INFLATION REPORT / I

2015

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 Bank Board's final decision may not correspond to the message of the forecast due to the arrival of new information since the forecast was drawn up and to 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.

This Inflation Report was approved by the CNB Bank Board on 12 February 2015 and contains the information available as of 23 January 2015. Unless stated otherwise, the sources of the data contained in this Inflation Report are the CZSO or the CNB. All the Inflation Reports published to date are available on the CNB website. Underlying data for the tables and charts presented in the text of this Inflation Report, minutes of Bank Board meetings, and time series of selected economic and monetary indicators (available in the ARAD database) are published at the same internet address.

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I. SUMMARY

The Czech economy continued to expand at the end of 2014. Both headline and monetary policy-relevant inflation decreased, thus remaining well below the lower boundary of the tolerance band around the CNB's target. The fall in inflation was due to a drop in world prices of oil and a decline in food prices. The pass-through of the weakened exchange rate to inflation through higher import prices is fading, but the exchange rate is still contributing to growth in the domestic economy, which is fostering higher prices. Thanks to recovering external demand, low oil prices, easy domestic monetary conditions and expansionary fiscal policy, GDP will grow by 2.6% this year and pick up to 3% in 2016. The growing economic activity and accelerating wage growth will contribute to growth in the price level, whereas import prices will slow inflation significantly this year. Both headline and monetary policy-relevant inflation will be at zero or slightly negative levels in 2015. In 2016, they will rise to the CNB's 2% target as the year-on-year fall in oil prices and the deflationary tendencies in the euro area dissipate. The forecast expects market interest rates to be flat at their current very low level and the koruna exchange rate to be used as a monetary policy instrument until the end of 2016, i.e. over the entire forecast horizon. The subsequent return to conventional monetary policy will not imply appreciation of the exchange rate to the level recorded before the CNB started intervening.

The Czech economy expanded by 2.4% year on year **in 2014 Q3**, with all domestic demand components making positive contributions. By contrast, the contribution of net exports was negative. GDP also continued to grow in quarter-on-quarter terms. The forecast predicts a slightly lower annual GDP growth rate in 2014 Q4, with an increase in the negative contribution of net exports.

Both **headline and monetary policy-relevant inflation decreased in 2014 Q4**, thus remaining well below the lower boundary of the tolerance band around the CNB's target at the end of the year (see Chart I.1). Administered prices continued to fall year on year and fuel and food prices also started to decrease in December. Adjusted inflation excluding fuels rose slightly, reflecting the weakened koruna, the growth in the domestic economy and wage growth.

Economic activity in the **effective euro area** has recorded only weak growth for several quarters now. According to the assumptions of the forecast, its growth will reach 1.5% this year and increase further to 2% in 2016. Inflation in the euro area remains very subdued owing mainly to falling energy commodity prices amid a persisting negative output gap and only slowly recovering consumer demand. Industrial producer prices are falling year on year and consumer price inflation is negative in most euro area countries. Prices are expected to change trend this year thanks to an increase in the growth rate of the euro area economy and a weakening exchange rate of the euro. The dissipation of deflationary pressures should also be fostered by

CHART I.1

FULFILMENT OF THE INFLATION TARGET

Headline inflation was well below the lower boundary of the tolerance band around the CNB's target at the end of 2014
(year on year in %)

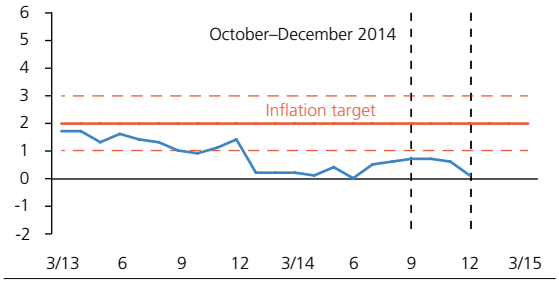
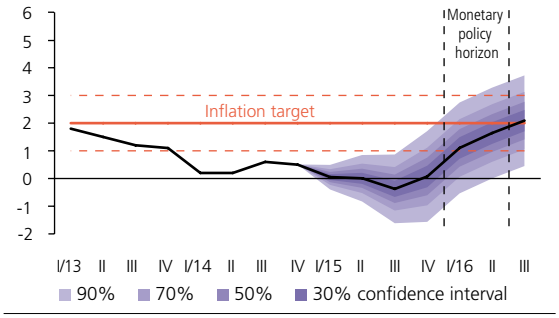


CHART I.2

HEADLINE INFLATION FORECAST

Headline inflation will fluctuate around zero in 2015 and rise to the target next year
(year on year in %)



a further easing of monetary policy by the ECB using unconventional instruments, which is reflected in a low outlook for 3M EURIBOR rates. The outlook for the Brent crude oil price takes into account its recent decline and expects it to rise modestly in the future.

The **forecast** expects both **headline and monetary policy-relevant inflation** to be at zero or slightly negative levels in 2015 and then rise to the 2% target in 2016 (see Charts I.2 and I.3). The overall upward pressures on consumer prices will almost disappear in the near term, as a decline in producer prices in the euro area coupled with a fall in global prices of energy commodities will result in a substantial decrease in costs stemming from import prices. The anti-inflationary effect of import prices will subside at the start of 2016. By contrast, continued growth in domestic economic activity and gradually accelerating wage growth will foster higher prices over the entire forecast horizon. This will result in a renewed upward trend in adjusted inflation excluding fuels as from 2015 H2. Administered prices will continue to decline this year and return to modest growth in 2016. The same applies to fuel prices. Food prices will also fall in the near term owing to agricultural producer price developments and will then return to growth.

The forecast expects market **interest rates** to be flat at their current very low level until the end of 2016, i.e. over the entire forecast horizon (see Chart I.4). This reflects an assumption that the 2W repo rate will be left at technical zero and the money market premium will be kept unchanged in the same period. The short-term forecast for the **exchange rate of the koruna against the euro** in 2015 Q1 takes into account its depreciation in the first half of January. It is expected to be stable in the following quarters at a similar level to that observed last year, slightly weaker than the announced asymmetric exchange rate commitment (i.e. CZK 27 to the euro). The forecast expects the exchange rate to be used as a monetary policy instrument until the end of 2016, i.e. over the entire forecast horizon. By then, thanks to the economic recovery and rising wages, domestic inflationary pressures should be sufficiently restored to allow a return to conventional monetary policy. However, this return should not result in the exchange rate appreciating to the level recorded before the CNB started intervening, as the weaker exchange rate of the koruna has in the meantime been passing through to the price level and other nominal variables.

The **Czech economy** will continue to grow (see Chart I.5). Accelerating external demand, low oil prices, easy domestic monetary conditions via the weakened koruna and exceptionally low interest rates, and expansionary fiscal policy will lead to GDP growth of 2.6%. Economic growth will accelerate to 3% next year despite falling government investment, thanks mainly to a further pick-up in external demand growth. The rising economic activity is manifesting itself in the **labour market** in growth in the number of employees converted into full-time equivalents. This growth will continue over the forecast horizon. The unemployment rate will continue to decrease gradually. Wage growth in the business sector will increase, and the same will apply to wages in the non-business sector this year.

CHART I.3

MONETARY POLICY-RELEVANT INFLATION FORECAST

Monetary policy-relevant inflation will fall in 2015 and rise to the target at the end of the monetary policy horizon
(year on year in %)

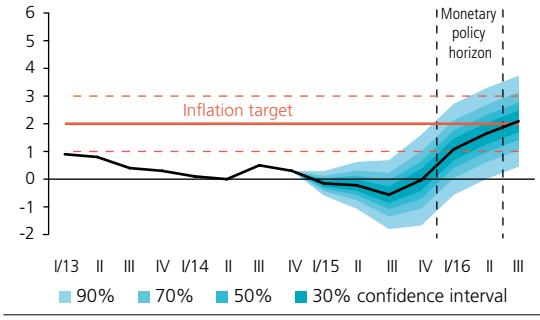


CHART I.4

INTEREST RATE FORECAST

The forecast expects market interest rates to be flat at their current very low level until the end of 2016, i.e. over the entire forecast horizon
(3M PRIBOR in %)

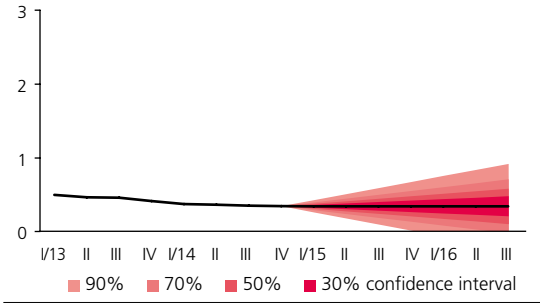
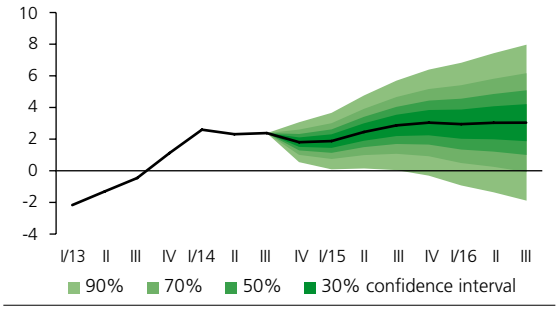


CHART I.5

GDP GROWTH FORECAST

GDP growth will gradually accelerate after temporarily slowing in late 2014 and early 2015
(annual percentage changes; seasonally adjusted)



At its monetary policy meeting on 5 February 2015, the Bank Board decided unanimously to keep interest rates unchanged at technical zero. The Bank Board also decided to continue **using the exchange rate as an additional instrument for easing the monetary conditions** and confirmed the CNB's commitment to intervene on the foreign exchange market if needed to weaken the koruna against the euro so that the exchange rate of the koruna is kept close to CZK 27 to the euro. The asymmetric nature of this exchange rate commitment is unchanged. The Bank Board considers the risks to the new forecast to be balanced, although the degree of uncertainty has increased. In this situation, the Bank Board stated that the Czech National Bank would not discontinue the use of the exchange rate as a monetary policy instrument before the second half of 2016. The Czech National Bank stands ready to move the level of the exchange rate commitment if there were to be a long-term increase in deflation pressures capable of causing a slump in domestic demand, renewed risks of deflation in the Czech economy and a systematic decrease in inflation expectations.

