart III.3.10).

In Q2, the year-on-year growth in value added was again due mainly to **industry** (1.3 percentage points) and, within it, especially manufacturing. However, the mining and energy supply sectors also made positive contributions (see Chart III.3.10). The growth in value added in this sector was achieved amid fairly fast annual growth in industrial production, supported by most industrial branches. Its growth rate continued to be affected significantly by the above-mentioned

17 At 2000 prices, seasonally adjusted.

low base, but the level of production in industry rose continuously (see Chart III.3.11). However, it was still below the pre-crisis level. Despite gradually rising, capacity utilisation in industry also remained low compared to its pre-crisis values (see Chart III.3.12). The growth in production in industry in 2010 Q2 was fostered mainly by external demand, which was reflected in annual growth in real exports of goods of 13.5%.

According to the latest published data for August, industrial production recorded a further month-on-month increase and rose by 9.6% year on year.[18] This growth continued to be driven by external rather than domestic demand, as indicated by fast growing direct export sales. The latest available data on **new industrial orders** for July and August indicate continuing annual growth, the rate of which is also being affected by base effects (see Chart III.3.13). This is consistent with the results of a CZSO business survey, according to which industrial businesses reduced their assessment of expected demand (domestic in particular) in September. Insufficient demand is thus still perceived by industrial businesses as being the largest barrier to production growth, although this barrier is gradually weakening.

The contribution of **services and trade** to annual growth in total gross value added increased in 2010 Q2 and was higher overall than that of industry (1.6 percentage point). In line with the continuing growth in industrial production, value added growth strengthened especially in transport, storage and business services. By contrast, value added in retail trade continued to record an annual decline in Q2. It, however, was close to zero, in line with real sales in the non-motor-vehicle segment of retail trade. The latest data on retail sales are so far signalling no noticeable changes in consumer demand in the near future.

Construction recorded a quarter-on-quarter increase in 2010 Q2, thus correcting the fall observed in the previous quarter. However, construction output was lower than in the same period a year earlier and its contribution to total annual growth in gross value added was therefore negative (see Chart III.3.10). Construction output also recorded an annual decline in the first two months of Q3, affected mainly by the higher-weight segment of building construction. By contrast, civil engineering production rose in August and can be expected to increase further in the near future, as the approximate value of buildings permitted in August rose in annual terms.[19] However, it is likely that the halts and cuts in transport construction announced by the Ministry of Transport will result in a renewed decline in civil engineering production.

18 Seasonally adjusted data.
19 Mainly as a result of permits issued for energy structures (especially photovoltaic power stations) and for the construction of costly transport infrastructure.

CHART III.3.12

CAPACITY UTILISATION

Production capacity utilisation in industry remains lower than before the crisis
(full capacity utilisation = 100)

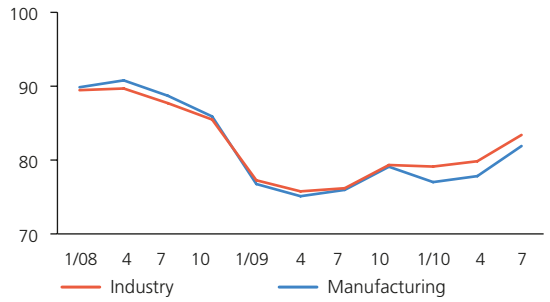


CHART III.3.13

NEW ORDERS IN INDUSTRY

Base effects are contributing to the year-on-year growth in new orders
(annual percentage changes)

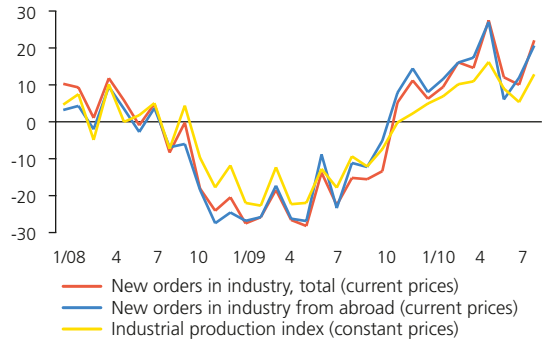


CHART III.3.14

CONFIDENCE INDICATORS

The rise in the business confidence indicator halted
(2005 average = 100; source: CZSO)

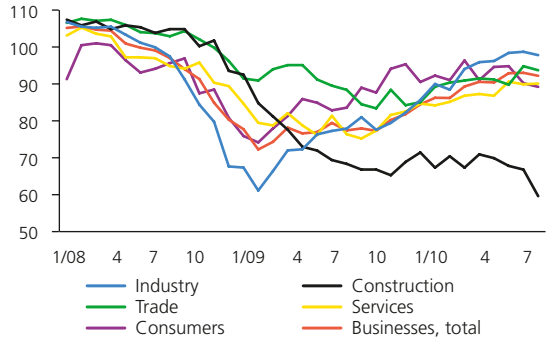


CHART III.3.15

POTENTIAL OUTPUT

The slowdown in potential output growth halted in 2010 Q2
(annual percentage changes)

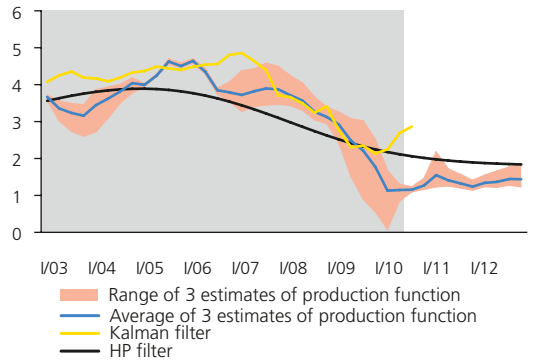


CHART III.3.16

OUTPUT GAP

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

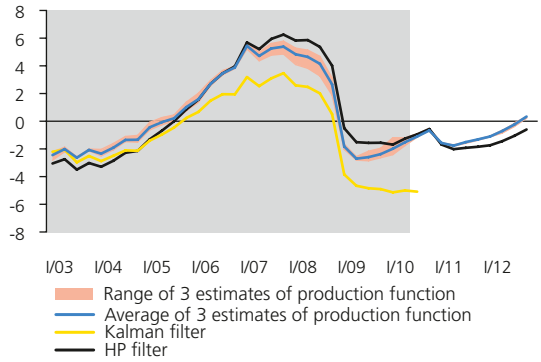
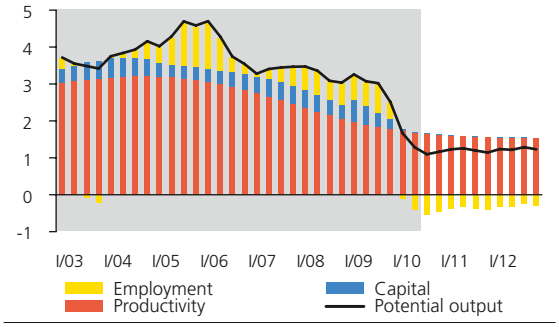


CHART III.3.17

CONTRIBUTIONS TO POTENTIAL OUTPUT GROWTH

The contribution of employment to potential output growth (in the baseline production function variant) is negative
(annual percentage changes)



According to the results of the CZSO business survey, the overall **confidence indicator** declined in 2010 Q3, with consumer confidence decreasing first, followed by business confidence in September. While business confidence in services was flat in Q3 and that in industry and trade deteriorated negligibly in September, the negative expectations in construction strengthened significantly in Q3 (see Chart III.3.14).

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

According to the calculation of the **Cobb-Douglas production function**,[20] the slowdown in annual potential output growth halted in 2010 Q2 (see Chart III.3.15). As in the previous quarter, the growth rate of potential output remained at 1.1%.[21] The corresponding output gap narrowed slightly further to -1.5% (from -2.0% in 2010 Q1).[21] The calculations for the following quarters of this year suggest a slight pick-up in growth in potential output and a gradual narrowing of the output gap (see Chart III.3.16). However, the expected slowdown in annual GDP growth in 2011 will be associated with a renewed decline in the growth rate of potential output and also a slight opening of the output gap to more negative values. The situation is likely to improve again in 2012, and the output gap could turn positive by the end of 2012.

According to the baseline production function calculation, the annual growth rate of potential output continued to slow in Q2 and should pick up at the end of this year. The breakdown of the **contributions of the individual factors** entering the baseline production function reveals that the slowdown in annual potential output growth in 2010 Q2 was due to a negative contribution of equilibrium employment (see Chart III.3.17). At the same time, the contribution of capital dropped to almost zero. The contributions of productivity were little changed in Q2 and we expect them to remain close to their current levels in the coming quarters.

An alternative estimate using the **HP filter** suggests slightly higher potential output growth (2.1% in 2010 Q2) and a less open output gap (-1.3%). On the other hand, the estimate of potential output using the **Kalman Filter**, which has a significant advantage in that it takes direct account of price developments, monetary conditions etc., indicated a faster growth in potential output (2.7% in 2010 Q2). Under this methodology, the output gap is thus currently much more open into negative values (-5.0%), while suggesting a significantly less extensive overheating of the Czech economy for 2007–2008, which is in line with intuition. Nevertheless, the persisting sizeable dispersion of the results of the individual methods indicates the high degree of uncertainty of the estimates of the current cyclical position of the economy.

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

III.4 THE LABOUR MARKET

A moderation in the decline in employment in 2010 Q2 had a positive effect on the general and registered unemployment rate. Year-on-year growth in the average wage picked up slightly, following a sharp decline at the start of the year. Whole-economy productivity also grew faster in Q2. Nominal unit wage costs decreased year-on-year in 2010 Q2 amid a noticeable recovery in economic activity and only a slight increase in the volume of wages and salaries.

III.4.1 Employment and unemployment

The continuing recovery in economic activity was reflected in a noticeable weakening of the year-on-year decline in total **employment** in 2010 Q2 compared to the previous quarter (from -2.4% in Q1 to -1.2% in Q2). In absolute terms, this meant that the annual decline in the number of employed persons shrank by almost 60,000 compared to the previous quarter.[22] In quarter-on-quarter comparison, employment increased by 0.6% in Q2. In the context of other partial indicators, this result suggests that the labour market bottomed out in Q1 and a change in trend is occurring (see Chart III.4.1).

The same was also indicated by the **number of employees**,[23] which showed a clear tendency towards a deepening year-on-year decline during the crisis. This trend halted in Q2 and the year-on-year decline in employees moderated (by 0.6 percentage point compared to 2010 Q1, to -2.6%). Similarly as in the previous quarters, its effect on total employment was partly offset by a rise in the number of entrepreneurs (of 5.5%).[24]

The previous adverse tendencies in employment eased mainly in **industry**, which had been hit hardest by the fall in demand in previous quarters. Although the contribution of industry to the total decline in employment remained the highest (see Chart III.4.2), employment in this sector decreased in Q2 at half the rate of 2010 Q1 (by 2.8%, or 58,900 persons). The situation improved above all in manufacturing, where the number of employed persons declined by 40,300 year-on-year, having recorded a decline roughly twice as large in Q1. The ongoing changes in employment in industry thus confirmed a gradual response of businesses to the continuing recovery in demand. However, employment continued to decline and so productivity continued to rise rapidly (by 9.4%; see Chart III.4.3) amid growing production.

In **services and trade**, where the previous forecast had assumed a decline in employment due to a lagged response to the economic crisis,

22 The number of employed persons fell by 117,600 year on year in 2010 Q1 and by 60,300 in Q2.
23 Including members of production cooperatives.
24 Employees often turn to full-time independent business activity if they lose their job.

CHART III.4.1

LABOUR MARKET INDICATORS

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

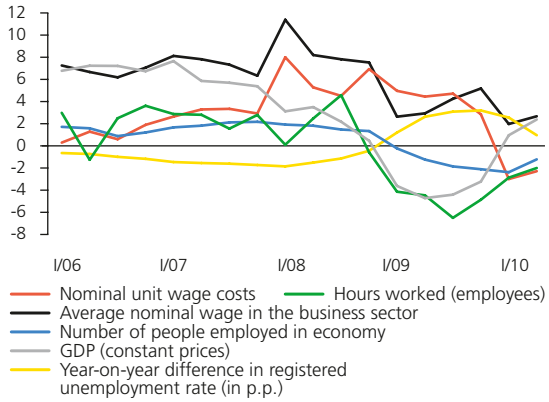


CHART III.4.2

EMPLOYMENT BREAKDOWN BY BRANCHES

The decline in employment moderated in industry and market services
(contributions in percentage points to annual growth; selected branches)

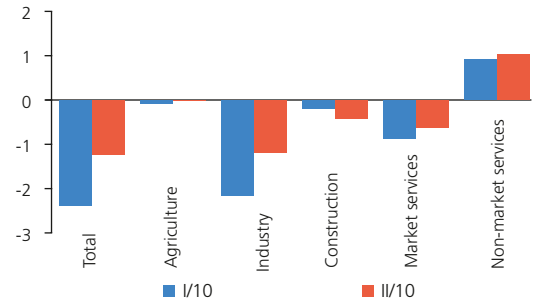


CHART III.4.3

EMPLOYMENT IN INDUSTRY

Businesses are responding to demand with changes in employment with a lag; this is being reflected in rapid productivity growth
(annual percentage changes)

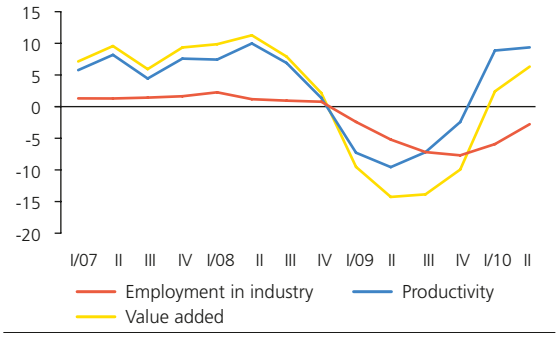


CHART III.4.4

UNEMPLOYMENT RATE

Signs of a change in the unemployment rate trend are emerging
(percentages; seasonally adjusted data; source: MLSA, CZSO, CNB calculation)

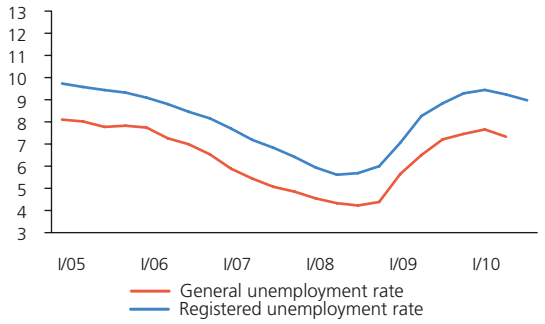


CHART III.4.5

BEVERIDGE CURVE

The decline in the number of unemployed people was accompanied by an only slight increase in the number of vacancies
(seasonally adjusted numbers in thousands)

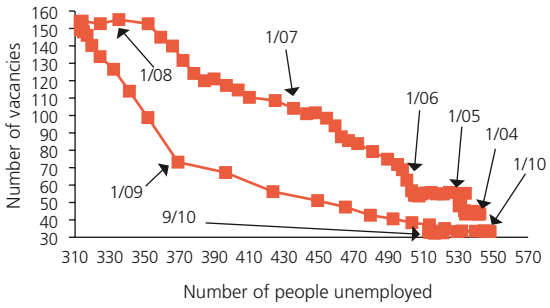


TABLE III.4.1

WAGES, PRODUCTIVITY, UNIT WAGE COSTS

Nominal unit wage costs kept falling in 2010 Q2
(annual percentage changes)

	III/09	IV/09	I/10	II/10
Average wage in monitored organisations				
nominal	4.6	5.2	2.2	2.4
real	4.5	4.8	1.5	1.2
Average wage in business sector				
nominal	4.2	5.2	2.0	2.7
real	4.1	4.8	1.3	1.5
Average wage in non-business sector				
nominal	5.6	4.4	3.2	1.0
real	5.5	4.0	2.3	-0.1
Whole-economy labour productivity	-3.1	-1.0	3.1	4.0
Nominal unit wage costs	4.7	2.9	-3.0	-2.3

year-on-year growth in employment conversely strengthened to 0.7% in Q2. In quarter-on-quarter terms, the increase was even higher, reaching 1.5%. Looked at in more detail, employment recorded the largest year-on-year growth in health and social care, followed by public administration and defence (of 26,500 and 14,400 persons respectively).

The general unemployment rate[25] declined in 2010 Q2 after a quite a long period of growth (to 7.4%; see Chart III.4.4), thanks mainly to rising employment. The decline was also significant due to a decrease in the labour force, caused in large part by a change in the economic activity rate of the population aged 15 or over. The **rate of registered unemployment** (MLSA) also started to decline in Q2, and this trend continued with a downward tendency into Q3 (to 8.8%).[26]

An only gradually improving situation on the labour market was indicated by the **Beveridge curve** (see Chart III.4.5). According to this curve, the number of unemployed persons is continuing to fall[27], but the rate of decline has been slowing in recent months and we are still seeing no major change in the number of vacancies.

III.4.2 Wages and productivity

Following a marked slowdown in 2010 Q1 to the lowest figure recorded since the comparable time series began (to 2.2% year-on-year), **average nominal wage growth** rose only slightly in Q2 (to 2.4%). The average real wage grew by 1.2%. The pick-up in average nominal wage growth was due mainly to the business sector, where the year-on-year growth rate increased by 0.7 percentage point compared to Q1, to 2.7%. In the non-business sector, by contrast, the downward trend in the growth rate observed in previous quarters continued (to 1%). In real terms, the average wage in this sector recorded a very slight year-on-year decline (see Table III.4.1).

Employers raised wages to only a small extent in the current phase of the cycle. However, wage cuts were rare, occurring only in education and transport and storage, and even in these industries the average wage came down by only several tenths of a per cent year on year. Average wage growth in industry slowed by 0.4 percentage point in Q2 compared to Q1, to 3.5%, owing mainly to wages in manufacturing.[28] The average wage in the non-business sector increased significantly only in health and social care (by 4.9% year on year).

Annual growth in **whole-economy labour productivity** increased by a further 0.9 percentage point to 4% in Q2. Unlike in Q1, when the renewed productivity growth had been supported by mostly

25 Measured by the ILO methodology according to LFS; seasonally adjusted by the CNB.
26 It declined to 9% according to seasonally adjusted data.
27 Except for September 2010.
28 Annual average wage growth there slowed by 0.6 percentage point to 3.2% in 2010 Q2 compared to 2010 Q1.

declining employment, the contribution of GDP growth dominated in Q2 (see Chart III.4.6). As regards individual sectors, there were still considerable differences in the changes in productivity, mainly due to different developments in demand in individual branches. Productivity in industry increased very fast in Q2 (by 9.4% year-on-year), while productivity in construction declined for the second quarter in a row (albeit more moderately than in the previous quarter) owing to subdued demand in building construction and civil engineering. Productivity edged up in the other sectors.

In these circumstances, **unit wage costs** fell again in 2010 Q2, too. Nominal unit wage costs recorded an annual decrease of 2.3% in Q2 (see Chart III.4.7). This decline was fostered by a further strengthening of GDP growth in Q2. Contrary to the previous quarter, this factor was partly offset by renewed slight growth in the volume of wages and salaries, which occurred amid a slight increase in average wage growth and a weakening decline in employment. Nominal unit wage costs declined most of all in industry, where they declined in manufacturing and in electricity, gas and water supply (by 4.8% and 5.1% respectively). The annual decline in nominal unit wage costs in market services was due to a combination of a slight rise in value added and a larger decline in the volume of wages and salaries.

CHART III.4.6

WHOLE-ECONOMY PRODUCTIVITY

Productivity growth increased in 2010 Q2
(contributions in percentage points; annual percentage changes)

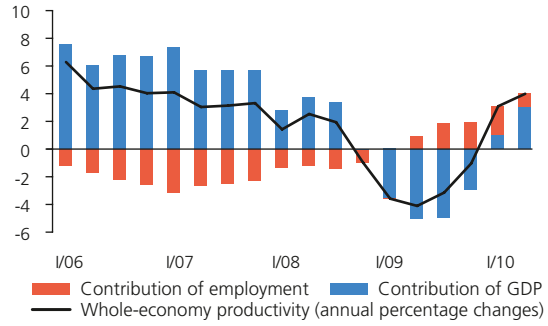


CHART III.4.7

NOMINAL UNIT WAGE COSTS

Faster GDP growth fostered an annual decline in nominal unit wage costs
(contributions in percentage points; annual percentage changes)

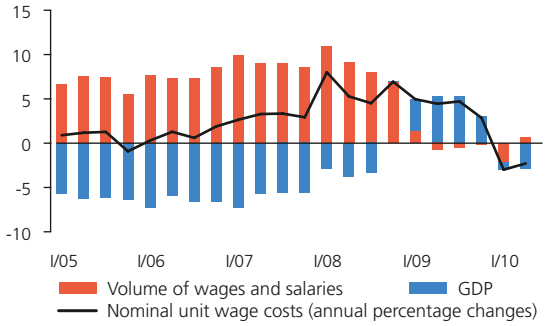


CHART III.5.1

MONETARY AGGREGATES

M2 growth remains pretty weak
(annual percentage changes)

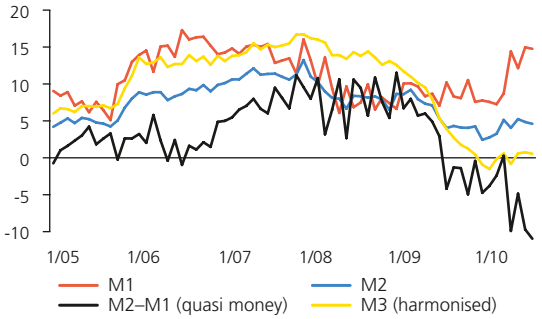


TABLE III.5.1

MONETARY AGGREGATE STRUCTURE

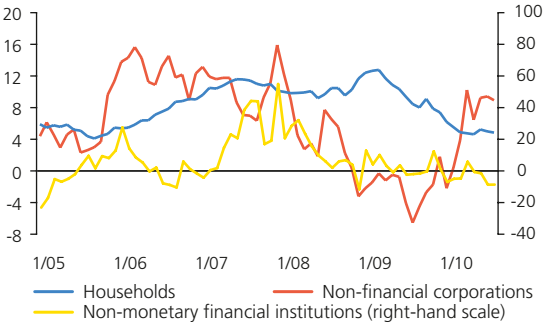
Growth in overnight deposits rose, while the decline in deposits redeemable at notice intensified
(quarterly averages and end-of-month stocks; annual percentage changes)

	I/10	II/10	7/10	8/10	Share in M2, % 8/10
M1	7.5	11.8	15.0	14.8	66.4
Currency in circulation	-2.4	-0.9	0.5	0.3	12.8
Overnight deposits	10.6	15.6	19.2	18.8	53.6
M2–M1 (quasi money)	-3.7	-4.8	-9.7	-11.0	33.6
Deposits with agreed maturity	-7.7	-3.5	0.6	-1.2	19.9
up to two years	-19.9	-17.3	-13.9	-16.9	13.1
over two years	53.2	57.3	59.2	55.0	6.8
Deposits redeemable at notice	3.6	-6.2	-21.6	-22.5	13.2
up to three months	-5.7	-7.0	-18.8	-19.0	11.4
over to three months	64.5	-1.4	-35.8	-38.7	1.8
Repurchase agreements	-37.2	-13.4	-33.9	-11.0	0.5
M2	2.8	4.8	4.8	4.6	100.0

CHART III.5.2

DEPOSITS BY SECTOR WITHIN M2

Sectors' deposits correspond to the phase of the economic recovery and the nascent turnaround on the labour market
(annual percentage changes)



III.5 FINANCIAL AND MONETARY DEVELOPMENTS

Annual money growth remained subdued. The low level of interest rates and the economic recovery were reflected in an increase in transaction money and deposits of corporations. Loans to corporations and households increased only gradually overall, with the decline in loans to non-financial corporations moderating and loans to households continuing to record slowing growth. Client interest rates mostly showed only a slight decline or remained at the previous month's level, reflecting the stagnation of money market rates and the previous decline in long-term government bond yields. Client risk premia for households edged down. The koruna appreciated against the euro in Q3. The financial indicators of non-financial corporations and households improved. Corporations made use of financing mainly through bond issues in Q2 amid a decline in loans. The indebtedness of households declined, but their net interest payment burden continued to grow. Transfer and supply prices of apartments continued to fall in Q3.

III.5.1 Money

Annual **M2** growth declined slightly in Q3, reaching 4.6% in August (see Chart III.5.1).[29] The rate of money growth remained subdued, despite an increase in Q2 due to corporate bond issuance. The inflation pressures stemming from the current money growth are therefore weak.

Turning to the **structure of M2**, growth in M1 increased, while the decline in quasi money deepened. Time deposits with shorter maturities (up to two years and up to three months) continued to be moved into overnight deposits. Currency in circulation increased slightly in Q3 following a year-on-year decline in 2010 H1. Time deposits with long maturity (over two years) continued to rise apace, albeit more moderately than in the several previous months due to lower remuneration (see Table III.5.1). By contrast, the decline in deposits redeemable at notice intensified.

The growth rate of the total volume of **deposits** started to increase year on year (reaching 3.1% in August). The ratio of bank deposits to loans is almost 140% and is rising thanks to subdued growth in loans. After having surged in April owing to bond issuance by large entities on foreign markets, the annual growth rate of deposits of non-financial corporations was flat in Q3 and amounted to 8.9% in August. Corporations are increasing their liquid financial assets as a result of a further improvement in cash flow. Deposits of corporations can be expected to continue to be positively affected by the economic

29 Harmonised M3 recorded an annual increase of just 0.6%. The lead of M2 growth over M3 growth is due to higher demand for long-term time deposits in recent months. In contrast to M2, such deposits are not included in M3.

recovery. Following a decline recorded since the start of 2009, annual growth in deposits of households has been also flat in recent months and was 4.8% in August. This reflected a slight increase in nominal income. Deposits of non-monetary financial institutions have remained broadly unchanged since 2008 despite showing some short-term volatility (see Chart III.5.2).

III.5.2 Credit

Annual growth in **loans to corporations and households** is increasing only slowly. In August it stood at 1.1%, or 1.8% when adjusted for non-transaction effects (see Chart III.5.3). This reflects a slowing decline in loans to non-financial corporations amid still weakening growth in loans to households. The positive contribution of property market-related loans was unchanged (see Box 3). Annual growth in loans in the euro area is similarly low at 1%. New loans suggest a moderating decline in loans to non-financial corporations and flat household borrowing (see Chart III.5.4). This reflects the gradual economic recovery and falling interest rates.

Loans to non-financial corporations declined by 4% in August. The fall in short-term loans with a maturity of up to one year moderated amid growth in long-term loans. The decline in loans has been weakening in all sectors except construction since the start of the year (see Chart III.5.5). A fall in the confidence indicator in construction and an increase in the same indicators in the other sectors suggest that these tendencies will continue in the months ahead. Loans to corporations are developing in line with the gradual recovery in demand in industry and the easing of the financial problems of corporations. On the other hand, greater availability of internal funds is probably hampering a stronger recovery in loan growth. According to the July business survey, only 8% of industrial firms expect increased borrowing in the next few months. A renewal in annual loan growth can therefore be expected only at the end of 2010. This recovery will probably be gradual.

Annual growth in **loans to households** continued to slow gradually, but, in contrast to loans to non-financial corporations, remained positive (at 7.5% in August). Loans for house purchase and consumer credit slowed amid moderate growth in nominal income and a still high unemployment rate (see Chart III.5.6). However, the gradual fall in interest rates is being reflected in a slower decline in new loans for house purchase (see Chart III.5.7).[30] A more significant recovery is still being prevented by persisting uncertainty on the labour and housing markets. New consumer credit continued to decline quite strongly. A recovery in loans to households continued to be suppressed by relatively high client risk premia (see below). Growth in loans to households is likely to be around the current level at the end of 2010.

30 According to Hypoindex data for September 2010, interest rates on mortgage loans declined and the volume of mortgage loans increased.

CHART III.5.3

LOANS TO CORPORATIONS AND HOUSEHOLDS

Year-on-year growth in loans is low
(annual percentage changes)

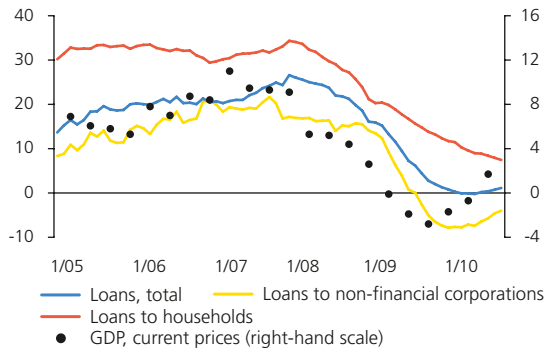


CHART III.5.4

NEW LOANS TO CORPORATIONS AND HOUSEHOLDS

The decline in new loans slowed noticeably
(annual percentage changes)

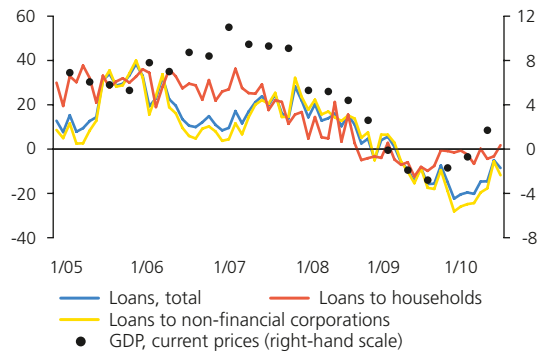
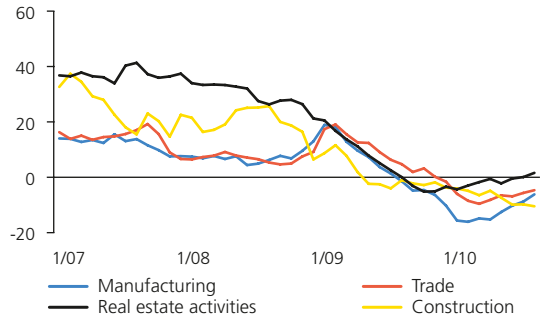


CHART III.5.5

LOANS TO CORPORATIONS BY ECONOMIC ACTIVITY

The decline in loans moderated in most of the branches under review, but deepened in construction
(annual percentage changes)



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

CHART III.5.6

LOANS TO HOUSEHOLDS

Growth in loans to households is still gradually slowing
(annual percentage changes)

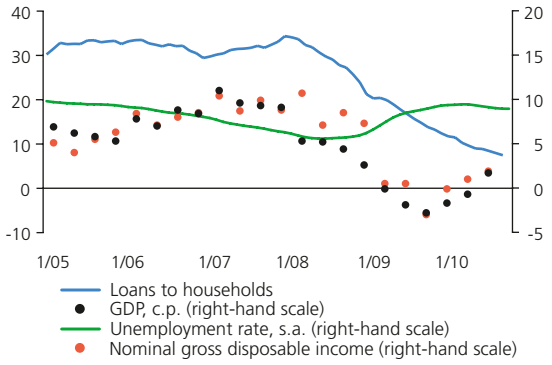


CHART III.5.7

LOANS TO HOUSEHOLDS FOR HOUSE PURCHASE

The decline in new loans for house purchase slowed amid a gradual fall in interest rates
(new business; annual percentage changes, interest rate in %)

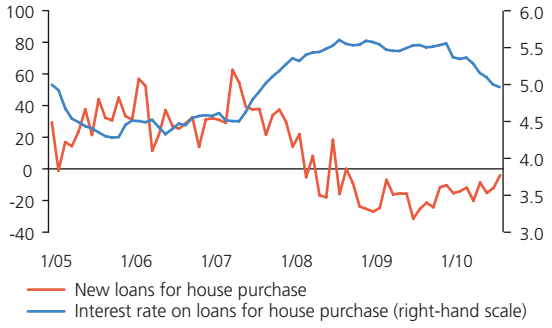
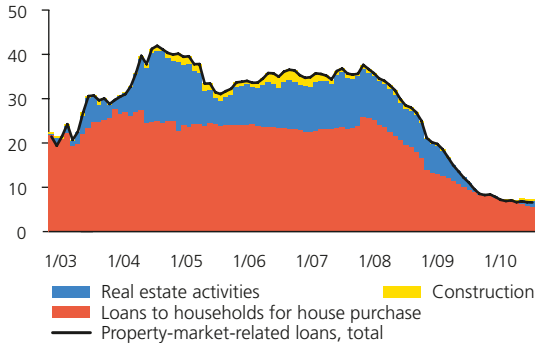


CHART 1 (BOX)

STRUCTURE OF LOANS PROVIDED TO THE REAL ESTATE MARKET

Growth in property-market-related loans slowed sharply during the crisis
(contributions in percentage points; annual percentage changes)



The **non-performing loan ratio** of non-financial corporations remained at 9% in August, while that of consumer credit and loans for house purchase edged up further to 10.2% and 3.2% respectively. Non-performing loans should start gradually to reflect the improving solvency of corporations and households (see section III.5.6). Non-performing loans totalled CZK 116 billion, up by one-third on a year earlier and twice as high as in 2008.