II. THE FORECAST, ITS CHANGES AND RISKS

II.1 EXTERNAL ASSUMPTIONS OF THE FORECAST

External demand growth is expected to pick up this year and the next. The decrease in energy commodity prices is reflected in an outlook for continuing subdued growth in industrial producer prices, which will not start rising until the second half of this year. Consumer prices will also rise only slightly from very low levels owing to slowly recovering demand. The ECB responded to the subdued inflation by further easing monetary policy. This is reflected in the outlook for 3M EURIBOR rates, which is close to zero until the end of 2016. The euro is expected to weaken against the dollar over the entire forecast horizon. The outlook for the Brent crude oil price reflects its recent decline and foresees only moderate growth in the period ahead.

The outlook for the **effective indicator of euro area GDP** foresees a pick-up in economic growth to 1.5% this year. This is 0.5 percentage point higher than in 2014 (see Chart II.1.1).[1] The expected growth in the effective indicator is driven mainly by the German and Slovak economies, which account for the largest shares of Czech exports. Economic growth in the effective euro area is expected to continue accelerating next year, to 2% on average. Compared to the previous forecast, this represents a shift in the outlook towards slightly slower external demand growth over the entire forecast horizon. Slowing demand in emerging countries and developments in Russia and Ukraine remain risks. By contrast, the positive effects of the oil price slump and the ECB's actions may be larger than expected.

The marked decline in energy commodity prices coupled with only sluggish growth in economic activity is reflected in the outlook for the **effective indicator of industrial producer prices in the euro area** (see Chart II.1.2). Its growth is expected to return to positive values in the second half of this year thanks to an accelerating economic recovery. Producer prices are thus expected to increase by only 0.2% for the year as a whole on average. In 2016, producer price inflation is expected to rise to 1.6% on average. The outlook is substantially lower than the previous forecast.

The expected growth of the **effective indicator of consumer prices in the euro area** mainly reflects falling prices of energy for households and low food prices amid a persisting negative output gap and only slowly recovering consumer demand. Most euro area

1 The outlooks for euro area GDP, PPI and CPI and the dollar-euro exchange rate are based on the January Consensus Forecasts (CF). The outlooks for the 3M EURIBOR and Brent crude oil are derived from prices of market contracts as of 12 January 2015. The outlook is indicated by the grey areas in the charts. This convention is used throughout this Report. The differences between the previous and new forecast for already known facts are due, in addition to revisions, to an update of the weights of individual countries in Czech exports, to new seasonal adjustment and, in the case of GDP, to a revision of the national accounts according to the ESA 2010 methodology.

CHART II.1.1

EFFECTIVE GDP IN THE EURO AREA

External demand growth is expected to pick up this year and the next

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

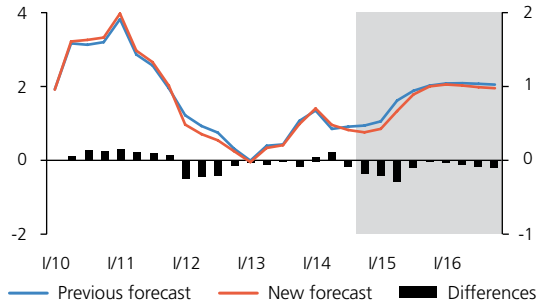


CHART II.1.2

EFFECTIVE PPI IN THE EURO AREA

The decline in industrial producer prices, reflecting, among other things, the current marked decline in energy commodity prices, is expected to fade in 2015 H2

(year on year in %; differences in percentage points – right-hand scale; seasonally adjusted)

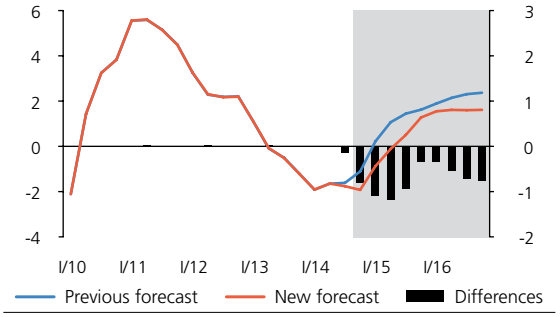


CHART II.1.3

EFFECTIVE CPI IN THE EURO AREA

Consumer price inflation is expected to be below the 2% definition of price stability over the entire forecast horizon

(year on year in %; differences in percentage points – right-hand scale; seasonally adjusted)

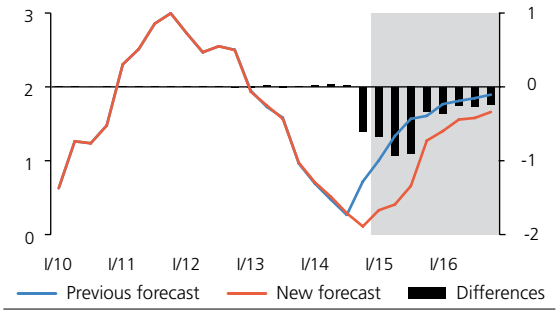


CHART II.1.4

3M EURIBOR

The very subdued inflation and the ECB's continuing easy monetary policy is reflected in a low interest rate outlook
(in %; differences in percentage points – right-hand scale)

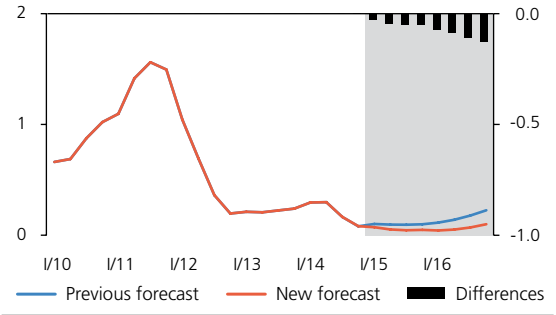


CHART II.1.5

EURO-DOLLAR EXCHANGE RATE

The euro is expected to continue depreciating gradually against the dollar
(USD/EUR; differences in % – right-hand scale)

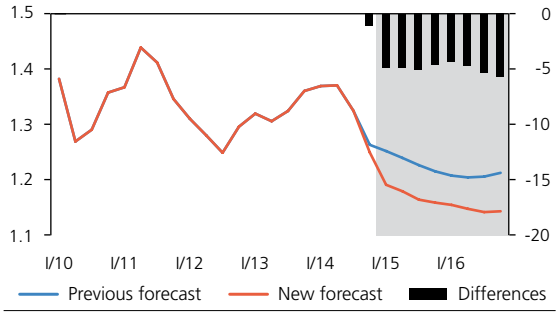
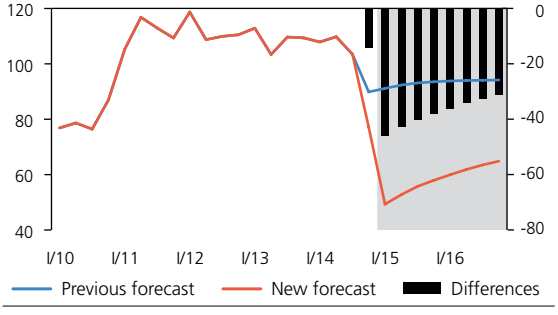


CHART II.1.6

PRICE OF BRENT CRUDE OIL

Following a fall in late 2014 and early 2015, the price of Brent crude oil is expected to rise gradually over the forecast horizon
(USD/barrel; differences in % – right-hand scale)



countries were thus in deflation at the end of last year. Consumer price inflation is expected to rise to 0.7% on average for 2015 as a whole and accelerate further to 1.5% in 2016 (see Chart II.1.3). The easing of ECB monetary policy is expected to contribute. Compared to the previous forecast, however, this represents a shift to lower inflation levels over the entire horizon.

The low level of **3M EURIBOR interest rates** reflects the current deflation in some euro area countries and an outlook for very subdued inflation in the medium term. Consistent with this is the easy monetary policy of the ECB, which announced a further easing via unconventional instruments on 22 January (see section III.7). Over the entire forecast horizon, 3M EURIBOR rates should be only just above the zero bound (see Chart II.1.4), i.e. at slightly lower levels compared to the previous forecast. The market outlook for foreign interest rates is in line with the expectations of the analysts surveyed in the January CF, who expect the 3M EURIBOR to be flat at the current level of 0.1% at the 3–12-month horizon. At the same time, most of the analysts expect the ECB's main refinancing rate to stay at the current level of 0.05% at least until the end of this year.

The outlook for the **euro-dollar exchange rate** foresees a continued weakening trend for the euro (see Chart II.1.5). Compared to the previous forecast, this means a shift towards a much weaker euro owing to poorer performance of the European economy and a further easing of monetary policy in the euro area by the ECB. By contrast, the Fed discontinued its quantitative easing policy. The average rate is thus expected to be USD 1.17 to the euro this year and USD 1.15 in 2016. However, the current exchange rate is already well below these levels and is the lowest since 2003.

The outlook for the **Brent crude oil price** based on market futures contracts reflects its fall in late 2014 and early 2015. From the whole-year perspective, the price of oil is expected to be 45% lower this year than in 2014, i.e. at USD 54 a barrel (see Chart II.1.6). From an initial level of roughly USD 50 a barrel it is predicted to rise gradually over the forecast horizon to about USD 65 a barrel at the end of 2016.[2] The current slump in oil prices is a result of increased oil production in North America and the Middle East, an expected slowdown in global growth (in particular, lower expected performance in emerging economies) and a strengthening dollar. The analysts surveyed in the January CF predict the price of Brent crude oil 12 months ahead to be USD 8 a barrel higher than the market outlooks, at approximately USD 67 a barrel.

2 For details see Box 2 in section III.7.

II.2 THE FORECAST

Both headline and monetary policy-relevant annual inflation were slightly positive on average in 2014 Q4. The forecast expects them to be at zero or slightly negative levels in 2015 and then rise to the 2% target in 2016. The anti-inflationary effect of import prices observed at the end of last year will strengthen substantially at the start of this year owing to a decline in producer prices in the euro area magnified by a fall in energy commodity prices amid a slightly weaker koruna. Next year, import prices will have a modest inflationary effect. The domestic economy will contribute to price growth over the entire forecast horizon as a result of a gradual recovery in wage growth. Following a temporary slowdown in late 2014 and early 2015, GDP growth will accelerate gradually thanks to a recovery in external demand, still easy monetary conditions, an increase in government investment and the positive supply effect of low oil prices. The contribution of fiscal policy to economic growth will be positive this year and slightly negative in 2016. The economic growth will also give rise to a further improvement in the situation on the labour market. The forecast expects market interest rates to be flat at their current very low level and the koruna exchange rate to be used as a monetary policy instrument until the end of 2016, i.e. over the entire forecast horizon.

Annual **headline inflation** averaged 0.5% in 2014 Q4, but decreased gradually to 0.1% in December. It was thus still below the lower boundary of the tolerance band around the CNB's target. Headline inflation will be only 0.1% in 2015 Q1 due to a fall in fuel prices and a modest decline in food prices. Headline inflation will be close to zero in 2015 as a whole, except in Q3, when it will temporarily turn slightly negative owing to an expected marked decline in administered prices, which will gradually reflect the fall in energy commodity prices on global markets. The unwinding of the year-on-year fall in energy commodity prices and of the deflationary tendencies in the euro area, combined with a continuing inflationary effect of the domestic economy, will increase inflation next year. Headline inflation will thus reach the CNB's 2% target in the second half of 2016 (see Chart II.2.1).

Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, also decreased gradually in 2014 Q4 and turned slightly negative in December. It averaged 0.3% in 2014 Q4, well below the lower boundary of the tolerance band around the CNB's target. Over the forecast horizon, monetary policy-relevant inflation will follow a similar path to headline inflation, although until the end of 2015 it will be slightly lower, i.e. negative, owing to positive first-round effects of changes to indirect taxes (see Chart II.2.1). In 2016 it will be the same as headline inflation, i.e. it will rise to the 2% target at the end of the monetary policy horizon.

The contribution of changes to **indirect taxes** to annual headline inflation averaged 0.1 percentage point in 2014 Q4. This reflected two harmonisation increases in excise duty on cigarettes in January and December 2014. The impact of the January increase on end prices was

CHART II.2.1

HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

Both headline and monetary policy-relevant annual inflation will fluctuate around zero in 2015 and rise to the 2% target in 2016
(year on year in %)

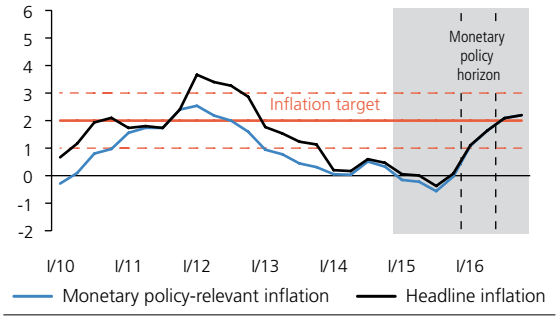


CHART II.2.2

ADMINISTERED PRICES AND FUEL PRICES

Both administered prices and fuel prices will fall this year and start rising again in 2016
(annual percentage changes; fuel prices excluding first-round effects of indirect tax changes)

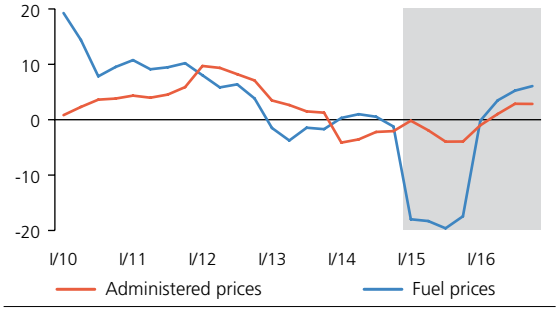


TABLE II.2.1

FORECAST OF ADMINISTRATIVE EFFECTS

The fall in administered prices this year will be due mainly to the abolition of fees in health care and falling energy prices
(annual average percentage changes; contributions to headline inflation in percentage points)

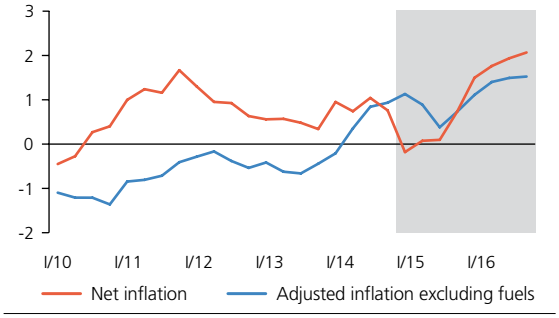
	2014 actual		2015 forecast		2016 forecast	
Administered prices – total[a)]	-3.0	-0.51	-2.5	-0.42	1.4	0.24
of which (main changes):						
electricity	-10.3	-0.49	-2.1	-0.10	0.7	0.03
natural gas	-2.4	-0.07	-9.6	-0.28	0.7	0.02
heat	0.5	0.01	3.4	0.07	3.0	0.06
water	3.4	0.03	2.5	0.02	3.0	0.03
health care	-5.6	-0.07	-17.4	-0.20	2.0	0.02
First-round impacts of indirect tax changes in non-administered prices		0.13		0.21		0.01

a) Including effects of indirect tax changes

CHART II.2.3

NET INFLATION AND ADJUSTED INFLATION EXCLUDING FUELS

Market price inflation will be close to zero in the near future but will start accelerating visibly at the end of this year
(year on year in %)



delayed significantly by substantial frontloading of tobacco products by producers and retailers. The second (December) increase in excise duty on cigarettes also started to affect prices slightly at the end of 2014. Since frontloading is legally limited to two months, the full pass-through of this change to end prices (a total effect of 0.2 percentage point) can be expected in the first few months of 2015. In addition, a second reduced VAT rate of 10% on medicines, books and irreplaceable infant food was introduced with effect from 1 January 2015. The first-round effect of this change on headline inflation is -0.07 percentage point and pertains primarily to non-administered prices. No changes to indirect taxes are foreseen by the forecast for 2016.

The year-on-year decline in **administered prices** continued into 2014 Q4 (see Chart II.2.2), reflecting a sharp fall in retail energy prices and the abolition of hospital stay fees in January 2014. The decline in administered prices will almost halt temporarily at the start of 2015, but will then accelerate again. Administered prices will decrease by 2.5% on average. Except for the emergency fee, administrative fees in health care were abolished at the start of the year. A decline in administered prices will also be fostered by a further drop in electricity prices, which, however, will be noticeably smaller than last year. By contrast, growth in water supply and sewerage collection charges will remain positive this year. Administered prices will fall more significantly in the following quarters of this year owing to an expected fall in retail prices of natural gas. Following the fall in prices of oil on world markets, the forecast also foresees a minor fall in the commodity component of the gas price, which, in an environment of competition between suppliers of gas to households, will be partly reflected in end prices in 2015 Q2 and Q3. Announced cuts in Prague public transport fares will also contribute to the decline in administered prices this year. Administered prices will start rising in 2016 (by 1.4% on average) as the effects of the 2015 fall in gas prices unwind and the other items increase slightly as well (see Table II.2.1). The following text describes the forecast excluding the first-round effects of changes to indirect taxes.

Annual **net inflation** slowed slightly to 0.8% on average in 2014 Q4 (see Chart II.2.3). This was due to fuel and food prices switching from modest growth to annual decline. By contrast, adjusted inflation excluding fuels continued to edge up as a result of the pass-through of the weakened exchange rate of the koruna and a slightly inflationary effect of the real economy and the labour market. The forecast expects net inflation to turn negative at the start of 2015 due to a sharp fall in fuel prices and a temporary decline in food prices.[3] Net inflation will

3 The marked depreciation of the koruna against the dollar will affect net inflation in the opposite direction, albeit to a small extent. In addition to a partial moderation of the impact of falling global oil prices, this will have a slight inflationary effect on some other imported commodities traded in dollars on global markets. These include electronics (2.9% of the consumer basket) and certain foods (about 1.2% of the consumer basket). However, given the historically only weak reaction of these prices to movements in the koruna's exchange rate against the dollar and their low weight in the consumer basket, the weakened exchange rate against the dollar has only a marginal impact on headline inflation.

increase again in the rest of 2015 as food prices return to year-on-year growth and will stand at about 2% in 2016 H2.

Annual **adjusted inflation excluding fuels** increased slightly further in 2014 Q4, averaging 0.9%. Faster growth in prices of tradable and non-tradable commodities reflected the effect of the weakened exchange rate and the growing domestic economy. The forecast assumes a further modest rise in adjusted inflation excluding fuels at the start of 2015. However, this indicator of core inflation will then decrease slightly again as a result of the unwinding of the direct effect of the weakened exchange rate and still very subdued inflation abroad. Adjusted inflation excluding fuels will start rising again at the end of this year and reach roughly 1.5% in 2016 H2 (see Chart II.2.3). This will be fostered by a continuing inflationary effect of the domestic economy combined with the fading of deflationary pressures from the euro area.