BOX 3
Property-market-related loans in the current phase of the business cycle

The property market is very closely related to the evolution of loans for house purchase, loans provided to corporations engaged in real estate activities (developers) and partly also to loans provided to the construction industry. This box analyses the importance of the said segments in total loans. A wider view is especially relevant given the still weak property market, as reflected in a continuing decline in prices of residential and commercial property (see section III.5.7).

In 2004–2009, loans for house purchase accounted for two-thirds of the growth in loans provided to the property market. Loans to developers accounted for one-third, while loans to the construction industry were negligible.[31] As from 2008, all these segments contributed to the slower growth in lending to the property market. This was due to lower demand for loans among households and corporations, but also to tighter credit standards on the part of banks. Annual growth in loans to the property market is currently around 7%. The positive contribution of loans for house purchase is still declining, but is far and away the largest of all the said components. The contribution of loans to developers is increasing slightly, while that of loans to the construction industry is negligible (see Chart 1).

Loans to the property market contribute significantly to growth in total loans provided to the economy. In 2008, when the credit cycle peaked, such loans contributed 16 percentage points to the almost 30% growth in total loans. Contributions of the other sectors were less significant. A decline in total loans was recorded following the escalation of the global financial and economic crisis. The positive contribution of loans to the property market has been flat in 2010 (only this segment makes a positive contribution). The negative contributions of loans to other sectors are mostly moderating (see Chart 2).

31 Moreover, only 64% of loans provided to the construction sector are related to the property market; the remainder consists of loans for civil engineering projects and so on.

The annual rates of growth of loans to corporations for property-market-related activities reveal that the decline in loans to developers halted in 2010, while the decrease in loans to the construction industry is continuing (see Chart 3). Gross value added is flat in the case of developers and the signs of a recovery are very weak, while value added in construction is continuing to fall. The confidence indicator in construction is still declining, but the fall in building production and new orders is moderating. A continuing unfavourable situation in the two segments is also demonstrated by their loan repayment problems, although such problems are considerably more widespread in construction. The share of non-performing loans in total loans increased to 14% in construction and 6% among developers (from 6% and 1% respectively in 2007).

Unlike the outstanding amounts of loans, new loans to households for house purchase are showing a slowing decline in 2010, and are increasing in the segment of large banks. New loans with fixations of over one year and up to five years are increasing amid a persisting decline in new loans with other fixations (see Chart 4). The share of new loans with fixations of over one year and up to five years in total loans for house purchase rose to 51%, and in recent months there has also been a slight increase in the share of loans with fixations of up to one year to 17% (according to Hypoindex the proportion of loans with a variable rate is 4%). By contrast, the share of new loans with longer fixations is decreasing. This is due to the fall in interest rates, which has been most pronounced for loans with fixations of up to five years.

While interest rates and client risk premia have been declining recently, the loan-to-value ratio has been at 56% since the start of 2009. Banks are therefore generally relaxing their interest terms for house purchase loans, whereas their non-interest terms remain visibly unchanged. The lowest rates on new loans for house purchase are being offered by large banks, but the decline in such rates is currently halting (see Chart 5).

To sum up, loans to the property market were affected very negatively and very quickly by the global financial and economic crisis. Banks started to treat loans to developers very cautiously given the typically low share of own funds invested by developers in their projects. At the same time, small and medium-sized banks faced a temporary lack of funds when the financial turmoil intensified. Lower demand for mortgage loans gradually started to prevail as a result of a more prudent attitude of households to debt as the recession strengthened. However, the slowdown in growth in loans to the property market probably bottomed out in 2010. Loans to developers are currently flat and the decline in new loans for house purchase is moderating. Nevertheless, the housing loan market is still relatively weak, in line with

CHART 2 (BOX)

IMPORTANCE OF LOANS PROVIDED TO THE PROPERTY MARKET

Loans provided to the property market make a key contribution to growth in total loans
(contributions in percentage points; annual percentage changes)

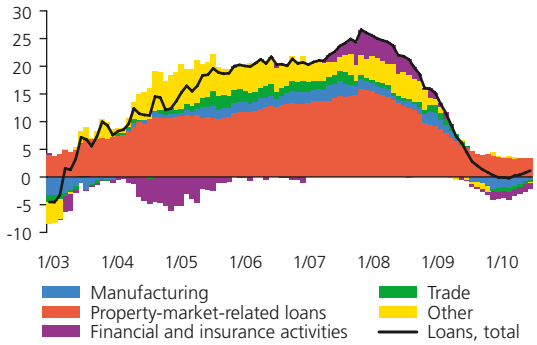


CHART 3 (BOX)

LOANS AND GROSS VALUE ADDED

Loans to developers are flat, in line with their gross value added, while loans to the construction industry are continuing to fall
(annual percentage changes)

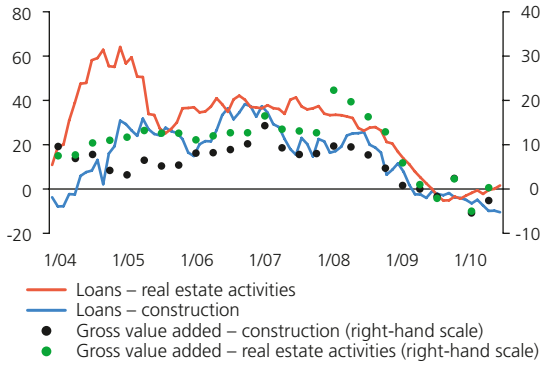


CHART 4 (BOX)

HOUSING LOANS BY RATE FIXATION

House purchase loans with fixations of over one year and up to five years are rising
(new business; annual percentage changes)

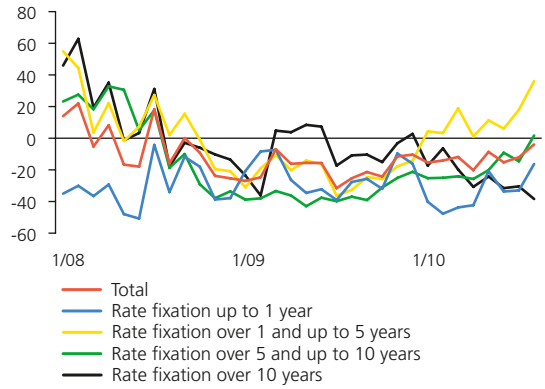


CHART 5 (BOX)

INTEREST RATES ON HOUSE PURCHASE LOANS BY BANK GROUP

Interest rates fell mainly in the case of large and medium-sized banks
(new business; percentages)

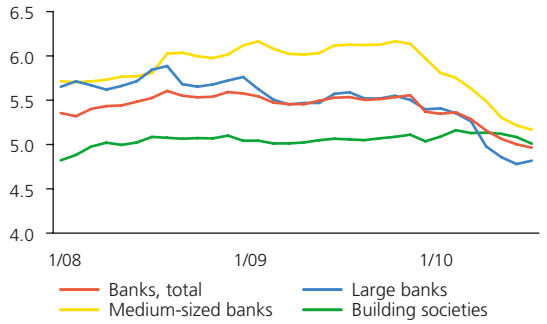


CHART III.5.8

CNB KEY RATES

The CNB left key rates unchanged in 2010 Q3
(percentages)

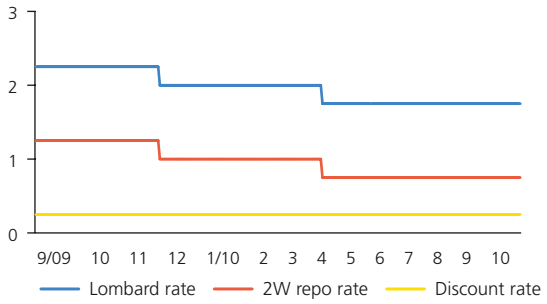
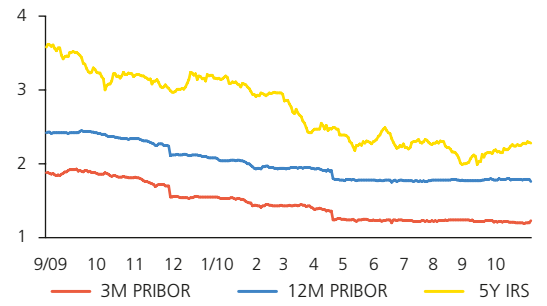


CHART III.5.9

MARKET INTEREST RATES

Money market interest rates were virtually unchanged
(percentages)



the only gradual recovery of the labour market and the persisting decline in supply and sale prices of dwellings. Only a marked recovery in loans for house purchase together with renewed growth in loans to developers and construction might foster higher growth in total loans. However, given the expected lower economic growth the growth in loans is expected to be more moderate than in the past.

III.5.3 Interest rates

Monetary policy interest rates

The monetary policy decision-making of the CNB Bank Board in 2010 Q3 was based on the macroeconomic forecast published in the previous Inflation Report. Consistent with the forecast was stability of market interest rates close to their then levels initially, followed by a gradual rise in rates as from 2011 H2. Accordingly, the Bank Board decided to leave the **key interest rates** unchanged at its meetings in August and September. 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.5.8). The risks of the baseline scenario of the previous forecast were assessed as being slightly inflationary at the Bank Board meeting in August. The balance of risks was identified as being balanced at the meeting in September.

At its monetary meeting in November, the Bank Board decided to **leave the interest rates unchanged**. The balance of risks of the new forecast was overall assessed as being balanced. Higher growth in world commodity prices and domestic agricultural producer prices are a mild upside risk to inflation. By contrast, higher-than-expected anti-inflationary effects of fiscal consolidation in the world pose a mild downside risk to inflation.

Financial market interest rates

Money market interest rates have been flat since the start of May, when they declined after the repo rate was lowered. Rates with longer maturities (IRS and bond yields) continued their downward trend until the end of August, as abroad, where there were still doubts regarding the economic recovery and demand for secure instruments persisted. Moreover, the decline in domestic bond yields was bolstered by a lower supply of government bonds in primary auctions, a successful eurobond issue and an improved outlook for the Czech Republic's rating. FRA and IRS derivative rates increased slightly at the start of September. The market outlook for 3M rates according to FRA quotations is stable in the near future and rising slightly from the start of 2011. Overall, this outlook is slightly above the path consistent with the baseline scenario of the new forecast over the entire horizon (the longer the horizon, the wider the deviation).

The average **3M PRIBOR rate** was 1.2% in 2010 Q3, up by 0.1 percentage point compared to the previous forecast. Money market interest rates continued to be influenced by the credit premium.

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

The **PRIBOR yield curve** did not change during 2010 Q3 and its slope remained positive. The spread between the 1Y PRIBOR and 2W PRIBOR was around 0.9 percentage point in September 2010. The money market yield curve remained flat during October. By contrast, the **IRS yield curve** shifted downwards during 2010 Q3, above all at longer maturities. In September, the average 5Y–1Y spread was 0.8 percentage point and the 10Y–1Y spread 1.2 percentage points. The IRS yield curve moved slightly upwards at the beginning of October.

Short-term **interest rate differentials** vis-à-vis the main world currencies (PRIBOR/CZK – EURIBOR/EUR, or LIBOR/USD) showed mixed developments, but remained positive (see Chart III.5.10). They continued to decrease vis-à-vis euro rates, but started to increase vis-à-vis dollar ones. As interest rates on the domestic money market were flat, this was due to mixed developments on foreign money markets. The 3M PRIBOR – 3M EURIBOR interest rate differential was 0.4 percentage point on average in 2010 Q3. On 22 October, it was 0.2 percentage point.

Nine auctions of fixed coupon bonds were held on the primary **government bond market** in the period under review. The total volume of bonds issued was CZK 60 billion. Most auctions met with great demand and the Ministry of Finance increased the originally announced volumes in order to take advantage of more favourable prices. However, interest in koruna bonds in primary auctions decreased slightly after a EUR 2 billion eurobond was issued at the beginning of September. This eurobond matures in 2021 and has a coupon of 3.625%. Standard & Poor's upgraded its rating outlook for the Czech Republic's long-term liabilities in foreign currency from stable to positive. The government bond yield curve shifted downwards (except at its shortest end) and its positive slope moderated (see Chart III.5.11).

Client interest rates

Client **interest rates on new loans** were mostly flat or decreased only slightly in Q3. Client risk premia remain elevated, most of all for households, despite declining slightly. In the period ahead they should be positively affected by the favourable economic outlook.

After having declined recently, the **rate on loans to non-financial corporations** remained at 3.9% in August. This reflected a halting decline in rates with short fixations amid a slight decline in rates with long fixations (see Chart III.5.12), which, in turn, reflects mainly flat money market rates and a recent decline in long-term government bond yields. The spread in overall corporate and market interest rates has remained elevated since the end of 2008, partly reflecting

CHART III.5.10

INTEREST RATE DIFFERENTIALS

Interest rate differentials vis-à-vis the euro continued to decrease
(percentage points)

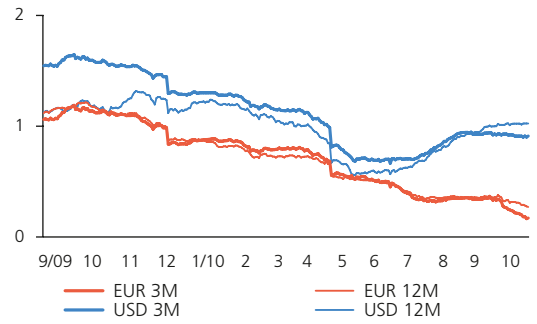


CHART III.5.11

GOVERNMENT BOND YIELD CURVE

The yield curve shifted downwards
(percentages)

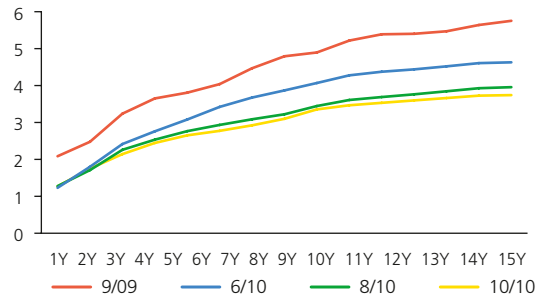


CHART III.5.12

INTEREST RATES ON LOANS TO CORPORATIONS

Interest rates on loans to non-financial corporations with floating rates and short rate fixations are flat
(new business; percentages)

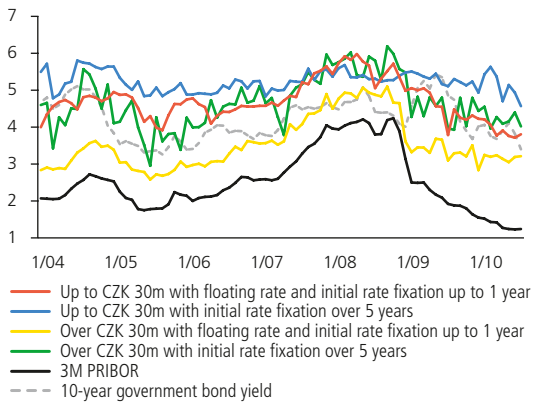


CHART III.5.13

INTEREST RATES ON LOANS FOR HOUSE PURCHASE

Interest rates on loans for house purchase are continuing to fall
(new business; percentages)

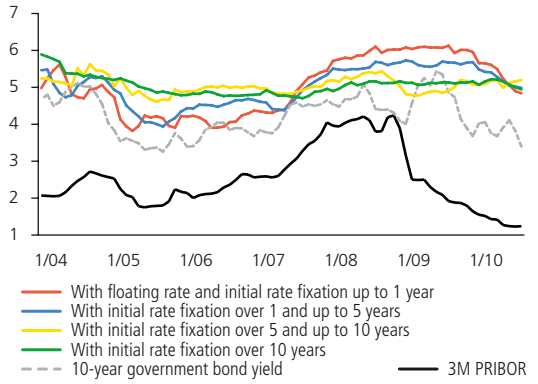


CHART III.5.14

SPREADS OF INTEREST RATES ON LOANS

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

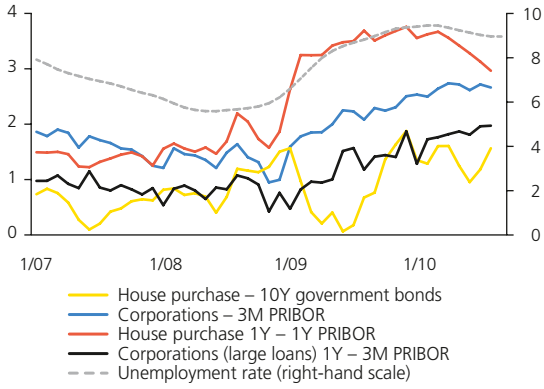
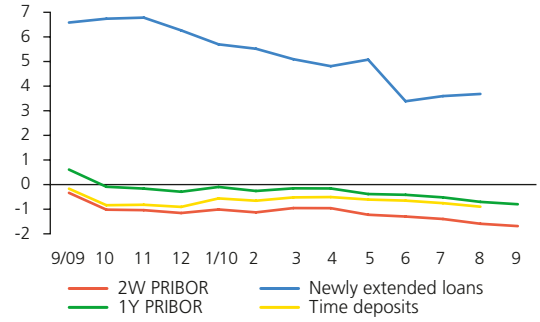


CHART III.5.15

EX ANTE REAL RATES

Ex ante real interest rates on new loans decreased further in 2010 Q3
(percentages)



the usual effect of the phase of the business cycle. However, interest rates on loans to corporations are at their lowest level since 2004. The downward trend in rates on loans to corporations also moderated in the euro area.

The interest rate on loans to households declined on average in Q3, but showed mixed developments across the individual loan types. The interest rate on loans for house purchase continued to fall gradually, reaching 5% in August. Almost all rate fixations edged down, but the decrease in rates with a fixation of up to one year is weakening (see Chart III.5.13). The spread between the rate on loans for house purchase with a short fixation and the 1Y PRIBOR market rate declined, but remains relatively high. The spread between the overall rate on loans for house purchase and the ten-year government bond yield also remains elevated (see Chart III.5.14). These spreads indicate still tight interest rate conditions and are being affected by the increased unemployment rate and other characteristics of the current phase of the business cycle. The spread of rates on loans for house purchase and market rates is around zero in the euro area. Rates on loans for house purchase in the Czech Republic are at roughly the end-2007 level, while in the euro area they are at a historical low. On the other hand, the rate on consumer credit increased in Q3, reaching 14.7% in August, one of the highest levels seen in the past few years. This mainly reflects the persisting high risk perceived by banks.

The interest rate on **deposits** remained at 0.9% on average in 2010. It is 1.1% for households and 0.5% for non-financial corporations. The rate is currently flat for large banks and building societies, but is declining gradually for the other bank groups.[32]

The **margin** between loan and deposit interest rates on new business remained at 5.7 percentage points in Q3. Despite declining in 2010 H1, it remains high in historical terms.

Real client interest rates[33] continued their downward trend in Q3. Real rates on new loans amounted to 3.7% in August, while real rates on time deposits were -0.9% (see Chart III.5.15).

32 The interest rate on deposits varies across the individual bank groups. It is 0.5% for large banks, 2.3% for building societies, 0.4% for medium-sized banks, 1.4% for small banks and 1.7% for foreign bank branches.

33 Ex ante real interest rates: nominal interest rates on loans are deflated by the industrial producer price inflation forecasted by the CNB; nominal interest rates on deposits and PRIBOR rates are deflated by the consumer price inflation expected by financial market analysts.

III.5.4 The exchange rate

The average **exchange rate of the koruna against the euro** was CZK 24.9 in 2010 Q3, which represents a year-on-year and quarter-on-quarter appreciation of 2.7%. The exchange rate appreciated particularly strongly in July (see Chart III.5.16). The koruna's exchange rate continued to appreciate modestly at the start of October and was fluctuating around CZK 24.5 against the euro in mid-October.

The koruna's exchange rate continued to be affected mainly by short-term investors' sentiment. The fast appreciation of the koruna in July seems to have been most fostered by news about an upgrading of the Czech Republic's rating outlook connected with expected measures to reduce the public budget deficit. Many regional currencies are now appreciating around the world, and some countries are trying to counter this trend with foreign exchange interventions. In Europe, in addition to the Czech koruna, the Swiss franc, the Swedish krona and the Polish zloty have been appreciating strongly against the euro. On the other hand, the appreciation of the koruna might have been dampened by fundamentals, i.e. the year-on-year deterioration of the trade balance in recent months, non-residents' record-high dividends from direct investments during Q3, and growth in residents' short-term international credit exposure.

The average **exchange rate of the koruna against the dollar** was CZK 19.3 in 2010 Q3, which represents a quarter-on-quarter appreciation of 4.3% but a year-on-year depreciation of 7.8%. The dollar depreciated considerably on world markets in Q3. Moreover, its movements against the koruna were amplified by the koruna's appreciation against the euro. During the quarter, the koruna appreciated from around CZK 21 to the dollar at the start of July to about CZK 18 to the dollar at the end of September. This trend continued into October; in the middle of the month the koruna's exchange rate against the dollar was only CZK 17.4. The dollar is currently being affected by comments made by Fed representatives and considerations of a further quantitative easing of Fed monetary policy.

III.5.5 Economic results of non-financial corporations

Annual growth in the main financial performance indicators of **non-financial corporations with 50 employees or more**[34] increased significantly in 2010 Q2. Although the speed of this growth was due to a low base in 2009 Q2, the levels of these indicators are now signalling an improving economic situation of corporations. In year-on-year comparison, sales and output increased particularly strongly. Growth in book value added was slightly less pronounced as a result of higher growth in intermediate consumption (see Chart III.5.17).

34 The segment of corporations with 50 employees or more consisted of almost 9,300 non-financial corporations at the end of 2010 Q2.

CHART III.5.16

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna appreciated slightly further against the euro in 2010 Q3, but its appreciation against the dollar was stronger

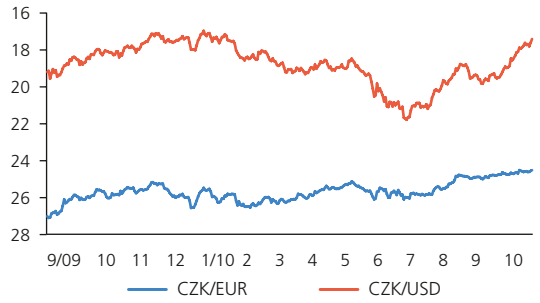


CHART III.5.17

KEY FINANCIAL INDICATORS

Annual growth in book value added and gross operating surplus both picked up pace in 2010 Q2
(annual percentage changes)

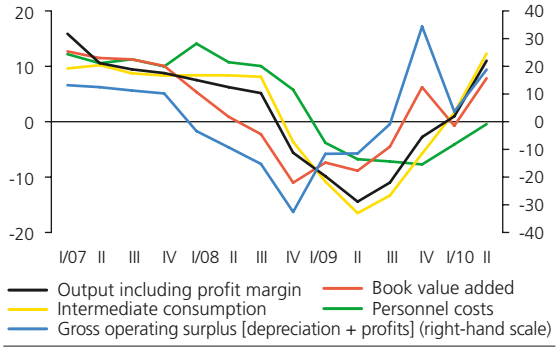


TABLE III.5.2

PERFORMANCE INDICATORS OF CORPORATIONS

The wage cost-output ratio continued to fall in 2010 Q2, but the material cost-output ratio rose

(CZK billions; percentages; annual changes in percentage points and percentages)

	2010 Q2	2009 Q2	Annual percentage changes
Output incl. profit margin (CZK billions)[a]	1,282.3	1155.1	11.0
Personnel costs (CZK billions)	189.0	189.8	-0.4
Intermediate consumption (CZK billions)	923.1	822.0	12.3
Book value added (CZK billions)	359.2	333.1	7.8
Sales (CZK billions)	1664.5	1529.2	8.9
	percentages	percentages	Annual changes in p.p.
Ratio of personnel costs to value added[a]	52.6	57.0	-4.4
Material cost-output ratio[a]	72.0	71.2	0.8
Personnel cost-output ratio[a]	14.7	16.4	-1.7
Ratio of book value added to output[a]	28.0	28.8	-0.8

a) CNB calculation

Personnel costs declined only slightly year on year. Gross operating surplus recorded rapid growth according to CNB calculations.

In 2010 Q2, the material cost-output ratio was influenced mainly by a further marked upswing in import prices of energy-producing materials and renewed growth in import prices of metal-based semi-finished products. The rising prices of these inputs were probably the main source of upward pressure on producers' costs, which contributed to a year-on-year rise in the material cost-output ratio of 0.8 percentage point to 72% (see Table III.5.2). Producer costs increased most of all at the early stages of the production chain.

At the same time, the wage cost-output ratio continued to fall (by 1.7 percentage points year on year). Compared to the previous quarter, this was due chiefly to rapid growth in output, while personnel costs recorded only a modest annual fall; this was again achieved by reducing the number of employees amid a rising average wage. In quarter-on-quarter comparison, a rise was observed in the number of employees and therefore also in personnel costs, but the wage cost-output ratio still decreased owing to the rapid rise in output.

Data for the narrower segment of **large corporations** (with 250 employees or more[35]) indicate faster growth in sales, output, book value added and gross operating surplus in large corporations than in the wider segment of corporations.

III.5.6 Financial position of corporations and households

Non-financial corporations

The continuing favourable evolution of most profitability indicators of non-financial corporations fostered higher generation of internal funds in Q2. As regards external **financing**, the year-on-year decline in total financial loans moderated, while debt security issuance rose slightly. Other accounts receivable declined (see Chart III.5.18). External financing of corporations thus shrank slightly in Q2 (by 0.2%).[36] Total financing developed similarly, but increased slightly (by 1.2%). Overall, corporations' debt-to-equity ratio continued to decrease, whereas the share of financing through bond issues increased, a trend observed since the start of 2009. However, the share of issuance of bonds and quoted shares in total financing of corporations is relatively low (11.8%).

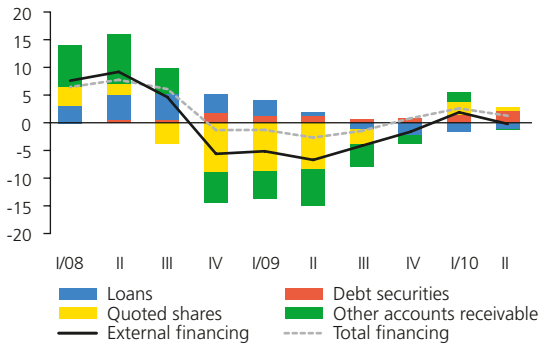
Financial investment by corporations was broadly flat year on year in Q2. Corporations held more free funds in the form of currency and deposits amid lower growth in other accounts receivable (which include trade receivables). The contributions of the other components

CHART III.5.18

FINANCING OF NON-FINANCIAL CORPORATIONS

External financing of corporations is flat and concentrated in market financing

(contributions in percentage points; annual percentage changes)



35 The segment of corporations with 250 employees or more consisted of almost 1,700 non-financial corporations at the end of 2010 Q2.

36 Revised financial accounts data since 2004 were released simultaneously with the data for Q2. External financing comprises loans, debt securities, issuance of quoted shares and other accounts receivable. Total financing comprises all financial liabilities of corporations.

of financial assets to total growth in financial investment were almost zero (see Chart III.5.19). The share of financial investment by corporations in total financial investment in the economy fell moderately to 23.3% compared to the start of 2009.[37]

The **debt of non-financial corporations**, as expressed by the ratio of loans and debt security issuance to GDP, was 48.8%[38] in Q2 (see Chart III.5.20). The interest burden on corporations continued to decrease thanks to declining interest rates on bank loans and a falling outstanding amount of these loans.

The **financial indicators of non-financial corporations** reveal that the solvency and the acid-test ratio of corporations have improved since the end of 2009 (to 115% and 154% respectively).[39] The previously negative financing gap (i.e. net borrowing), representing the difference between internal funds (i.e. gross savings) and real investment expenditure (i.e. gross capital formation), was positive in Q2. The ratio of gross savings of corporations to gross value added, based on four-quarter moving averages, was 29% compared to 19% for real investment. The generally subdued external financing together with the decrease in the interest burden and the rise in internal funds recorded since 2009 H2 suggests that corporations' financial position is improving in the cyclical recovery phase.

Households

Household debt fell slightly in 2010 Q2, to 30.1% of GDP and 55.2% of gross disposable income (see Chart III.5.20). Net interest payments (i.e. the difference between interest paid and received on bank loans and deposits) accounted for 2% of gross disposable income. Interest expenses reached 3.1% and interest income 1.1% of gross disposable income. In contrast to corporations, net interest payments have been rising over the last few years, reflecting a substantially smaller decline in interest rates on loans to households and persisting growth in loans to households in this period. The decrease in deposit interest rates observed since the start of 2009 also contributed to the rise in net interest payments. Annual growth in household financing slowed further to 5.1%, with all its components contributing to the slowdown (see Chart III.5.21).

Annual growth in the **financial investment of households** started to edge up again, reaching 6.4% in Q2. The contribution of investment in currency and deposits increased and that of debt securities also rose slightly. By contrast, the contribution of investment in insurance technical reserves fell slightly.

37 Non-financial corporations account for 23%, households 17%, financial corporations 32%, general government 9% and rest of the world 19% of financial investment in the economy as a whole.

38 When other accounts payable (relating mainly to trade liabilities) are included, the ratio of corporate debt to GDP is 111%.

39 Solvency represents the ratio of total financial assets to financial liabilities excluding equity. The acid-test ratio is defined as the ratio of liquid assets in the form of currency and deposits and short-term debt securities to short-term loans.

CHART III.5.19

FINANCIAL INVESTMENT OF NON-FINANCIAL CORPORATIONS

Corporations are increasing their liquid financial assets in the form of currency and deposits
(contributions in percentage points; annual percentage changes)

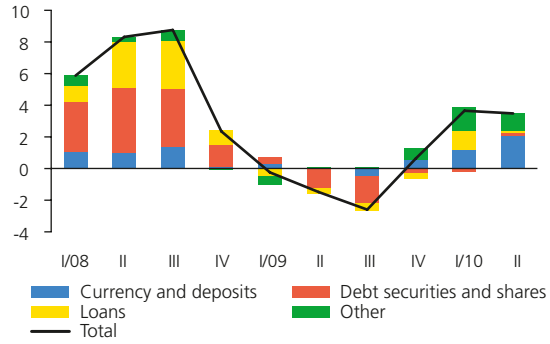


CHART III.5.20

DEBT AND NET INTEREST PAYMENTS

Net interest payments of households are rising while those of non-financial corporations are falling
(percentages)

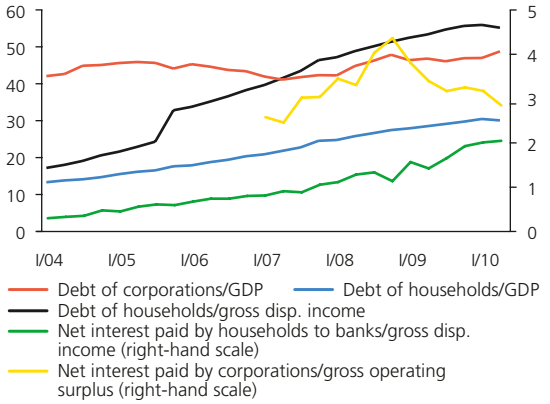


CHART III.5.21

FINANCING OF HOUSEHOLDS

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

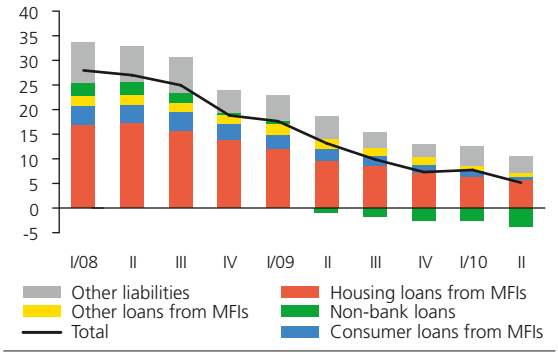


CHART III.5.22

TRANSFER AND SUPPLY PRICES OF DWELLINGS

The annual decline in prices of apartments continued into 2010 Q3
(annual percentage changes)

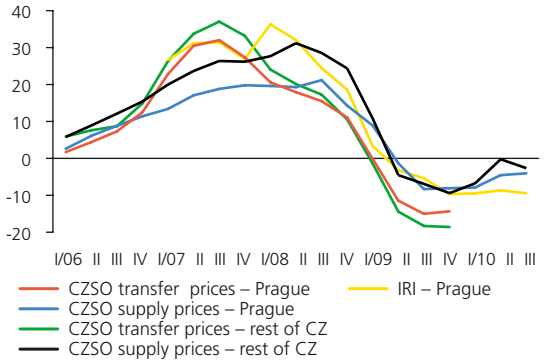


CHART III.5.23

NUMBERS OF TRANSACTIONS IN THE PROPERTY MARKET

The fall in prices was accompanied by a falling number of transactions in the property market
(2006 average = 100)

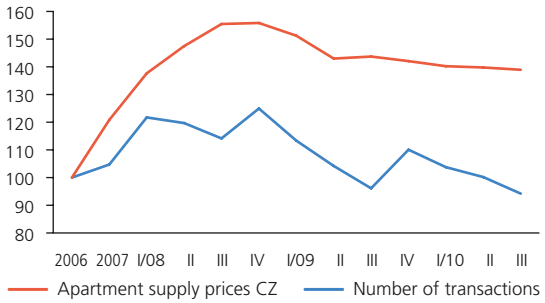
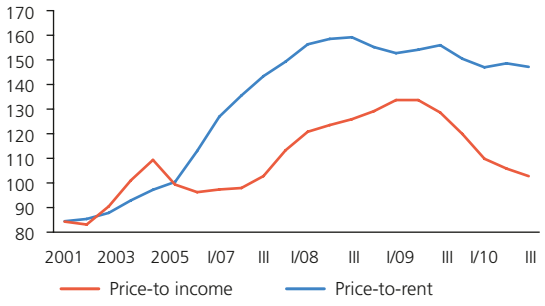


CHART III.5.24

APARTMENT PRICE SUSTAINABILITY INDICATORS

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



The **financial indicators of households** show that households' solvency improved in Q2 for the first time since the end of 2008 (the ratio of total financial assets to total liabilities reached 267%). This could gradually start to have a favourable effect on non-performing loans and household consumption expenditure.