Food prices increased by 0.7% on average in 2014 Q4 but slowed during the quarter, switching to an annual decline in December. This reflected a long-running fall in agricultural producer prices due to the good harvest in 2014 and the embargo on imports to Russia. Conversely, the opposite effect of the year-on-year weakening of the koruna via prices of imported food was by now negligible. The forecast assumes a continuing decline in food prices in 2015 Q1, but a return to annual growth after that. This will reflect renewed growth in agricultural commodity prices, which will rebound at the start of this year due to less favourable estimates for harvests in the southern hemisphere. Food price inflation will rise further in 2016, averaging 2.4% (see Chart II.2.4).

Fuel prices started to decline year on year in 2014 Q4. This was due to fall in world oil prices, which was only partly offset by a weaker exchange rate of the koruna against the dollar. At the same time, increased price dispersion can be seen among individual sellers, reflecting uneven incorporation of the decline in costs into end prices. A continuing shift to lower average values, as already observed in January 2015, can therefore be expected. The forecast assumes a further deepening of the annual decline in fuel prices to as much as 20% in the months ahead (see Chart II.2.5). Fuel prices will return to annual growth in 2016 as world prices of petrol and oil return to a slightly rising path.

Domestic money market **interest rates** remained flat at historical lows at all maturities in 2014 Q4. The forecast expects market interest rates to be flat at their current very low level until the end of 2016, i.e. over the entire forecast horizon (see Chart II.2.6). This reflects an assumption that the 2W repo rate will be left at technical zero and the money market premium will be kept unchanged in the same period.

The **exchange rate of the koruna against the euro** remained at CZK 27.6 in 2014 Q4. The short-term forecast for 2015 Q1 takes into account its depreciation in the first half of January. The forecast assumes that it will be stable in the following quarters at a similar

CHART II.2.4

FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

Food prices will fall temporarily at the start of 2015 owing to a decline in agricultural producer prices, but will then start rising again
(annual percentage changes)

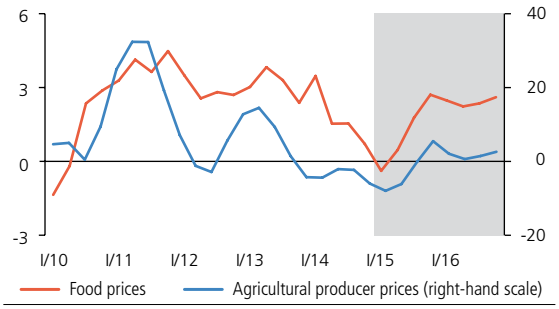


CHART II.2.5

FUEL PRICES AND OIL PRICES

Fuel prices will fall year on year until the start of 2016 due to world oil prices
(annual percentage changes)

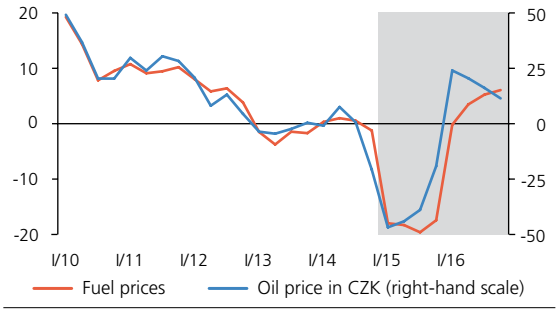
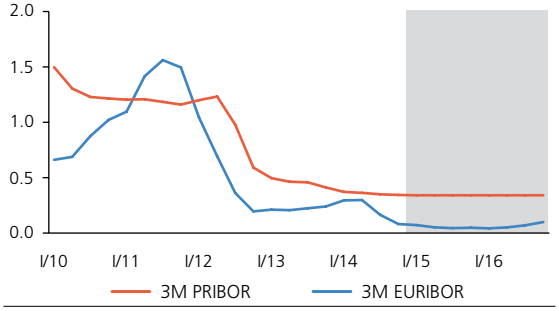


CHART II.2.6

INTEREST RATE FORECAST

The forecast expects market interest rates to be flat at their current very low level until the end of 2016, i.e. over the entire forecast horizon
(percentages)

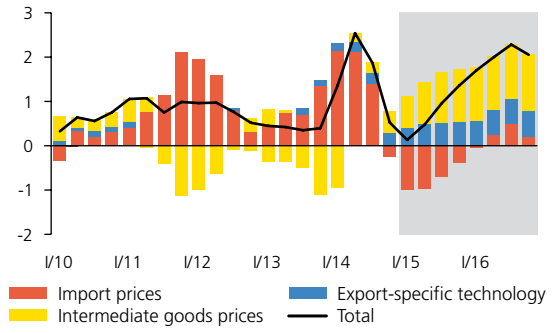


level to that observed last year, slightly weaker than the announced asymmetric exchange rate commitment (i.e. CZK 27 to the euro). The forecast expects the exchange rate to be used as a monetary policy instrument until the end of 2016, i.e. over the entire forecast horizon. By then, thanks to the economic recovery and rising wages, domestic inflationary pressures should be sufficiently restored to allow a return to conventional monetary policy, aided by renewed price growth abroad. However, this return should not result in the exchange rate appreciating to the level recorded before the CNB started intervening, as the weaker exchange rate of the koruna has in the meantime been passing through to the price level and other nominal variables. Given the CF outlook for a gradually depreciating euro against the dollar (see section II.1), this implies gradual depreciation of the koruna-dollar rate over almost the entire forecast horizon.

CHART II.2.7

COSTS IN THE CONSUMER SECTOR

Growth in prices in the consumer sector will reflect the increasing inflationary effect of the domestic economy, while the contributions of import prices will be negative this year
(quarterly percentage changes; contributions in percentage points; annualised)

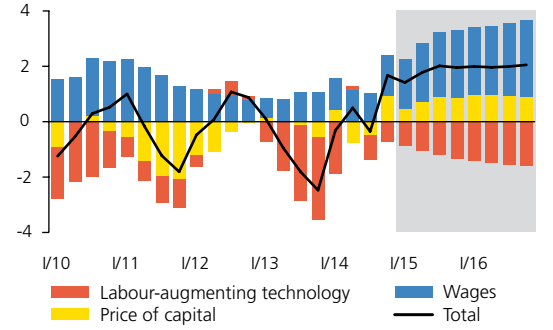


Quarterly growth in **nominal marginal costs in the consumer goods sector** slowed considerably in 2014 Q4 (see Chart II.2.7), contributing only slightly to the increase in the price level. The contribution of import prices turned negative due to the fall in prices of oil and petrol and to deflation in euro area industrial producer prices. Intermediate goods prices, reflecting the growing domestic economic activity and observed nominal wage growth, contributed to higher costs for the third consecutive quarter. The estimated impact on inflation of growth in export-specific technology, linked to different productivity growth in tradables and non-tradables (the Balassa-Samuelson effect), has been substantially weaker than in the pre-crisis period for some time now. The upward cost pressures on consumer prices will fade almost to zero at the start of 2015. Very low foreign producer price inflation coupled with a fall in global prices of energy commodities will result in a substantial decrease in costs stemming from import prices. The anti-inflationary effect of import prices will subside at the start of next year in connection with the expected return of energy commodity prices and euro area industrial producer prices to annual growth, and import prices will start to have a slightly inflationary effect again. Developments in the domestic economy will raise costs via rising intermediate goods prices over the entire forecast horizon, reflecting gradually accelerating wage growth and continued growth in economic activity. Growth in total costs will reach around 2% at the end of the horizon, allowing inflation to stabilise close to the CNB's target.

CHART II.2.8

COSTS IN THE INTERMEDIATE GOODS SECTOR

Domestic costs will rise mainly due to accelerating wage growth
(quarterly percentage changes; contributions in percentage points; annualised)



Nominal marginal costs in the intermediate goods sector rose in 2014 Q4. This was mainly due to expected nominal wage growth in the business sector outpacing labour productivity growth. The price of capital also made a positive contribution to the growth in marginal costs, reflecting the recovery in investment activity and overall economic activity in the growth phase of the business cycle (see Chart II.2.8). Domestic nominal costs will continue to rise in the quarters ahead on the back of gradually accelerating wage growth and continued growth in the price of capital. However, these cost pressures will be partly offset by accelerating labour productivity growth over the entire forecast horizon.

The negative gap in **profit mark-ups in the consumer goods sector** widened further in 2014 Q4, despite only a weak rise in overall production costs (driven by positive wage developments), as inflation was even more subdued due to the decline in prices of fuels and food. In 2015, the gap in mark-ups will gradually close amid continuing pass-through of rising costs (especially from the domestic economy) to end prices. The fall in energy commodity prices will have a positive effect on the cost side. A rapid increase in inflation to the 2% target will help close the gap in profit mark-ups next year (see Chart II.2.9).

Annual growth in whole-economy **labour productivity** slowed slightly to 2.2% in 2014 Q3. It is expected to slow further in Q4 in connection with the expected decline in annual GDP growth. In 2014 as a whole, labour productivity is expected to rise by around 2%. Productivity growth will be 2.2% in 2015 and rise to 2.7% in 2016. Its path will be influenced by a gradual pick-up in economic growth accompanied by modest growth in total employment.

The average nominal **wage in the business sector** rose by 2.2% year on year (seasonally adjusted) in 2014 Q3. The forecast for Q4 assumes a pick-up in wage growth to 3%, largely due to base effects. This assumption takes into account leading indicators of wage growth in October and November in industry and construction. Annual wage growth in 2014 was still affected by tax optimisation in late 2012 and early 2013 (for details see section III.4.2). According to the forecast, average wage growth should gradually increase on the back of accelerating growth in domestic economic activity and a return of inflation to the target in 2016. The forecast expects wage growth in the business sector to reach 2.5% for 2015 as a whole and rise to 3.8% in 2016 (see Chart II.2.10).