III.5.7 The property market

Supply **prices of apartments** continued to decline in Prague and the rest of the Czech Republic in 2010 Q3 (see Chart III.5.22). They have already decreased by 11–16% from their peak in 2008 Q3, depending on the source and region. Newly published estimates of growth in **transfer prices of apartments** in 2009 suggest that the decline in the prices of actual transfers might have been even sharper (14.3% year on year in 2009 Q4 for Prague and 18.6% for the rest of the Czech Republic). By contrast, supply prices of building plots recorded moderate year-on-year increases in Q3 (0.5% for the Czech Republic as a whole).

In the past, property price declines were due chiefly to falling demand relating to a general deterioration of the labour market situation and to demographic trends (falling population growth). The fall in demand was also reflected in a fewer property market transactions. According to data from the Czech Office for Surveying, Mapping and Cadastre, the number of transactions – as measured by the number of proceedings on entry of ownership rights in the cadastre – fell by 5% year on year in the first three quarters of 2010, following a decrease of 11.8% in 2009 (see Chart II.5.23). However, the year-on-year decline in the number of transactions slowed to just 2% in 2010 Q3.

The decline in apartment prices also manifested itself in, among other things, a sizeable decline in housing construction. The **number of housing completions** for January–August fell by 8.8% year on year, while the number of housing starts was down by 24.4%. The decline in construction pertained mainly to apartment blocks (a drop in the number of apartment completions of 19.3% and in the number of apartment starts of 48.9%). The region that contributed most to the decline was Prague (roughly 35%).

The property price sustainability indicators decreased again owing to the decline in prices (see Chart II.5.24). The **price-to-income ratio** fell by 2.9 percentage points between Q2 and Q3. It is now at the mid-2007 level, i.e. only slightly above the long-term average for the period before the last price surge. The **price-to-rent ratio** fell by 1 percentage point, reflecting among other things a shift in preferences from owner-occupied housing to rented apartments at a time when households are in a worse financial situation. The price-to-rent ratio has already fallen by 7.6 percentage points from its peak in mid-2008. The available analyses (besides the aforementioned ratios these include a regression analysis of the macroeconomic determinants

of property prices) indicate that the residential property market is now approximately in equilibrium. At the forecast horizon, a stagnation can be expected initially, followed by gradual growth in property prices towards the end of 2011, linked mainly with an improved labour market situation. In addition to the standard macroeconomic variables, the market could be influenced by the mooted increase in the reduced VAT rate, which should lead to a short-term recovery in demand and an increase in prices. Uncertainty also prevails regarding the evolution of the market following rent deregulation.

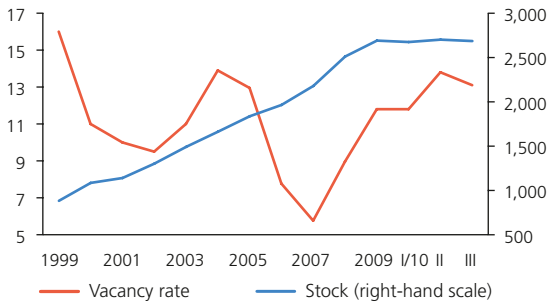
The situation in the commercial property sector stabilised following sizeable declines in 2009. This was aided by a recovery in demand, especially in the industrial property segment, which rose by 41% quarter on quarter and by a full 224% year on year in Q2, driven by the recovery in industrial production (King Sturge data). The upturn in demand for industrial property was also reflected in a decrease in the **vacancy rate** for such property, which fell from 17.6% to 15.9% at the end of H1. However, demand in the office property sector continued to decline (by 10% year on year in Q2) despite an almost complete halt in new supply (according to King Sturge estimates, the supply of new offices will fall by two-thirds this year; the total office floor area is stagnant). The office property vacancy rate thus rose again in 2010 H1 by 2 percentage points (see Chart III.5.25). However, it decreased slightly in Q3 (by 0.7 percentage point).

Overall gross demand (gross take-up) on the office property market is strongly affected by renegotiations of existing contracts, which in H1 accounted for one-half of the total volume of transactions (compared to just 35% in 2009). This was reflected in a fall in yields in this market segment of 0.5 percentage point in Q3 compared to the end of 2009 (see Chart III.5.26). Yields on industrial and retail property declined similarly (by 0.3% and 0.8% respectively).

CHART III.5.25

SITUATION IN THE OFFICE MARKET

The vacancy rate in the office market remains high despite stagnant new supply
(vacancy rate in per cent; stock in thous. m²)

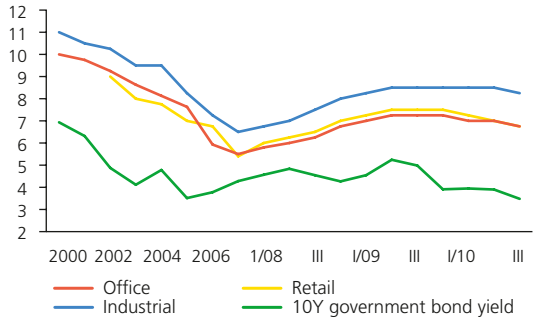


Note: King Sturge, Prague Research Forum

CHART III.5.26

YIELDS ON COMMERCIAL PROPERTY

Yields on commercial property fell slightly, suggesting a recovery in prices
(yields in per cent)



Note: King Sturge

CHART III.6.1

CURRENT ACCOUNT

The annual current account deficit decreased slightly in 2010 Q2, owing mainly to the evolution of the income balance and current transfers
(annual moving total in CZK billions)

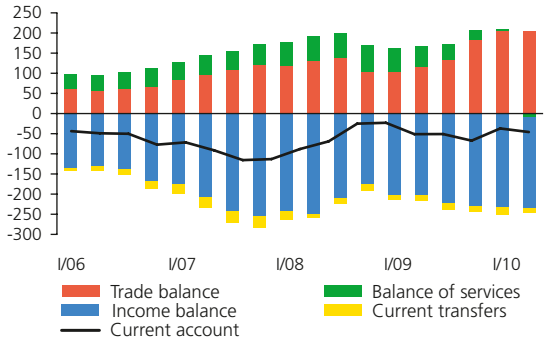


CHART III.6.2

TRADE BALANCE

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

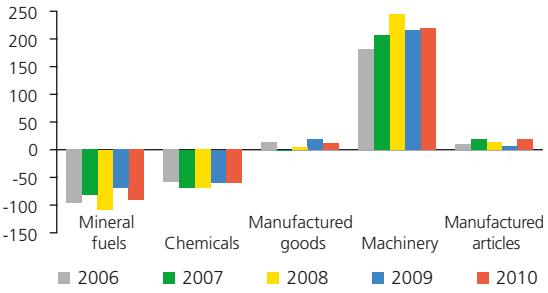
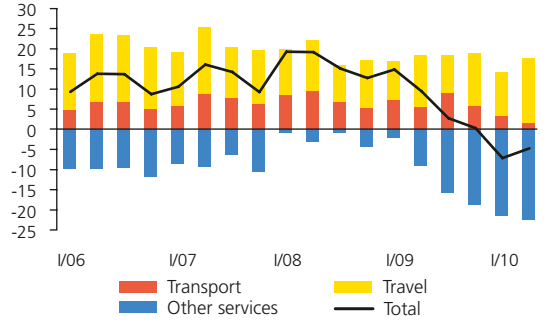


CHART III.6.3

BALANCE OF SERVICES

The services deficit in 2010 Q2 was due to other services, in particular branding
(CZK billions)



III.6 THE BALANCE OF PAYMENTS

In 2010 H1, the balance of payments was characterised by a high income deficit, due mainly to dividends paid to non-residents. Its effect on the current account was largely offset by a surplus on the goods and services balance, which, however, declined year on year owing to price developments. The annual moving current account deficit of 1.1% of GDP indicates persisting external balance of the Czech economy. On the financial account, the high other investment deficit was due chiefly to a very strong net outflow in the corporate sector. It was, however, offset by a surplus on portfolio and direct investment.

III.6.1 The current account

The **current account** ended 2010 H1 in a deficit of CZK 10.4 billion. The half-yearly deficit widened by almost CZK 5 billion year on year, owing to a shift of the services balance from surplus to deficit (see Chart III.6.1). The evolution of the services balance was largely offset by the other three balances, especially an increase in the goods surplus. The ratio of the annual moving current account deficit to GDP improved slightly, to 1.1%.

In 2010 H1, the **trade balance** recorded a surplus of CZK 118 billion, up by almost CZK 24 billion on a year earlier. The increase in the trade surplus was due to developments in real terms, roughly one-half of which was offset, however, by a price effect associated mainly with strongly negative terms of trade for mineral fuels. The recovery in external demand growth was reflected in rapid growth in goods exports, whose nominal year-on-year rate of growth rose to almost 15% despite the appreciation of the koruna. At the same time, a strong increase in imports was a result of the high import intensity of exports and the recovery in domestic demand. As regards the commodity structure, growth in the surpluses on machinery and transport equipment and miscellaneous manufactured articles was the biggest contributor to the increase in the overall surplus (see Chart III.6.2). However, the annual growth in the trade surplus was interrupted in June and the surplus declined by more than CZK 5 billion in July and August, owing among other things to rapid growth in investment imports of photovoltaic equipment.

The **balance of services** ended 2010 H1 in a deficit of CZK 12.1 billion, representing a year-on-year change of more than CZK 36 billion amid a shift from surplus to deficit (see Chart III.6.3). The overall deficit was due to rapid growth in the other services deficit,

linked with a rise in other business services debits.[40] The surplus on transportation recorded a smaller decrease. By contrast, the surplus on travel increased slightly.

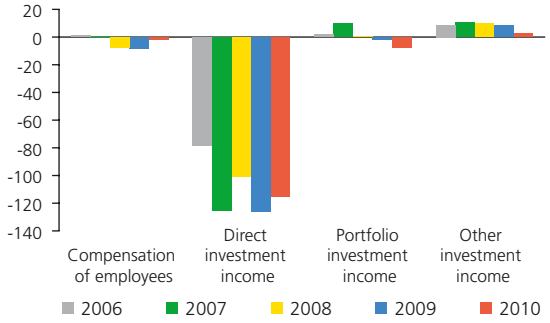
The **income balance** showed a deficit of CZK 121.2 billion, representing a year-on-year decrease of more than CZK 6 billion. The balance of direct investment income (CZK -114.8 billion) was the biggest contributor to the overall deficit (see Chart III.6.4). The year-on-year moderation of the overall deficit was also related above all to the direct investment income deficit as a result of lower dividends paid to non-residents in H1. A decrease in the deficit on compensation of employees, due to lower wage expenditure on foreign workers in the Czech Republic, also helped to reduce the overall deficit.

Current transfers recorded a surplus of CZK 4.8 billion, which was slightly higher than a year earlier due to a faster decline in debits than in credits. The determining factor was the government transfers surplus of CZK 15.3 billion. Within government transfers, the surplus on transfers between the Czech Republic and the EU budget, recorded on the current account, reached CZK 15 billion in H1. However, roughly two-thirds of the government transfers surplus was offset by a private transfers deficit.

CHART III.6.4

INCOME BALANCE

The income deficit was most strongly affected in 2010 H1 by a decrease in the direct investment income deficit
(accumulation since start of year in CZK billions)



III.6.2 The capital account

The **capital account** recorded a surplus of CZK 11.8 billion, a decrease of more than CZK 8 billion from a year earlier owing to significantly lower income from EU institutions. However, its main component was still net government revenues from EU funds, recorded on the capital account, amounting to CZK 7.9 billion. By contrast, the surplus on trading in emission allowances rose to CZK 4.2 billion.

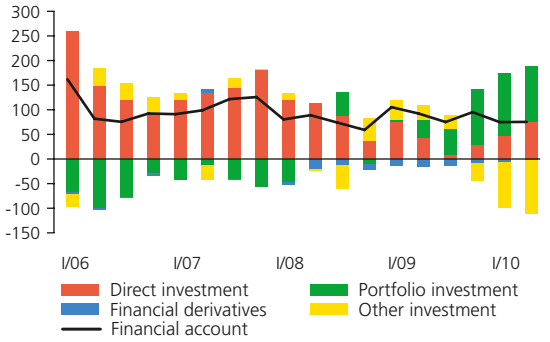
III.6.3 The financial account

The **financial account** ended 2010 H1 in a modest deficit of CZK 2.1 billion (see Chart III.6.5). Its largest component was a net outflow of other investment, which was almost fully offset by surpluses on direct and portfolio investment. Other investment also affected the year-on-year switch of the financial account from surplus to deficit.

CHART III.6.5

FINANCIAL ACCOUNT

The annual financial account surplus was unchanged overall in 2010 Q2
(annual moving total in CZK billions)



40 The strong decline in the services balance is offsetting the growth in the trade surplus relating to operations affected by economic globalisation, which are fostering stronger growth in its surplus and volume without reflecting domestic economic output. The adjustment of the goods balance for value added reported in the trade balance that pertains to non-residents is captured by the branding item under expenditure on other services. Its size in 2010 H1 was estimated at CZK 44 billion. Adjusted for this item, therefore, the services balance would still be in surplus. The CNB and CZSO are currently preparing a revision of the goods and services balance time series (above all this will involve contrary adjustments in the balances of goods and services and elimination of growth in the services deficit). The revised data for 2009–2010 will be published in March 2011 together with the data for 2010 Q4.