Average nominal **wage growth in the non-business sector** was 1.9% in 2014 Q3. The forecast assumes a relatively pronounced increase in Q4, due mainly to a rise in public sector wages in November (see Chart II.2.10). Wage growth is expected to stand at 2.8% in 2014 as a whole. Given the further increase in wages in January, the rate of growth of wages in the non-business sector should increase further to 3.7% this year. In 2016, conversely, it will slow to 2.5% owing to dissipation of the wage increase recorded in late 2014 and early 2015.

Real GDP recorded a year-on-year increase of 2.4% and a quarter-on-quarter rise of 0.4% **in 2014 Q3** (see Chart II.2.11). All components of domestic demand made positive contributions to the year-on-year growth, with fixed investment being the main driver. Conversely, the contribution of net exports was slightly negative (see Chart II.2.12). According to the forecast, economic activity rose by 1.8% year on year and 0.5% quarter on quarter **in 2014 Q4**. The expected annual GDP growth was fostered by all components of domestic demand, and most of all by change in inventories. The negative contribution of net exports increased. **In 2014** as a whole, GDP is expected to grow by 2.3%.

CHART II.2.9

GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

The negative gap in profit mark-ups will gradually close
(percentages)

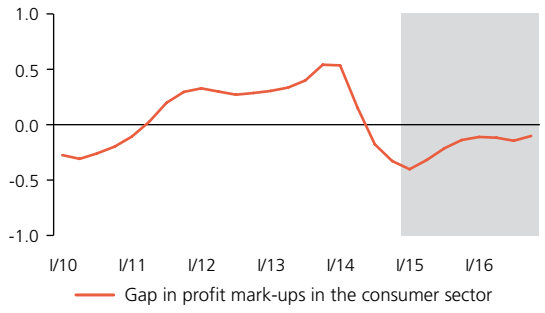


CHART II.2.10

AVERAGE NOMINAL WAGE

Wage growth in the business sector will pick up
(annual percentage changes; business sector – seasonally adjusted; non-business sector – seasonally unadjusted)

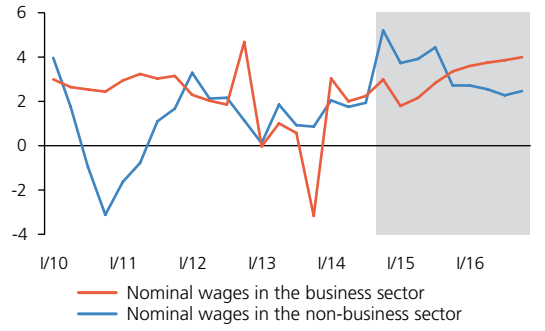


CHART II.2.11

GDP GROWTH FORECAST

After temporarily slowing in late 2014 and early 2015, annual GDP growth will gradually pick up to 3%
(percentage changes; seasonally adjusted)

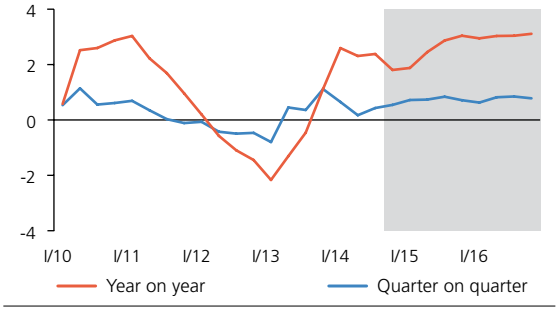


CHART II.2.12

ANNUAL GDP GROWTH STRUCTURE

Almost all components of domestic demand will contribute positively to GDP growth
(annual percentage changes; contributions in percentage points; seasonally adjusted)

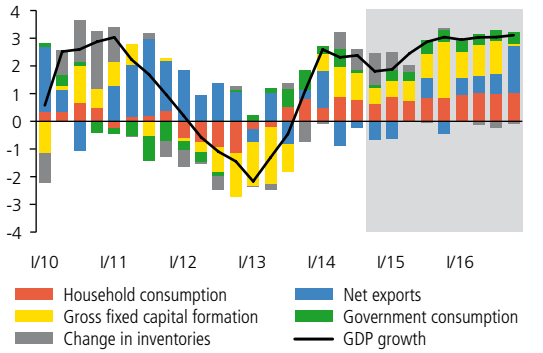


CHART II.2.13

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

The converted number of employees will rise as the economy grows
(annual percentage changes; contributions in percentage points)

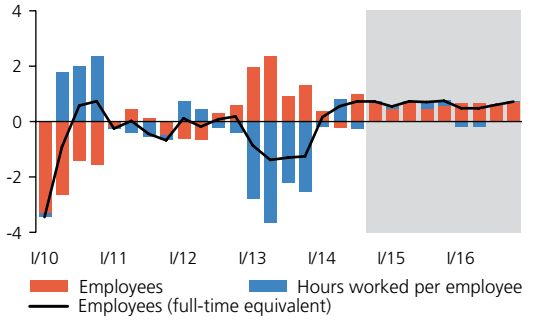
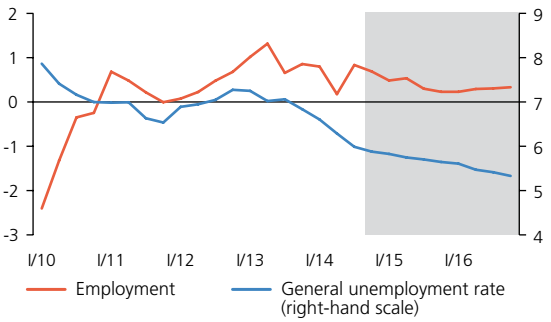


CHART II.2.14

LABOUR MARKET FORECAST

Total employment will continue to rise slowly, albeit at a lower pace, while the unemployment rate will keep going down
(annual percentage changes in employment; general unemployment rate in percentages; seasonally adjusted)



GDP will grow by 2.6% **in 2015**. The economy will be boosted by an upswing in external demand, still easy monetary conditions, low oil prices and more expansionary fiscal policy. Underlying this will be an expected further pick-up in government investment financed from domestic and especially European sources. Household consumption will also make a positive contribution. The contribution of net exports will be roughly zero on average despite growing external demand, due to continued growth in imports of consumer goods, machinery and equipment, and intermediate goods for production of export goods.

GDP will pick up slightly to 3% **in 2016** due to a further acceleration in external demand and an improving supply side of the economy following the previous increase in investment activity. Gross capital formation will continue to increase, but its pace will be slowed by a decrease in general government investment. The other components of domestic demand and net exports will also make positive contributions to GDP growth.

The labour market situation is gradually improving thanks to the continuing growth in economic activity. Growth in the **number of employees converted into full-time equivalents** rose further to 0.7% in 2014 Q3. This was due to faster growth in the number of employees amid slightly shorter average hours worked per employee. The forecast expects the current growth rate of the converted number of employees to be maintained in 2014 Q4 and throughout 2015. This will be fostered mainly by a higher number of employees, while average hours worked are expected to be flat (see Chart II.2.13). The forecast expects slightly slower growth in the converted number of employees in 2016. Annual growth in **total employment** seems to have continued into 2014 Q4, albeit at a slightly lower pace than in Q3. According to the assumption, employment increased by 0.6% for 2014 as a whole. Employment will continue to rise this year and the next, but the forecast assumes a gradual decline in the growth rate from its previously fairly high levels, to 0.4% and 0.3% respectively on average (see Chart II.2.14).

The previous fast decline in the seasonally adjusted **general unemployment rate** slowed in 2014 Q4. The forecast assumes that the seasonally adjusted unemployment rate averaged 5.9% in the quarter as a whole. The general unemployment rate will gradually decline this year and the next, due mainly to expected growth in employment associated with a gradual pick-up in growth in economic activity. The forecast expects the labour force to shrink slightly at first and be broadly flat later. The general unemployment rate is expected to decline to 5.4% at the end of 2016 (see Chart II.2.14). The seasonally adjusted **share of unemployed persons, as determined by the MLSA**, will also gradually decline from the current 7.4% over the entire forecast horizon. Owing to cyclicality, the supply of vacancies should edge up further. The seasonally adjusted share of unemployed persons should drop to 6.8% at the end of 2016, assuming a slight decline in the population aged 15–64.

Year-on-year growth in real **household consumption** slowed slightly to 1.5% in 2014 Q3 (see Chart II.2.15). For the second consecutive quarter, the growth was attributable to all components of consumption broken down by kind. The forecast assumes that the year-on-year growth rate slowed slightly further at the end of last year, although largely due to base effects at the end of 2013. Conversely, the consumer confidence indicator and retail sales in October and November suggest an upswing in household consumption (see section III.3). According to the forecast, household consumption increased by 1.4% in 2014 as a whole, following a pronounced recovery in annual growth in wages and salaries amid easy monetary conditions. Its growth rate will increase in year-on-year terms over the following two years, reaching 2.1% in 2016. For most of the forecast horizon, growth in the volume of wages and salaries and other household income will outpace the only gradually rising consumption deflator, which will reflect the positive income effect of the oil price decline.

The growth rate of **gross nominal disposable income** slowed significantly in 2014 Q3, due mainly to a negative contribution of payments of taxes and social contributions and property income (see Chart II.2.16). Conversely, the recovery in the labour market (and in the related volume of wages and salaries) had a strongly positive effect on growth in gross nominal disposable income. Overall, nominal gross disposable income is expected to have increased by 2.5% last year. At the forecast horizon, the volume of wages and salaries will contribute most strongly to a marked pick-up in the annual growth rate of gross nominal disposable income. Nevertheless, social benefits and profits of businesses will continue to make positive contributions. The growth rate of gross nominal disposable income will gradually rise to 4.5% at the end of 2016.

With household consumption rising rather faster than household income, the seasonally adjusted **household saving rate** decreased to 10.4% in 2014 Q3. However, it will rise slightly until the end of 2015 as growth in wages and salaries picks up pace (see Chart II.2.17). A switch to annual household consumption growth outpacing gross nominal disposable income growth in 2016 will cause the household saving rate to decline slightly again.

Annual growth in real **government consumption** slowed considerably in 2014 Q3. The forecast expects a similarly low annual growth rate in Q4. In 2014 as a whole, government consumption seems to have risen by 1.5% (see Chart II.2.15). In 2015 and 2016 it will grow at a pace just above 2% as a result of faster growth in compensation of employees in the government sector and government intermediate consumption.

Gross capital formation maintained a growth rate of almost 7% in 2014 Q3, with slackening growth in fixed investment being offset by an increase in inventories for production and consumption. The forecast expects gross capital formation to have maintained robust growth in 2014 Q4. However, fixed investment growth slowed further. According to the assumptions of the forecast, gross capital formation

CHART II.2.15

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption and government consumption will rise at a rate of around 2%

(annual percentage changes; seasonally adjusted)

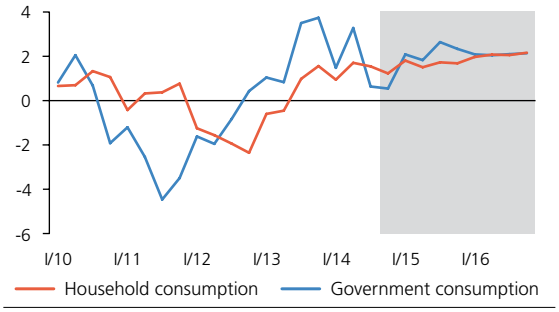


CHART II.2.16

NOMINAL DISPOSABLE INCOME

Disposable income growth will gradually accelerate thanks mainly to growth in the volume of wages and salaries

(annual percentage changes; contributions in percentage points)

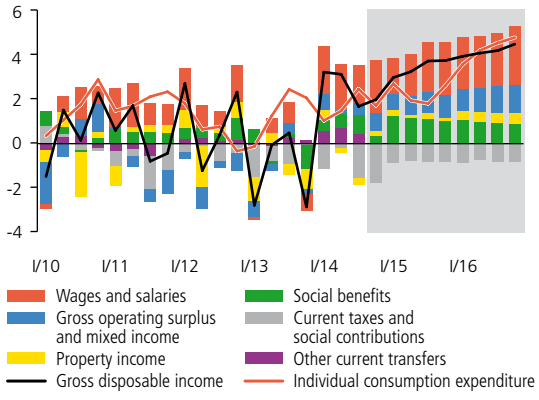


CHART II.2.17

HOUSEHOLD SAVING RATE

The saving rate will gradually rise until the end of 2015

(percentages)

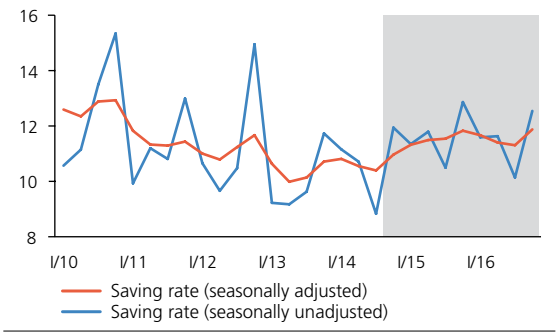


CHART II.2.18

GROSS CAPITAL FORMATION

Gross capital formation will keep rising
(annual percentage changes; seasonally adjusted)

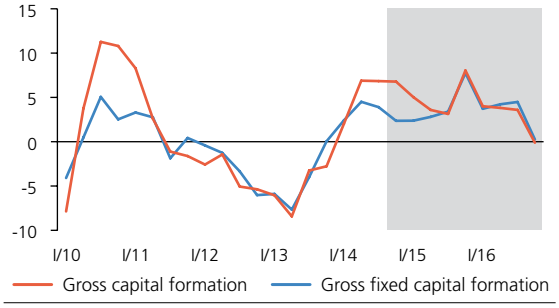


CHART II.2.19

REAL EXPORTS AND IMPORTS

Exports and imports will attain high growth rates, boosted by renewed external demand and the weakened koruna
(annual percentage changes; annual changes in CZK billions; seasonally adjusted)

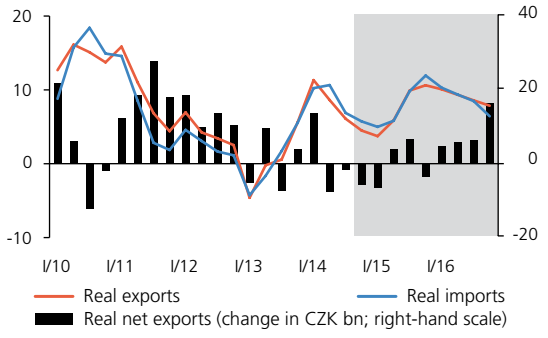


TABLE II.2.2

FORECASTS OF SELECTED VARIABLES

Real disposable income will continue to rise as wage growth picks up, and labour productivity will also increase
(annual percentage changes unless otherwise indicated)

	2013 actual	2014 exp. outc.	2015 forec.	2016 forec.
Real gross disposable income of households	-2.4	2.1	2.8	2.0
Total employment	1.0	0.6	0.4	0.3
Unemployment rate (in per cent)[a)]	7.0	6.2	5.7	5.5
Labour productivity	-1.1	1.9	2.2	2.7
Average nominal wage	0.0	2.7	2.8	3.6
Average nominal wage in business sector	-0.2	2.7	2.5	3.8
Current account balance (ratio to GDP in per cent)	-1.4	0.2	1.4	1.6
M2	4.4	4.2	4.3	6.2

a) ILO methodology, 15–64 years

increased by 5.6% in 2014 as a whole. Its growth rate will slip to around 5% in 2015 despite the drawdown of EU funds from the 2007–2013 programme period, as the contribution of inventories will drop amid slightly faster annual growth in fixed investment. Private investment will be supported by growing external demand in an environment of historically low interest rates, a weakened exchange rate of the koruna and declining energy costs. It will maintain positive, albeit slightly lower (due to a decline in government investment) growth in 2016 (see Chart II.2.18).[4]

Annual growth in real **exports of goods and services** slowed further in 2014 Q3, but still exceeded 6%. Owing to external demand developments, the forecast expects exports to have slowed further at the end of last year (see Chart II.2.19). According to the forecast, exports of goods and services rose by 7.6% in 2014 as a whole. The growth rate will remain unchanged on average in 2015 as the positive effect of the weaker real exchange rate moderates and external demand picks up. In 2016, the growth rate of exports will increase to 9% on average, with external demand rising faster amid a stable exchange rate of the koruna.

The real growth rate of **imports of goods and services** declined in 2014 Q3 to just below 7% owing to slower growth in exports. In 2014 as a whole, imports probably rose by 8.3%. The growth rate will remain similarly high on average in 2015 and 2016, reflecting growth in import-intensive components of domestic demand and exports.

The contribution of **net exports** at constant prices to annual GDP growth was negative again in 2014 Q3. Amid continued annual growth in import-intensive inventories, the forecast expects an even more negative contribution at the end of 2014. Net exports made a slightly negative contribution to annual GDP growth in 2014 as a whole. The forecast expects similar developments in 2015, when the contribution of net exports will be approximately zero. In 2016, the contribution of net exports will be positive (0.9 percentage point) owing to a more pronounced upswing in external demand and slower growth in domestic investment (due to base effects caused by the extension of the lease of supersonic fighter aircraft).

The balance of payments forecast (see Table II.2.3) expects a slight **current account** surplus of 0.2% of GDP for 2014, increasing to 1.4% of GDP this year and around 1.6% of GDP next year.[5] The sizeable increase in the current account surplus in 2015 will be due to a relatively large rise in the **goods surplus**, associated mainly with a sharp decline in prices of energy commodities, which will lead to improved terms of trade (with a positive impact on the goods balance

4 The forecast is affected by an extension of the lease of JAS-39 Gripen fighter aircraft at the end of 2015. This will cause a one-off increase in gross capital formation and an equal increase in imports. Real GDP growth will remain unaffected by this transaction.

5 The current account will record a surplus for the first time in the independent history of the Czech Republic.

of around CZK 50 billion). To a lesser extent, the increase in the current account surplus will also be due to the elimination of the secondary income deficit as a result of higher drawdown of EU funds. The further improvement in the current account expected in 2016 is linked with growth in the goods surplus due to a fading decline in prices of energy commodities (the effect of the lagged reaction of gas prices to the previous fall in oil prices) and faster expected growth in external demand. The **services surplus** will remain roughly at the 2014 level over the entire forecast period.

A rising **primary income** deficit, linked mainly with higher earnings of non-residents on foreign direct investment in the Czech Republic, will have the opposite effect on the current account balance than the goods balance. **Secondary income** should be broadly balanced over the entire forecast period. This represents a slight improvement compared to 2014 owing to higher drawdown of EU funds.

The forecasted sharp increase in the **capital account** surplus compared to the level expected in 2014 is associated with the expected drawdown of EU funds for the 2007–2013 programme period.