CHART III.6.6

DIRECT INVESTMENT

The direct investment surplus in 2010 Q2 was affected most strongly by a net inflow of reinvested earnings
(CZK billions)

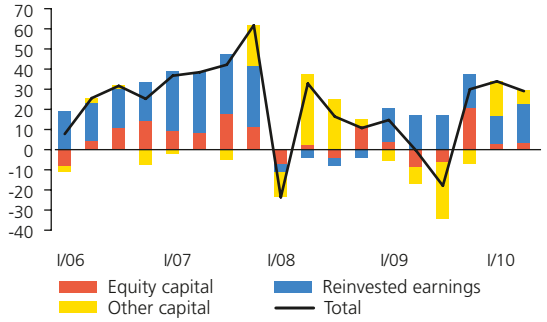


CHART III.6.7

PORTFOLIO INVESTMENT

Portfolio investment recorded a net inflow in 2010 Q2 owing mainly to purchases of bonds by non-residents
(CZK billions)

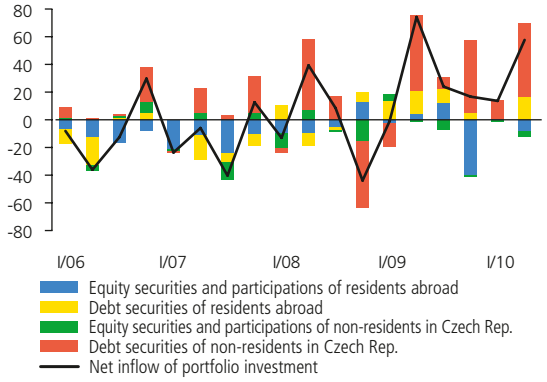
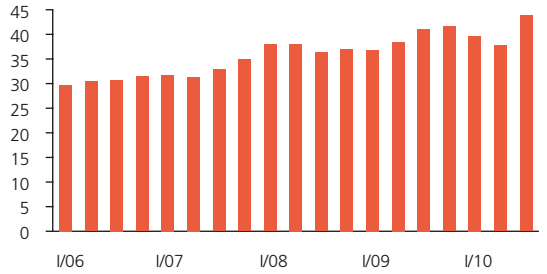


CHART III.6.8

CNB INTERNATIONAL RESERVES

The CNB's international reserves increased in dollar terms in 2010 Q3 compared to the previous quarter
(USD billions)



The net inflow of **direct investment** reached CZK 63 billion (see Chart III.6.6), an increase of almost CZK 49 billion year on year. The inflow of foreign direct investment into the Czech Republic increased to CZK 80.2 billion owing to a significant change in other capital flows. Reinvested earnings accounted for more than one-half of the inflow, while the inflow of investment in equity capital was low. Direct investment by domestic corporations abroad was also affected most of all by reinvested earnings. With regard to its branch structure, the foreign capital inflow was channelled primarily into transport and telecommunications, followed by manufacture of metals and metal products. The outflow of capital abroad went mainly into the electricity, gas and water supply sector.

The net inflow of **portfolio investment** amounted to CZK 71.3 billion in 2010 H1 (see Chart III.6.7), representing only a slight year-on-year decrease. The most significant operations were purchases of domestic debt securities by non-residents, which reached almost CZK 69 billion. They were associated mainly with domestic corporate bond issues on foreign markets and purchases of government bonds by foreign investors on the domestic market. As regards investment abroad, the lack of interest in foreign securities among domestic investors persisted. However, the sales of foreign bonds were partly offset by purchases of foreign shares by residents.

The net outflow of capital in the form of **financial derivatives** was only CZK 1.1 billion. It fell by more than CZK 6 billion year on year.

Other investment recorded a net capital outflow of CZK 135.2 billion in 2010 H1, up by almost CZK 73 billion on a year earlier. Both the overall balance and the increase in deficit were affected mainly by a net outflow of corporate sector funds of CZK 94 billion. It was related chiefly to the provision of trade credits and financial loans to non-residents. Also significant was a net outflow in the financial corporations sector (CZK -40.7 billion), linked with an increase in deposits and loans abroad. Only a net inflow of government sector funds, linked with EIB loans for infrastructure development, helped to reduce the overall deficit very slightly.

The CNB's **international reserves** totalled CZK 790.2 billion at the end of 2010 Q3, up by CZK 0.6 billion quarter on quarter. In dollar terms, the reserves increased by USD 6.1 billion to USD 43.8 billion in the same period (see Chart III.6.8). The CNB's international reserves covered 46.8% of all external debt liabilities of domestic entities at the end of Q2.

III.7 THE EXTERNAL ENVIRONMENT

The economic recovery in the euro area strengthened in Q2, thanks mainly to Germany. However, a slowdown due to fiscal austerity measures in most euro area countries is expected in the period ahead. By contrast, the US economy slowed and its growth outlook deteriorated. Despite rapid growth in world commodity prices and producer prices, consumer price inflation is not currently a problem in the euro area or the USA. In Europe, the commodity price growth was offset by a marked appreciation of the euro in Q3. However, this simultaneously represents another obstacle to a continued strong recovery in the euro area. The sharp weakening of the dollar was due to a perceived improvement in the euro area economy and expectations of another round of quantitative easing of monetary policy in the USA, which should stimulate its ailing economy. The weakening dollar was probably the reason for strong growth in prices of oil and other commodities.

III.7.1 The euro area

In 2010 Q2, the quarterly **rate of economic growth in the euro area** increased substantially from 0.3% to 1.0%, mainly as a result of faster investment growth. However, the overall growth rate conceals significant cross-country differences – GDP increased by 2.2% in Germany and 1.2% in Slovakia, but decreased by 1.8% in Greece and 1.2% in Ireland. The annual rate of economic growth also rose by 1.1 percentage points to 1.9% (see Chart III.7.1). However, a slowdown in GDP growth can be expected in the second half of this year. Industrial production growth declined in July and August in both quarterly and annual terms. Retail sales and construction output also decreased. The unemployment rate did not fall and remained high at 10.1% in September.

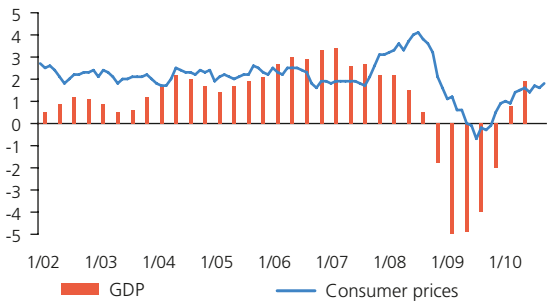
Compared to the July edition, the **October Consensus Forecasts** (CF) increased the estimate of economic growth in 2010 as a whole by 0.5 percentage point to 1.6%, mainly on account of higher expected household consumption growth. For next year, the CF predicts a slight decrease in GDP growth to 1.4% as a result of fiscal consolidation in most euro area countries and less favourable export outlooks. The ECB and IMF adjusted their estimates of GDP growth for 2010 in the same way.

Euro area inflation increased from 1.6% in August to 1.8% in September as a result of buoyant growth in energy prices. According to the ECB, inflation should remain roughly at this level in the months ahead and fall slightly in 2011. The October CF also expects average inflation to reach 1.6% in 2011. At its meeting at the beginning of October, the ECB left its key interest rate unchanged at a historical low of 1%. The ECB Governing Council does not see any medium-term risk of inflation shifting outside the price stability band, and in its opinion inflation expectations are also firmly anchored. The evolution

CHART III.7.1

GDP AND INFLATION IN THE EURO AREA

Annual GDP growth in the euro area accelerated in 2010 Q2 and inflation increased during 2010 Q3
(annual percentage changes; source: Eurostat)

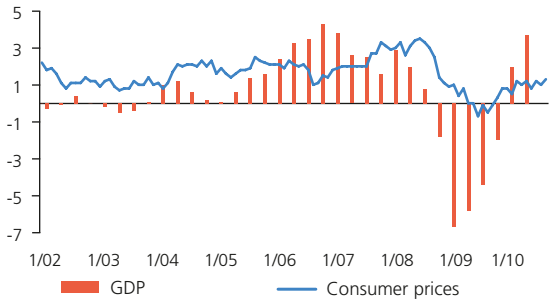


of monetary and credit aggregates in August confirms the absence of inflation pressures. M3 increased by only 1.1% and loans to private non-bank clients by 1.2% year on year. Unlike the FOMC in the USA, the Governing Council did not hint that it would consider renewing quantitative easing.

CHART III.7.2

GDP AND INFLATION IN GERMANY

German annual GDP growth increased significantly further in 2010 Q2; inflation rose slightly in Q3
(annual percentage changes; source: Eurostat)



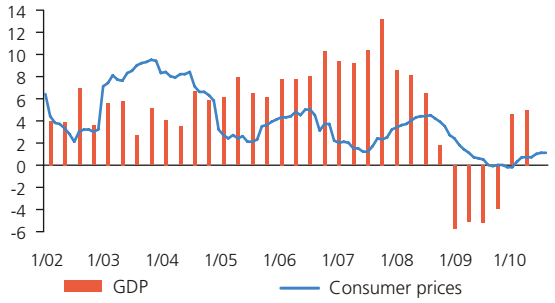
The **German economy** increased its quarterly rate of growth very strongly in Q2 – by 1.7 percentage points to 2.2%. Growth increased in all components of aggregate demand, in particular exports and fixed investment. Both these components contributed 0.8 percentage point to the overall rise in GDP. The annual rate of economic growth also increased significantly, to 3.7% (see Chart III.7.2). This buoyant growth was reflected in a further decrease in the unemployment rate to 6.8% in August, which represented a return to pre-crisis levels. In H2, growth is expected to weaken by comparison with Q2 as a result of expected weaker global demand and appreciation of the euro vis-à-vis the dollar. However, the worse outlook has not so far manifested itself in lower industrial production growth in July and August compared to Q2. New industrial orders also continued to rise in August.

By comparison with July, the October CF increased the **German GDP growth estimate** for 2010 as a whole by 1.3 percentage points to 3.3%. In particular, it raised the prediction for fixed investment growth and also for consumption. The GDP forecast for 2011 was increased by 0.3 percentage point to 2%. The IMF and Ifo increased their GDP growth estimates for 2010 and 2011 in the same way. Inflation rose by 0.3 percentage point to 1.3% in September, owing chiefly to rising energy prices. The October CF expects average inflation to reach 1.1% this year and increase to 1.4% next year.

CHART III.7.3

GDP AND INFLATION IN SLOVAKIA

The Slovak economy was one of the fastest-growing economies in the euro area in 2010 Q2; the annual inflation rate is steadily increasing
(annual percentage changes; source: Eurostat)



The **Slovak** economy continued to grow strongly in 2010 Q2, with annual real GDP growth reaching 5% (see Chart III.7.3). This made Slovakia the second-fastest-growing euro area economy behind Luxembourg in year-on-year terms. Quarterly real GDP growth increased from 0.8% to 1.2%. Growth was driven mainly by net exports, owing to rising external demand and therefore stronger export growth. Industry, agriculture and public services contributed to the economic growth with higher value added. Government and household consumption declined in Q2 in both year-on-year and quarter-on-quarter terms. The weak domestic demand was also reflected in total retail sales in Q2, which fell by almost 4% year on year. The low consumer demand reflects a very high unemployment rate, which has remained above 14% since November 2009 (14.6% in August). The annual inflation rate has been rising gradually during the year, reaching 1.1% in August and September owing to growth in prices of food and services.

The September CF expects the Slovak economy to grow by 3.9% this year. The current October forecasts of the IMF and the Slovak Ministry of Finance also predict growth of 4%.

III.7.2 The United States

In 2010 Q2, the **quarterly GDP growth rate** in the USA slowed by a further 0.5 percentage point to 0.4%. All components of domestic demand continued to rise, but a much stronger increase in imports than in exports caused net exports to deteriorate by USD 17 billion compared to the previous quarter. By contrast, the annual rate of economic growth rose to 3% (see Chart III.7.4). In Q3, economic growth will probably not accelerate, given the fading fiscal stimuli and the inventory cycle. Industrial production growth also slowed (the average monthly increase declined from 0.5% to 0.2%) and the average monthly net export deficit increased marginally in the first two months of Q3. Owing to high and unabating unemployment (9.6% in September), slowly rising employment and low consumer confidence, no significant strengthening of household consumption can be expected. A slowdown in economic growth is suggested by the September leading indicators, which are signalling weakening industrial production and worsening consumer confidence.

Compared to July, the October CF decreased its **estimate of US economic growth for 2010 as a whole** by 0.4 percentage point to 2.7%. The reduction for 2011 was even sharper – 0.6 percentage point to 2.4%. Estimated corporate investment was increased for both years, but expected household consumption was reduced substantially. The IMF made almost the same revision to its prediction for the same period. This reduced forecast still seems very optimistic. For 2010 H2, it would mean a pick-up in quarterly growth compared to Q2 to a quarterly average of 0.6%. However, most analysts believe that growth will slow and that there is even a risk of return to recession (with a probability of around 25%).

The low economic growth, linked with high unemployment and low capacity utilisation (down to 74.7% in September), is also contributing to low **inflation**, which fell by 0.1 percentage point to 1.1% in September. An increase in energy prices was the main source of inflation. Core inflation declined to 0.8%, the lowest figure since 1966. At its meeting on 21 September, the FOMC left the Fed's key rate unchanged at 0–0.25%. Given the low expected growth and the absence of inflation pressures, it hinted that it would leave the rate at this level for an extended period. The Fed regards inflation as too low. It sees the risk of deflation and a renewed economic downturn as a threat. Attention was focused on the possibility of returning to quantitative easing. The FOMC members remained divided on whether to start quantitative easing now or to take this step if economic indicators worsen further. The financial markets expect the Fed to start a second round of quantitative easing after the FOMC meeting on 2–3 November. The fiscal deficit for 2009/2010 reached USD 1.29 trillion, the second highest figure since 1945.

CHART III.7.4

GDP AND INFLATION IN THE USA

Annual US GDP growth increased further in 2010 Q2; inflation continued to fall in 2010 Q3
(annual percentage changes; source: BEA, BLS)

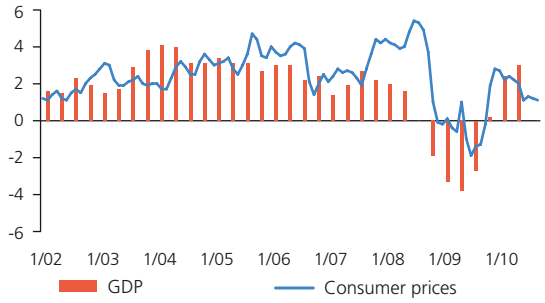
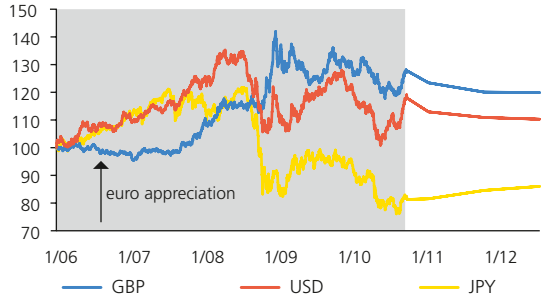


CHART III.7.5

EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

The euro strengthened sharply against all reserve currencies in 2010 Q3

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



III.7.3 The USD/EUR exchange rate

In 2010 Q3, the euro strengthened against all reserve currencies (see Chart III.7.5), in particular the dollar. The strengthening occurred in two waves – during July and again from mid-September. Overall, the euro appreciated from USD 1.22 to roughly USD 1.40 (i.e. by around 14%). Against the pound sterling and the Japanese yen it gradually strengthened by just under 6% in Q3.

After strengthening sharply against the dollar from USD 1.19 at the beginning of June to USD 1.33, the euro experienced a strong correction in early August. Following news of a deepening of the Greek recession and a worsening of Greek public finances, the euro abruptly weakened by 4.5% to around USD 1.27. The exchange rate of the euro in the period under review was also negatively affected by growing uncertainty surrounding the adoption of the international rescue plan for Greece and disputes with some member countries regarding the conditions of participation. Thereafter, the exchange rate was flat between USD 1.27 and 1.29 against the euro until September, when unexpectedly positive news regarding economic growth in euro area countries, especially Germany, was released.

The returning confidence in the stability of some euro area member countries was partly reflected in favourable results of Irish, Spanish and Greek government bond auctions. This contrasted with signs of an unexpected slowdown in economic growth in the USA, rising unemployment and expectations of a further easing of monetary policy by the Fed.[41] The exchange rate of the euro vis-à-vis the US dollar thus returned to growth in mid-September, quickly strengthening to around USD 1.40 against the euro in the first week of October. The risks to the future evolution of the European currency – above all the still unresolved fiscal issues in most euro area countries – have been pushed into the background for the time being.

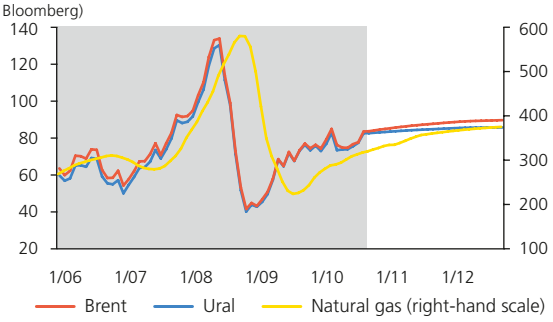
The **October CF** expects the euro to depreciate to USD 1.34 over the next three months and to around USD 1.31 at the one-year horizon.