The net inflow of **direct investment** into the Czech Republic will fall sharply in 2015 compared to 2014. This change will be linked with a turnabout in residents' international capital flows, with the withdrawal of funds back into the Czech Republic last year being replaced by renewed interest of residents in investing abroad this year.[6] The forecast assumes that direct investment in the Czech Republic will still primarily take the form of reinvested earnings. The inflow of direct investment will increase year on year in 2015 on expectations of a modest rise in reinvested earnings in the Czech Republic. In 2016, the net capital inflow into the Czech Republic will also be favourably affected by an already approved sizeable investment in the automotive industry.

Following an extraordinary change in capital flows in 2014, linked mainly with the repayment of euro-denominated government bonds, a moderation of the capital outflow can be expected in the area of **portfolio investment** in 2015. However, the net outflow will continue over the entire forecast horizon owing to long-standing low foreign borrowing requirements of the corporate sector, a limited range of suitable portfolio investments in the Czech Republic, an excess of domestic savings over borrowing requirements in the Czech Republic, and the government's announced intention to primarily tap the koruna market for funding. With regard to **other investment** (excluding banking sector operations), the forecast assumes a high – albeit falling – net outflow of capital from the corporate sector in the form of growth in residents' deposits abroad, growth in loans

6 In addition, according to publicly available information a resident (Energetický a průmyslový holding) will make an acquisition totalling several tens of billions of korunas in the energy sector in Q2.

TABLE II.2.3

BALANCE OF PAYMENTS FORECAST

The current account surplus should increase this year and the next thanks to falling prices of energy commodities

(CZK billions)

	2013 actual	2014 exp. outc.	2015 forec.	2016 forec.
A. CURRENT ACCOUNT	-56.8	10.0	60.0	75.0
Goods	163.6	240.0	305.0	350.0
Services	68.6	55.0	55.0	55.0
Primary income	-279.6	-275.0	-300.0	-330.0
Secondary income	-9.3	-10.0	0.0	0.0
B. CAPITAL ACCOUNT	82.3	31.0	60.0	60.0
C. FINANCIAL ACCOUNT[a)]	-19.4	85.0	182.0	107.0
Direct investment	57.4	-135.0	-30.0	-75.0
Portfolio investment	-92.8	70.0	30.0	20.0
Financial derivatives	-4.7			
Other investment	-52.7	80.0	50.0	30.0
Reserve assets	188.2	70.0	132.0	132.0

a) expected outcome and forecast excluding operations of banking sector and financial derivatives but including changes in CNB reserves

Table II.2.4

FISCAL FORECAST

Fiscal policy will be expansionary in 2015 and slightly restrictive in 2016
(% of nominal GDP)

	2013 actual	2014 exp. outcome	2015 forec.	2016 forec.
Government revenue	40.7	40.5	40.8	40.2
Government expenditure	42.0	41.7	42.7	41.6
of which: interest payments	1.4	1.3	1.3	1.3
GOVERNMENT BUDGET BALANCE	-1.3	-1.2	-1.9	-1.4
of which:				
primary balance[a)]	0.0	0.1	-0.7	-0.2
one-off measures[b)]	0.0	0.2	-0.2	0.1
ADJUSTED BUDGET BALANCE[c)]	-1.3	-1.4	-1.8	-1.5
Cyclical component (ESCB method)[d)]	-1.0	-0.5	-0.1	0.2
Structural balance (ESCB method)[d)]	-0.3	-0.9	-1.7	-1.8
Fiscal stance in pp (ESCB method)[e)]	1.5	-0.6	-0.8	0.0
Cyclical component (EC method)[d)]	-1.2	-0.8	-0.5	0.0
Structural balance (EC method)[d)]	-0.1	-0.6	-1.3	-1.5
Fiscal stance in pp (EC method)[e)]	2.0	-0.4	-0.7	-0.2
Government debt	45.7	43.9	43.9	43.3

a) government budget balance minus interest payments
b) 2014–2016: sales of emission permits.
2014: impact of auction of mobile frequencies.
2015: impact of extension of lease of supersonic fighter aircraft
c) adjusted for one-off measures; CNB estimate
d) CNB estimate
e) year-on-year change in structural balance (positive value indicates fiscal restriction, negative value fiscal expansion)

Table II.2.5

FISCAL IMPULSE

The fiscal impulse will have an impact primarily through government investment over the forecast horizon
(contributions to GDP growth in percentage points)

	2013 actual	2014 exp. outcome	2015 forec.	2016 forec.
Fiscal impulse[a)]	-1.0	0.2	0.5	-0.3
of which impact through:				
private consumption	-0.7	0.0	0.1	0.0
private investment	0.0	0.0	0.0	0.0
government investment, domestic	-0.3	0.0	0.1	0.0
government investment, EU funded	0.0	0.3	0.3	-0.3

a) Owing to rounding, the total may not be equal to the sum of the individual items.

to non-residents and repayments of existing loans accepted from non-residents. The expected decline in the net outflow is due to an expected gradual recovery in investment in the Czech Republic.

Reserve assets reflect an expected increase in the CNB's international reserves owing to a surplus on relations with the EU and income on international reserves.

The future macroeconomic developments described above and the fiscal policy settings are reflected in the **government finance** outlook for 2015–2016 (see Table II.2.4).

The estimated government deficit edged down to 1.2% of GDP in **2014**. Last year, the government's finances were affected by extraordinary income of CZK 8.5 billion from an auction of frequency bands to mobile operators. The continuing effect of the consolidation measures adopted in 2012 (for example, a smaller increase in pensions) and the harmonisation changes made to excise duties on cigarettes also played a role. However, the slightly restrictive effect of these measures on economic growth was outweighed by continued – and at the close of the year also faster – wage growth in the government sector and by a significant recovery in government investment growth connected with the implementation of projects co-financed from EU funds. In 2014, therefore, the overall effect of fiscal policy on economic activity was slightly expansionary to the tune of around 0.2 percentage point (see Table II.2.5).

In **2015** the general government deficit will increase to 1.9% of GDP despite continuing economic growth. This reflects the abolition of fees in health care, the introduction of a second reduced VAT rate of 10%, an increase in benefits and deductible items for children, a one-off increase in pensions going beyond the restoration of the policy to increase them fully in line with inflation, and an increase in wage growth in the government sector. The higher expenditure will also be due to a further rise in government investment growth, driven by efforts to draw as much EU money as possible from the previous programme period, including through increased use of domestic funds. The rise in the overall deficit will also be supported by the accounting effect of an extension of the lease of the JAS-39 Gripen aircraft of 0.2% of GDP. However, it will not have a real impact and can be regarded as an extraordinary one-off measure. As a result, fiscal policy will be significantly expansionary this year, making a positive contribution to economic growth of around 0.5 percentage point.

In **2016** the general government deficit can be expected to fall to 1.4% of GDP, mainly as a result of continuing economic growth. Government investment will decline year on year owing to the end of the previous programme period for drawing down EU funds and the start of the new one. Fiscal policy will therefore be slightly restrictive in 2016, making a contribution to economic growth of around -0.3 percentage point.

The estimated general government **structural deficit** rose to around 0.8% of GDP in 2014. It will increase further this year and the next and will noticeably exceed the medium-term objective of 1% of GDP.

The expected evolution of the general government deficit this year and the next will lead initially to stability and then to a very small decrease in the **ratio of general government debt to GDP** (the ratio will slightly exceed 43% in 2016). In addition to the expected borrowing requirements of general government stemming from persisting public finance deficits, this ratio will reflect the continuing involvement of state financial assets in debt management. The accelerating nominal GDP growth and an expected lower effective interest rate on government debt owing to financial market developments and positive perceptions of the Czech Republic will act in the same direction.

II.3 COMPARISON WITH THE PREVIOUS FORECAST

The forecasts for headline and monetary policy-relevant inflation are considerably lower than in the previous prediction over the entire horizon, owing to a decrease in administered prices and a lower outlook for net inflation. Despite lower external demand, GDP growth has been revised slightly upwards as a result of significantly lower oil prices and an extension of the forecasted period for which the exchange rate will be used as a monetary policy instrument. The prediction for nominal wage growth in the business sector has shifted much lower as a result of slower observed wage growth in 2014 and considerably more subdued consumer price inflation. The interest rate path mainly reflects a more anti-inflationary effect of the external environment and a related extension of the expected use of the exchange rate as a monetary policy instrument until the end of the forecast horizon.

The forecast for annual **headline inflation** is considerably lower than in the previous forecast until late 2016 (see Chart II.3.1). This is due to a significantly lower outlook for administered prices (especially in 2015) and net inflation, reflecting a downward revision of energy commodity prices and euro area industrial producer prices and lower future annual wage growth in the domestic business sector. The lower outlook for headline inflation is also due to the current situation of the Czech economy, which is generating somewhat weaker inflationary pressures compared to the previous forecast. These downside factors are only marginally offset within headline inflation by a weaker exchange rate due to its depreciation in January 2015 and an assumption of a longer duration of use of the exchange rate as a monetary policy instrument. The size of the impacts of changes to indirect taxes remains in line with the previous forecast, but the effect of the increase in excise duty on cigarettes is shifted from late 2014 to the initial months of 2015. Therefore, the outlook for **monetary policy-relevant inflation** has been revised in a similar way as for headline inflation.

The outlook for **administered prices** has decreased considerably compared to the previous forecast, owing chiefly to an unexpected fall in energy commodity prices. The new forecast thus expects a partial pass-through of the much lower oil prices to world prices of natural gas, and during 2015 also to gas prices for Czech households. The expected decline in electricity prices for households this year has also deepened slightly. In addition, the rise in water supply and sewerage collection charges and heat prices will be weaker compared to the previous forecast. In the second half of 2016, by contrast, the outlook for administered price inflation has shifted slightly higher owing to the unwinding of the above-mentioned factors and a return of energy commodity prices to year-on-year growth.