CHART III.7.6

OIL AND NATURAL GAS PRICES IN USD

The price of oil has been hovering above 80 USD/barrel level since October

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



III.7.4 Prices of oil and other commodities

While the **price of Brent oil** increased by almost USD 10 a barrel in July, it gave away these gains in August. Its movements in September were less volatile with a slight upward tendency. However, the price surged again by around USD 5 a barrel in late September and fluctuated around USD 82 a barrel in the first three weeks of October (see Chart III.7.6). These fluctuations largely reflected the movement of

41 The problems of the US economy led to verbal interventions by top Fed officials, including Chairman Bernanke, and to considerations of reintroducing the asset purchase programme (especially with regard to US government bonds) totalling USD 500 billion to USD 1 trillion. That triggered a massive sell-off of the US dollar.

the dollar exchange rate. According to the IEA, the last increase was also due to stronger-than-expected demand in Q3 (especially in OECD countries), the recovery in the financial markets and the strike in French sea ports.

High inventories of oil and oil products around the world are preventing oil prices from rising faster. The inventories held by industrial corporations in OECD countries in August represented 61.1 days of consumption, the highest August figure since 1998. According to preliminary data, however, inventories declined in September as total supply was decreased in non-OPEC countries. By contrast, OPEC countries increased their supply, although at their October meeting they left their quotas – agreed almost two years earlier – unchanged. Their supplies fluctuate depending on the degree of adherence to the quotas, which is currently around 57% according to a Reuters survey. The individual OPEC countries are not united as regards the current optimal price. Saudi Arabia fears a drop in demand and would prefer a lower price, while other countries (with budgetary problems) point out that the purchasing power of the dollar is down and higher prices suit them.

In connection with the increased GDP growth estimates in OECD countries, **the IEA revised oil consumption** for 2010 and 2011. Consumption should rise by 2.1 million barrels a day (Mb/d) to an average of 86.9 Mb/d in 2010 and by a further 1.2 Mb/d in 2011. The expected evolution of oil prices over the coming two years is consistent with this prediction. According to market contracts, the price of Brent oil should grow further from its current level around USD 82 a barrel to USD 90 a barrel at the end of 2012. CF analysts expect similar growth for WTI oil, which, however, is currently selling about two dollars cheaper than Brent owing to high oil inventories in the USA.

Commodity prices rose across all categories in Q3 (see Chart III.7.8). This was due chiefly to the marked depreciation of the US dollar. The strongest price growth was recorded by agricultural commodities and some industrial metals, which started to rise around mid-2010. Increasing demand linked with the recovery in global industrial activity can be regarded as the main factor pushing prices of industrial metals upwards. The largest increase in Q3 (around 40%) was recorded for prices of zinc and lead. Prices of copper and aluminium rose by around 30%.

As regards **agricultural commodities**, uncertainty persists regarding the impact of the adverse weather on this year's harvest. Maize prices, which almost doubled in Q3, are still showing the highest growth rates in the agricultural commodities category. However, prices of sugar, cotton and wheat also rose strongly. While further price growth is expected for the other categories, agricultural commodity prices should decline.

CHART III.7.7

OIL AND NATURAL GAS PRICES IN CZK

Oil and natural gas prices were flat in koruna terms in Q3; the outlook is rising mainly in 2011

(oil in CZK/litre; gas in CZK/m³; source: IMF, Bloomberg)

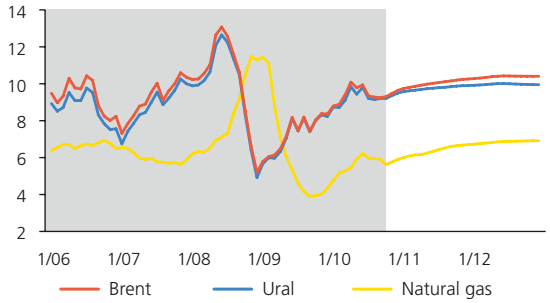
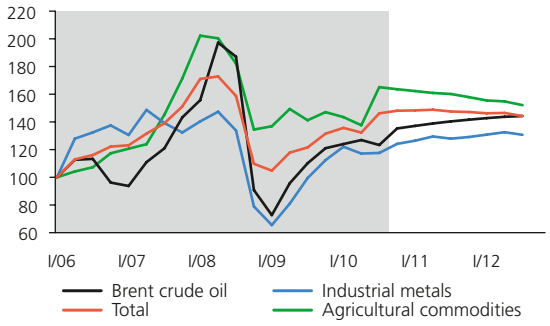


CHART III.7.8

COMMODITY PRICES

Agricultural commodity prices surged in 2010 Q3

(2006 Q1 = 100; source: The Economist)



ABBREVIATIONS

ARA	Amsterdam-Rotterdam-Antwerp
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
BoE	Bank of England
CF	Consensus Forecasts
CNB	Czech National Bank
COICOP	Classification of Individual Consumption by Purpose
CPI	consumer price index
CZK	Czech koruna
CZSO	Czech Statistical Office
ECB	European Central Bank
EIB	European Investment Bank
ERM II	Exchange Rate Mechanism
ERO	Energy Regulatory Office
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
FMIE	Financial Market Inflation Expectations
FOMC	Federal Open Market Committee
FRA	forward rate agreement
GDP	gross domestic product
HICP	Harmonised Index of Consumer Prices
HP filter	Hodrick-Prescott filter
Ifo	Ifo Institute for Economic Research
ILO	International Labour Organization
IMF	International Monetary Fund
IRS	interest rate swap
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
M1, M2	monetary aggregates
MLSA	Ministry of Labour and Social Affairs
OECD	Organisation for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
PLN	Polish zloty
PPI	producer price index
PRIBOR	Prague Interbank Offered Rate
(1W, 1M, 1Y)	(one-week, one-month, one-year)
repo rate	repurchase agreement rate
USD	US dollar
VAT	value added tax
WTI	West Texas Intermediate

Price indices used for the evaluation of inflation	(Box)	April 1998
Analysis of the money supply trend	(Box)	July 1999
Revisions to the statistical data on GDP	(Box)	July 1999
Measuring the inflation expectations of the financial market	(Annex)	October 1999
Oil prices and their impact on inflation	(Box)	July 2000
The effect of oil price changes on the balance of trade	(Box)	October 2000
The methodological framework for evaluating wage developments relative to inflation	(Box)	January 2001
The CNB's monetary policy rates	(Box)	April 2001
The setting of the inflation target for 2002–2005	(Annex)	April 2001
Harmonisation of the reserve requirements with European	(Annex)	April 2001
Central Bank standards	(box)	leden 2003
Escape clauses pertaining to the new inflation target	(Annex)	July 2001
Changes in economic growth forecasts in the eurozone, Germany, the USA and Japan for 2001 and 2002	(Annex)	October 2001
Strategy for dealing with the exchange rate effects of capital inflows from privatisation of state property and from other foreign exchange revenues of the state	(Annex)	January 2002
Assessment of fulfilment of the CNB's net inflation target in December 2001	(Annex)	January 2002
Prediction of external variables	(Box)	April 2002
Estimated capital flows in 2002 and 2003 and their effect on the exchange rate	(Box)	April 2002
The Balassa–Samuelson effect	(Annex)	April 2002
The CNB changes its type of inflation forecast	(Box)	July 2002
An assessment of the effect of the August floods on Czech economic growth	(Box)	October 2002
The financial conditions of the Czech Republic's accession to the EU	(Box)	January 2003
Implications of the unexpectedly slow growth in regulated prices	(Box)	January 2003
The Czech Republic and the euro – Draft accession strategy	(Annex)	January 2003
Fiscal consolidation and its effect on economic growth	(Annex)	January 2003
Price deregulation in the period of transformation of the Czech economy of the Czech economy	(Box)	April 2003
Revisions to the March 2003 GDP figures	(Box)	April 2003
Credit to households	(Box)	July 2003
The withdrawal of 10- and 20-heller coins and its possible impact on prices	(Box)	July 2003
Indirect taxes and the inflation forecast	(Box)	July 2003
Changes to the methodology for surveying inflation expectations	(Box)	July 2003
ERM II and the exchange-rate convergence criterion	(Annex)	July 2003
Use of the output gap indicator at the CNB	(Box)	October 2003
Monetary policy in the CNB's macroeconomic forecast	(Box)	October 2003
The Czech Republic's euro-area accession strategy	(Annex)	October 2003
Short-run food price prediction methods	(Box)	January 2004
Monetary conditions	(Box)	April 2004
The CNB's inflation target from January 2006	(Annex)	April 2004
The CNB has fully integrated into the European System of Central Banks	(Annex)	July 2004
The exchange rate in the CNB's forecasting system	(Box)	July 2004
Indicators of households' financial situation	(Box)	October 2004
GDP data revision	(Box)	October 2004
Petrol prices and their impact on inflation in the Czech Republic	(Box)	October 2004
Assessment of the fulfilment of the Maastricht convergence criteria and the degree of alignment of the Czech economy with the euro area	(Annex)	January 2005
The structure of lending	(Box)	January 2005
Uncertainty regarding the evolution of public finances in 2005 and 2006	(Box)	January 2005
Inflation expectations in the CNB's modelling system	(Box)	January 2005
The transmission of external cost shocks into domestic prices in 2003–2005	(Box)	April 2005
The effect of the exchange rate on inflation	(Box)	April 2005
The Czech National Bank's position on the revision of the Stability and Growth Pact	(Annex)	April 2005
The effect of EU accession on prices and inflation expectations	(Box)	July 2005
Foreign trade in the first year after the Czech Republic's accession to the EU	(Box)	July 2005
Financial flows between the Czech Republic and the European Union	(Box)	July 2005
The effect of world energy prices on consumer prices	(Box)	October 2005

The performance of large non-financial corporations 1998–2004	(Box)	October 2005
Potential output in the CNB's forecasting system	(Box)	October 2005
Fiscal policy in the CNB's modelling system	(Box)	January 2006
Assessment of the fulfilment of the Maastricht Convergence criteria and the degree of economic alignment of the Czech Republic with the euro area	(Annex)	January 2006
Implications of household debt for consumption	(Box)	April 2006
Effective indicators of external developments	(Box)	July 2006
Oil and petrol prices in the CNB forecast	(Box)	July 2006
The role of monetary aggregates in the CNB's forecasts	(Box)	October 2006
Assessment of the fulfilment of the Maastricht convergence criteria and the degree of economic alignment of the Czech Republic with the euro area	(Annex)	October 2006
Employment of foreign nationals	(Box)	January 2007
The extension of the core prediction model to include the effect of real wages	(Box)	January 2007
The new consumer basket as from January 2007	(Box)	April 2007
Financing of non-financial corporations	(Box)	April 2007
The application of escape clauses to indirect tax changes	(Box)	April 2007
The CNB's new inflation target and changes in monetary policy communication	(Annex)	April 2007
The relationship between interest rates and the structure of new loans for house purchase	(Box)	July 2007
The CNB's new approach to the monitoring of inflation expectations of households in the Czech Republic	(Box)	July 2007
The causes, course and impacts of the current turmoil in global financial markets	(Box)	October 2007
Household debt by income group in 2006 and its impact on consumption	(Box)	October 2007
The causes of the sharp growth in world prices of cereals	(Box)	October 2007
Fiscal measures and their impact on the economy in 2008	(Box)	October 2007
The Czech Republic's updated euro-area accession strategy	(Annex)	October 2007
Changes in the conduct and communication of monetary policy	(Box)	I/2008
Publication of the forecast-consistent interest rate path and the use of fan charts	(Box)	I/2008
The quarterly financial accounts statistics – New statistics at the CNB	(Box)	I/2008
Changes to the CNB's core prediction model	(Box)	I/2008
Assessment of the fulfilment of the Maastricht convergence criteria and the degree of economic alignment of the Czech Republic with the euro area	(Annex)	I/2008
The new g3 structural model	(Box)	II/2008
Joint agreement between the Czech Government and the Czech National Bank and Updated strategy for dealing with the exchange rate effects of foreign exchange revenues of the state	(Annex)	II/2008
The sectoral and production structure of the g3 model	(Box)	III/2008
The withdrawal of 50-heller coins and its possible impact on prices	(Box)	III/2008
The impact of the still fast growing world prices of energy-producing materials on inflation in the Czech Republic	(Box)	IV/2008
Pricing in the g3 model	(Box)	IV/2008
Publication of a numerical exchange rate forecast	(Box)	I/2009
The exchange rate path in the g3 model	(Box)	I/2009
Assessment of the fulfilment of the Maastricht convergence criteria and the degree of economic alignment of the Czech Republic with the euro area	(Annex)	I/2009
Transmission of financial market interest rates to client interest rates	(Box)	II/2009
Proxying external developments after Slovakia's entry to the euro area	(Box)	II/2009
Monetary policy in the g3 model	(Box)	II/2009
Analysts' forecasts in financial market inflation expectations questionnaires: A look back at the past ten years	(Box)	II/2009
Unconventional monetary policy of selected central banks	(Box)	III/2009
Financing and financial investment of corporations and households	(Box)	III/2009
The impact of the recession on public finances in the Czech Republic	(Box)	III/2009
Investment in housing during the business cycle	(Box)	IV/2009
The effect of regulated prices and other administrative measures on inflation in 2008–2009 and their expected future development	(Box)	IV/2009
Exit strategies from unconventional monetary policy instruments planned by selected central banks	(Box)	I/2010
Uncertainties surrounding the calculation of potential output	(Box)	I/2010
Revision of the quarterly financial accounts	(Box)	I/2010
Differences in client interest rates in the Czech Republic and the euro area	(Box)	I/2010

Assessment of the fulfilment of the Maastricht convergence criteria and the degree of economic alignment of the Czech Republic with the euro area	(Annex)	I/2010
Assessment of the accuracy of the outlooks for effective GDP and CPI in the euro area – comparison of forecasts	(Box)	II/2010
Revisions to the expenditure components of GDP	(Box)	II/2010
Business and consumer sentiment in the current phase of the economic cycle according to CZSO and CNB indicators	(Box)	II/2010
The January 2010 consumer basket update	(Box)	II/2010
The effect of new photovoltaic power station installations on economic activity	(Box)	IV/2010
An analysis of household consumption	(Box)	IV/2010
Property-market-related loans in the current phase of the business cycle	(Box)	IV/2010

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 regulated prices, indirect tax changes and fuels.

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

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

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

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

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

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

Disinflation: A decline in inflation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Net inflation: Consumer price inflation net of regulated 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 transfer prices: Prices based on Ministry of Finance statistics from property transfer tax returns and published by the CZSO. These prices are the closest to actual market prices in terms of methodology, but are published with a time delay.

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

Regulated 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.

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

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

Table 1

KEY MACROECONOMIC INDICATORS		years										
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p., seas. adjusted	2,286.0	2,368.4	2,470.8	2,628.5	2,812.2	2,984.6	3,053.3	2,931.3	**2,997.9**	**3,032.5**	**3,109.6**
GDP	%, y-o-y, real terms, seas. adjusted	1.8	3.6	4.3	6.4	7.0	6.1	2.3	-4.0	**2.3**	**1.2**	**2.5**
Household consumption	%, y-o-y, real terms, seas. adjusted	2.2	5.9	2.8	2.6	5.2	4.8	3.5	-0.2	**1.0**	**0.4**	**1.4**
Government consumption	%, y-o-y, real terms, seas. adjusted	6.7	7.1	-3.5	2.9	1.2	0.7	1.0	4.2	**1.8**	**-0.2**	**1.3**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	4.5	-1.4	8.4	-0.6	10.2	9.3	-3.1	-16.8	**3.8**	**2.2**	**2.7**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	2.0	7.2	20.3	11.8	16.2	15.0	5.7	-10.5	**11.0**	**5.7**	**7.4**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	4.9	8.0	17.5	5.2	14.7	14.2	4.3	-10.4	**11.1**	**5.4**	**6.7**
Net exports	CZK bn, constant p., seas. adjusted	-146.4	-170.7	-152.5	-26.1	3.6	24.5	65.8	55.1	**57.2**	**71.3**	**101.2**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	4.1	1.6	10.4	3.9	8.3	10.6	-1.8	-13.6	-	-	-
Construction output	%, y-o-y, real terms	3.0	9.3	8.8	5.2	6.0	7.1	0.0	-0.9	-	-	-
Receipts in retail sales	%, y-o-y, real terms	1.7	7.3	3.9	8.1	10.9	9.9	2.7	-4.7	-	-	-
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	1.8	0.1	2.8	1.9	2.5	2.8	6.3	1.0	-	-	-
Consumer Price Index	%, y-o-y, average	1.8	0.1	2.8	1.9	2.5	2.8	6.4	1.1	**1.5**	**1.9**	**2.0**
Regulated prices (17.15%)*	%, y-o-y, average	5.7	0.6	3.5	5.7	9.3	4.8	15.6	8.4	**2.7**	**4.7**	**3.2**
Net inflation (82.85%)*	%, y-o-y, average	0.8	0.0	1.8	0.7	0.4	1.7	2.4	-0.9	**0.0**	**1.2**	**1.7**
Food prices (including alcoholic beverages and tobacco) (25.63%)*	%, y-o-y, average	-0.9	-1.2	2.8	0.0	-0.2	3.8	3.0	-0.9	**1.0**	**3.8**	**1.8**
Adjusted inflation excluding fuels (53.52%)*	%, y-o-y, average	2.4	0.6	1.2	0.7	0.6	0.7	2.0	0.0	**-1.2**	**-0.2**	**1.4**
Fuel prices (3.70%)*	%, y-o-y, average	-9.3	1.5	4.5	7.8	3.7	-0.3	4.3	-11.1	**11.1**	**1.3**	**4.0**
Monetary-policy inflation (excluding tax changes)	%, y-o-y, average	1.8	0.1	2.0	1.8	2.3	2.2	4.4	0.9	**0.4**	**1.8**	**1.9**
GDP deflator	%, y-o-y, seas. adjusted	2.8	0.9	4.5	-0.3	1.1	3.4	1.8	2.6	**-0.7**	**1.4**	**2.1**
Partial price indicators												
Producer prices	%, y-o-y, average	-0.5	-0.3	5.6	3.1	1.4	4.1	4.5	-3.1	**1.2**	**4.2**	**2.5**
Agricultural prices	%, y-o-y, average	-7.5	-4.5	9.6	-9.8	1.3	16.4	10.8	-24.3	**7.2**	**14.5**	**-0.1**
Construction work prices	%, y-o-y, average	2.7	2.2	3.7	3.0	2.9	3.9	4.5	1.2	-	-	-
Brent crude oil	%, y-o-y, average	2.2	15.5	32.7	42.3	20.0	11.1	34.5	-36.7	**27.5**	**9.5**	**3.1**
LABOUR MARKET												
Average monthly wages in monitored organisations	%, y-o-y, nominal terms	8.0	5.8	6.3	5.0	6.6	7.2	7.8	4.0	**2.3**	**2.6**	**4.0**
Average monthly wages in monitored organisations	%, y-o-y, real terms	6.1	5.7	3.4	3.0	4.0	4.3	1.4	3.0	**0.9**	**0.7**	**1.9**
Number of employees	%, y-o-y	-0.8	-2.0	-0.2	2.2	1.2	1.9	1.7	-2.1	**-1.9**	**-0.3**	**0.6**
Nominal unit wage costs	%, y-o-y	4.6	2.3	1.8	0.6	1.0	3.0	6.1	4.2	**-2.8**	**0.7**	**1.9**
Nominal unit wage costs in industry	%, y-o-y	0.5	3.4	-4.5	-4.0	-5.6	0.9	0.3	4.5	-	-	-
Aggregate labour productivity	%, y-o-y	1.9	3.6	4.1	5.2	4.8	3.4	1.2	-3.0	**3.5**	**1.0**	**2.4**
ILO general unemployment rate	%, average	-	7.8	8.3	7.9	7.1	5.3	4.4	6.7	**7.5**	**7.1**	**6.8**
Registered unemployment rate	%, average	-	-	10.0	9.5	8.6	7.0	5.8	8.3	**9.2**	**8.9**	**8.0**
PUBLIC FINANCE												
Public finance deficit (ESA95)	CZK bn, current p.	-166.8	-170.0	-82.7	-106.6	-84.5	-23.2	-98.6	-209.0	**-194.7**	**-157.0**	**-159.4**
Public finance deficit / GDP**	%, nominal terms	-6.8	-6.6	-2.9	-3.6	-2.6	-0.7	-2.7	-5.8	**-5.3**	**-4.2**	**-4.0**
Public debt (ESA95)	CZK bn, current p.	695.0	768.3	847.8	885.4	948.3	1,023.8	1,104.9	1,280.4	**1,451.4**	**1,597.2**	**1,745.2**
Public debt / GDP**	%, nominal terms	28.2	29.8	30.1	29.7	29.4	29.0	30.0	35.3	**39.3**	**42.2**	**44.1**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current p.	-71.3	-69.8	-13.4	59.4	65.1	120.6	102.7	180.6	**180.0**	**230.0**	**240.0**
Trade balance / GDP	%, nominal terms	-2.9	-2.7	-0.5	2.0	2.0	3.4	2.8	5.0	**4.9**	**6.1**	**6.1**
Balance of services	CZK bn, current p.	21.9	13.2	16.6	36.9	45.1	49.7	65.9	27.0	**-30.1**	**-35.0**	**-40.0**
Current account	CZK bn, current p.	-136.4	-160.6	-147.5	-39.8	-77.2	-113.1	-22.9	-37.0	**-100.4**	**-85.0**	**-100.0**
Current account / GDP	%, nominal terms	-5.5	-6.2	-5.2	-1.3	-2.4	-3.2	-0.6	-1.0	**-2.7**	**-2.2**	**-2.5**
Foreign direct investment												
Direct investment	CZK bn, current p.	270.9	53.5	101.8	279.6	90.3	179.1	36.3	26.5	**110.0**	**90.0**	**105.0**
Exchange rates												
CZK/USD	average	32.7	28.2	25.7	24.0	22.6	20.3	17.1	19.1	**19.0**	**18.3**	**18.3**
CZK/EUR	average	30.8	31.8	31.9	29.8	28.3	27.8	25.0	26.5	**25.2**	**24.3**	**23.8**
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-	-	0.0	-6.3	-5.1	-2.2	-12.5	5.6	**-4.8**	**-3.7**	**-2.1**
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-	-	-3.1	-5.6	-1.3	-3.9	-8.9	4.4	**-3.8**	**-5.3**	**-1.7**
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	-6.6	0.8	3.6	-1.5	-1.2	1.4	-4.6	0.2	**-1.1**	**-0.5**	**0.8**
Prices of imports of goods	%, y-o-y, average	-8.5	-0.3	1.6	-0.5	0.3	-1.0	-3.3	-3.5	**1.8**	**0.6**	**0.8**
MONEY AND INTEREST RATES												
M2	%, y-o-y, average	7.0	4.1	7.7	5.3	8.9	11.2	8.4	6.2	**3.5**	**6.9**	**5.9**
2W repo rate	%, end-of-period	2.75	2.00	2.50	2.00	2.50	3.50	2.25	1.00	-	-	-
3M PRIBOR	%, average	3.5	2.3	2.3	2.0	2.3	3.1	4.0	2.2	**1.3**	**1.3**	**1.8**

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

2008				2009				2010				2011				2012			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
760.0	765.3	766.6	761.4	732.5	729.2	732.8	736.8	739.6	746.6	752.6	759.2	754.2	755.2	759.5	763.6	767.9	773.8	780.4	787.5
3.1	3.5	2.2	0.5	-3.6	-4.7	-4.4	-3.2	1.0	2.4	2.7	3.0	2.0	1.2	0.9	0.6	1.8	2.5	2.8	3.1
4.5	3.7	3.0	2.6	0.8	0.0	-0.5	-1.2	0.1	0.8	1.2	2.0	0.6	0.1	0.4	0.5	0.9	1.3	1.5	1.8
-0.8	2.3	2.9	-0.4	3.1	3.4	5.5	4.8	2.8	0.9	0.9	2.8	2.6	2.0	-1.4	-3.8	-1.8	0.3	2.3	4.3
-1.8	-8.8	-10.5	9.4	-8.9	-16.2	-16.0	-25.3	-8.1	6.7	8.9	9.5	3.5	4.1	1.4	0.0	3.0	2.7	2.5	2.5
14.1	13.4	5.1	-8.7	-18.8	-15.5	-8.2	2.3	13.5	13.1	8.1	9.6	6.3	5.1	5.2	6.3	7.8	8.0	7.3	6.7
12.8	9.2	1.4	-5.3	-16.9	-14.7	-6.8	-2.1	10.8	13.8	8.8	11.3	6.3	5.7	4.5	5.0	6.9	7.0	6.6	6.3
14.2	32.1	30.0	-10.5	-4.2	21.0	16.7	21.5	13.9	19.5	12.9	11.0	15.2	15.8	18.9	21.4	23.6	24.9	25.8	26.9
2.1	3.9	0.8	-13.2	-19.0	-19.0	-13.2	-2.1	7.5	11.9	-	-	-	-	-	-	-	-	-	-
0.7	-2.3	6.4	-4.2	-10.8	1.2	0.3	2.0	-21.4	-7.2	-	-	-	-	-	-	-	-	-	-
5.3	4.7	4.5	-2.7	-4.3	-5.1	-5.4	-4.0	-0.8	1.9	-	-	-	-	-	-	-	-	-	-
4.3	5.4	6.4	6.3	5.0	3.7	2.1	1.0	0.7	0.6	1.1	-	-	-	-	-	-	-	-	-
7.4	6.8	6.6	4.7	2.2	1.4	0.2	0.4	0.7	1.1	1.9	2.1	1.9	1.7	1.9	2.0	1.9	2.0	2.1	2.1
15.0	14.7	15.8	16.9	11.2	9.8	7.5	5.2	0.8	2.3	3.6	4.0	5.4	4.5	4.5	4.5	3.4	3.4	3.1	3.0
3.6	2.9	2.9	0.4	-0.6	-0.6	-1.5	-0.7	-0.5	-0.3	0.3	0.5	1.0	1.0	1.3	1.5	1.6	1.6	1.7	1.8
5.7	3.3	3.4	-0.3	0.0	0.4	-2.0	-2.2	-1.4	-0.2	2.3	3.4	4.0	4.3	3.8	3.2	2.1	1.6	1.6	1.8
1.8	2.2	2.3	1.7	0.6	0.1	-0.5	-0.2	-1.1	-1.2	-1.2	-1.3	-0.5	-0.4	0.0	0.3	0.9	1.4	1.6	1.7
14.4	8.5	5.9	-11.5	-20.5	-15.7	-11.8	3.7	18.1	13.3	7.0	6.1	1.0	-2.1	0.8	5.5	6.3	4.2	3.0	2.5
5.3	4.6	4.7	2.9	1.6	1.3	0.2	0.4	-0.3	0.1	0.8	1.0	1.8	1.7	1.9	2.0	1.9	1.9	1.9	2.0
2.3	1.4	1.1	2.6	3.6	3.3	2.2	1.3	-1.7	-1.2	-0.1	0.2	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.3
5.6	5.1	5.5	1.7	-1.1	-3.6	-5.2	-2.6	-1.4	1.3	2.2	2.9	4.8	4.1	4.0	3.9	2.4	2.4	2.6	2.5
26.7	27.2	7.7	-18.5	-27.8	-29.5	-23.8	-16.0	-5.6	-1.4	8.2	27.5	24.8	20.8	12.6	-0.2	-2.7	-1.1	0.8	2.7
4.7	5.0	4.5	3.9	2.8	1.4	0.5	0.3	0.1	-0.2	-0.2	-	-	-	-	-	-	-	-	-
66.1	77.8	54.7	-36.7	-53.3	-51.5	-41.1	33.3	70.5	33.1	11.8	11.8	10.8	9.3	13.8	4.7	4.1	3.5	2.8	2.2
9.9	7.3	7.1	7.4	2.9	3.2	4.6	5.2	2.2	2.4	2.6	2.2	2.4	2.7	2.9	2.6	5.3	3.9	3.2	3.7
2.3	0.5	0.5	2.6	0.8	1.8	4.5	4.8	1.5	1.2	0.7	0.0	0.4	0.9	0.9	0.6	3.3	1.8	1.1	1.5
2.1	1.9	1.7	1.2	-0.9	-1.8	-2.8	-2.9	-3.2	-2.6	-0.9	-0.7	0.1	-0.1	-0.2	-0.9	0.2	0.2	0.7	1.2
8.0	5.3	4.5	6.9	5.0	4.4	4.7	2.9	-3.0	-2.3	-3.0	-3.0	-0.5	0.9	1.5	1.0	3.5	1.5	1.0	1.7
3.3	-1.4	-1.1	1.1	4.5	5.2	5.1	3.0	-6.5	-4.4	-	-	-	-	-	-	-	-	-	-
1.4	2.5	1.9	-1.0	-3.6	-4.1	-3.1	-1.0	3.1	4.0	3.4	3.3	1.2	1.0	1.0	0.8	1.9	2.3	2.5	2.7
4.7	4.2	4.3	4.4	5.8	6.3	7.3	7.2	8.0	7.1	7.5	7.2	7.1	6.8	7.3	7.2	7.0	6.5	7.0	6.6
6.3	5.5	5.6	5.8	7.5	8.1	8.7	9.0	10.1	9.1	8.8	8.8	9.6	8.8	8.7	8.3	8.9	8.0	7.7	7.2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42.9	39.3	27.0	-6.6	41.7	52.4	44.2	42.2	64.2	53.8	34.0	28.0	68.0	63.0	54.0	45.0	70.0	65.0	57.0	48.0
4.9	4.2	2.9	-0.7	4.8	5.7	4.9	4.6	7.4	5.8	3.6	2.9	7.6	6.6	5.7	4.6	7.5	6.5	5.7	4.7
19.2	19.1	15.0	12.6	14.7	9.4	2.7	0.2	-7.2	-4.8	-9.0	-9.0	-8.0	-9.0	-9.0	-9.0	-10.0	-10.0	-10.0	-10.0
53.3	-31.1	-7.3	-37.8	25.0	-30.7	-23.7	-7.5	19.1	-29.5	-58.0	-32.0	22.0	-40.0	-52.0	-15.0	17.0	-45.0	-54.0	-18.0
6.1	-3.3	-0.8	-4.0	2.8	-3.3	-2.6	-0.8	2.2	-3.2	-6.2	-3.3	2.5	-4.2	-5.4	-1.5	1.8	-4.5	-5.4	-1.7
-23.6	32.8	16.4	10.7	14.7	-0.3	-17.9	30.0	36.2	29.1	-	-	-	-	-	-	-	-	-	-
17.1	15.9	16.1	19.3	21.2	19.6	17.9	17.5	18.7	20.1	19.3	18.0	18.3	18.3	18.4	18.4	18.4	18.3	18.3	18.2
25.5	24.8	24.1	25.4	27.6	26.7	25.6	25.9	25.9	25.6	24.9	24.5	24.4	24.3	24.2	24.1	24.0	23.9	23.8	23.7
-12.2	-14.7	-15.9	-7.2	7.4	6.7	6.1	2.2	-6.0	-3.9	-3.1	-5.9	-6.2	-5.1	-2.4	-1.0	-1.4	-1.9	-2.4	-2.6
-9.9	-11.1	-11.4	-3.0	8.6	6.1	3.4	-0.6	-6.1	-3.3	-1.3	-4.7	-7.2	-6.7	-4.5	-2.9	-1.3	-1.5	-1.9	-2.0
-4.3	-6.2	-6.5	-1.2	5.2	1.3	-2.2	-3.5	-6.5	-0.3	2.1	0.2	-0.6	-2.0	-0.3	1.0	1.0	0.8	0.7	0.6
-3.0	-4.4	-4.0	-1.6	1.6	-2.9	-7.0	-5.7	-4.4	2.5	5.7	3.4	1.5	-1.0	0.2	1.5	1.2	0.9	0.6	0.3
10.1	7.6	8.3	7.6	8.8	7.5	4.6	4.1	2.8	4.8	4.8	4.7	8.2	6.3	6.6	6.7	5.9	5.7	5.8	6.3
3.75	3.75	3.50	2.25	1.75	1.50	1.25	1.00	1.00	0.75	0.75	-	-	-	-	-	-	-	-	-
4.0	4.2	3.9	4.1	2.7	2.3	2.0	1.8	1.5	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.5	1.7	2.0	2.3

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