Compared to the previous forecast, annual **net inflation** is lower over the entire forecast horizon (see Chart II.3.2). In particular, a drop in fuel prices, which was not expected in the previous forecast, will manifest itself in early 2015. In 2015 as a whole and in 2016, the

CHART II.3.1

CHANGE IN THE HEADLINE INFLATION FORECAST

The forecast for headline inflation has shifted downwards significantly over the entire horizon
(year on year in %; differences in pp – right-hand scale)

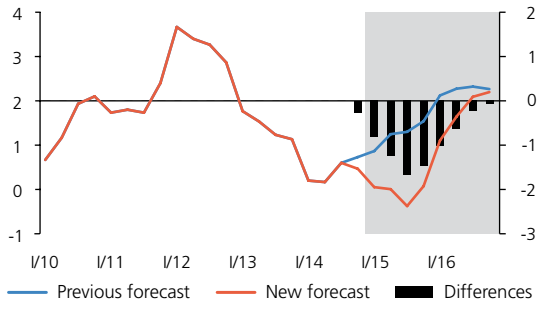
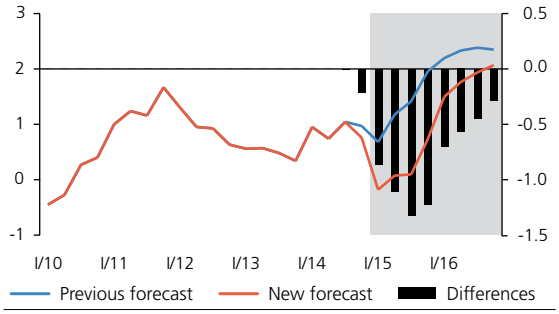


CHART II.3.2

CHANGE IN THE NET INFLATION FORECAST

The forecast for net inflation has been revised to a substantially lower level until the end of 2016
(year on year in %; differences in pp – right-hand scale)



lower net inflation will reflect stronger anti-inflationary pressures from the external environment, the more subdued domestic wage growth observed in 2014 and lower inflation expectations. This will result above all in a slower increase in adjusted inflation excluding fuels.

Turning to the **assumptions regarding the external environment**, the outlook for producer prices in the effective euro area has been lowered significantly for this year and the next compared to the previous forecast, more strongly reflecting the long downturn in economic activity coupled with falling energy commodity prices on foreign markets. The prediction for external demand growth has also been lowered for both years. The 3M EURIBOR market outlook is slightly lower, reflecting the ECB's recent measures to further ease monetary policy.

The path of domestic market **interest rates** has shifted considerably lower in 2016 (see Chart II.3.3). This is because the new forecast expects the exchange rate to be used as a monetary policy instrument over its entire horizon, whereas the previous forecast assumed it would be used only until 2016 Q1. The need for lengthier easy monetary conditions is due mainly to a lower outlook for foreign producer prices, the drop in oil prices and less inflationary domestic developments (especially slower wage growth) compared to the previous prediction.

The short-term forecast for the **koruna-euro exchange rate** in 2015 Q1 takes into account the movements observed in early 2015 and is therefore weaker than expected by the previous forecast. The forecast expects that the use of the exchange rate as a monetary policy instrument will continue until the end of 2016, i.e. longer than in the previous prediction.

The data for 2014 Q3 implied lower annual **GDP** growth than expected in the previous forecast. This is due to a more negative contribution of net exports and a slowdown in government consumption growth. Acting in the opposite direction was stronger growth in gross capital formation owing to a rise in inventories, and slightly higher growth in household consumption. GDP growth is forecasted to be 0.2 percentage point lower in 2014 as a whole on account of lower contributions from net exports as a result of weaker growth in the effective euro area. The GDP growth forecast for 2015 is marginally higher (see Chart II.3.4) despite an assumption of weaker external demand. The main reason is a positive supply shock resulting from significantly lower oil prices. Growth in consumption and gross capital formation has been revised downwards. Thanks to the favourable effect of oil prices, however, the revision is smaller than that corresponding to the observed developments in wages and fixed investment in 2014 H2. By contrast, government consumption will make a slightly stronger contribution to GDP growth than in the previous forecast. The GDP forecast for 2016 has also shifted slightly upwards owing to higher net exports connected with the extension of the use of the exchange rate as a monetary policy instrument. The assumed growth in government consumption in 2016 has also been increased moderately.

CHART II.3.3

CHANGE IN THE INTEREST RATE PATH

The market interest rate path has shifted lower in 2016 owing to an expected longer stay in the regime of using the exchange rate as a monetary policy instrument
(3M PRIBOR in %; differences in pp – right-hand scale)

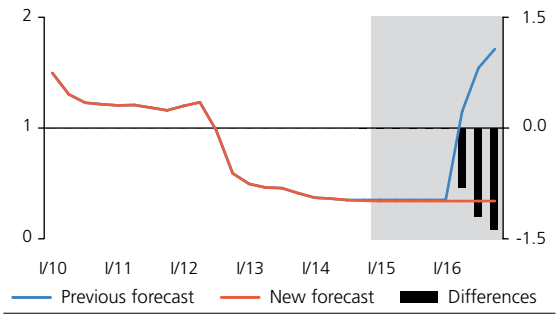
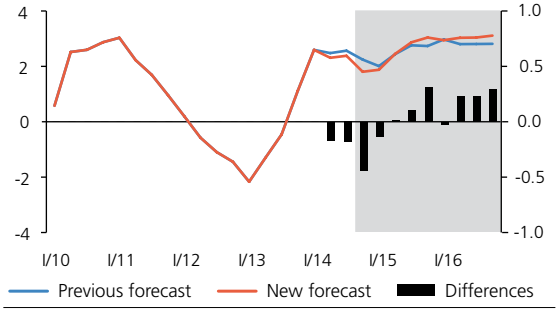


CHART II.3.4

CHANGE IN THE GDP FORECAST

The GDP growth forecast is slightly higher this year and the next
(annual percentage changes; differences in pp – right-hand scale; seasonally adjusted)



The contribution of **net exports** to GDP growth in 2014 Q3 was more negative than in the previous forecast. At the forecast horizon, conversely, it is more positive than in the previous prediction owing to slightly slower growth in domestic demand and a weaker koruna. However, the lower external demand outlook is reflected in a decrease in expected export and import growth in the next few quarters. By contrast, a more sizeable increase in these growth rates is expected in 2016.

The forecast for average **nominal wage** growth in the business sector has shifted considerably downwards over the entire forecast horizon. This revision mainly reflects more gradual wage growth and slower growth of the Czech economy in 2014, as well as lower observed and future inflation.

II.4 ALTERNATIVE SCENARIOS AND SENSITIVITY ANALYSES

Several uncertainties were identified during the preparation of the forecast. The first concerns the further evolution of the currently subdued wage growth in the low-inflation environment of the Czech economy. Another uncertainty relates to the future evolution of world prices of energy commodities following their drop in late 2014 and early 2015, including their effects on the domestic economy. It is also uncertain to what extent the outlooks for external demand and foreign prices have already incorporated the drop in oil prices and the easing of ECB monetary policy on the one hand, and slowing demand in emerging countries and the developments in Russia and Ukraine on the other. However, these uncertainties are not sufficiently strong or clear-cut to lead to the preparation of a fully-fledged alternative scenario. However, a scenario was prepared using a version of the g3 model extended to explicitly include oil imports. This scenario assesses the impact of continuing low oil prices as expected in the forecast on the main macroeconomic variables.

II.4.1 Scenario assessing the impacts of continuing low oil prices

The recent **drop in oil prices** is a global shock having different impacts on oil-exporting countries and on countries dependent on oil imports. As the Czech Republic and the effective euro area countries are net importers of oil, it is reasonable to assume that the lower price of oil is affecting them mainly through lower costs and is therefore having a favourable effect on the supply side of their economies. However, these positive effects may be partly offset by the fact that nominal interest rates in these economies are at the zero lower bound and therefore cannot be lowered in response to falling observed and expected inflation. Therefore, **this section aims** to quantify the approximate impacts of the sharp decrease in the oil price and its market outlook.

A satellite version of the **g3 core prediction model explicitly including the effect of oil prices** was used to quantify the effect of this positive shock on the Czech economy. In this extended model, the oil import intensity of individual sectors of the economy is based on an **analysis of input-output tables**; it is highest for households, at just under 4%, and second-highest for exports (see Table II.4.1). One advantage of this model is that it captures the different transmission of changes in oil prices and other foreign industrial producer prices from the perspective of price stickiness and the effects on exports, as oil prices (unlike other foreign prices) do not directly affect the relative price competitiveness of domestic versus foreign production.

The **scenario** is based on comparing two oil price paths. The first involves a drop in oil prices below USD 50 a barrel, followed by only gradual growth to USD 65 a barrel in late 2016. This is the path consistent with the current market outlook and therefore also with the new forecast. The second captures the hypothetical situation of oil

TABLE II.4.1

IMPORT INTENSITY ACCORDING TO INPUT-OUTPUT ANALYSIS

Household consumption has the highest oil import intensity

	Import intensity, total	Oil import intensity
Household consumption	38%	3.8%
Investment	43%	0.9%
Government consumption	17%	0.2%
Exports	48%	1.9%

Table II.4.2

IMPACTS OF LOWER OIL PRICES ON SELECTED VARIABLES

Lower oil prices lead to a rise in demand and GDP, but inflation falls significantly

(deviations from hypothetical scenario of oil price at USD 100/barrel)

	CPI inflation (pp)	Real GDP (pp)	Real consumption (pp)	Oil price (USD/barrel)
I/15	-0.5	0.3	0.2	-50.7
II/15	-0.9	0.6	0.5	-47.3
III/15	-1.2	0.9	0.8	-44.3
IV/15	-1.3	1.2	1.1	-42.1
I/16	-0.6	1.0	1.0	-40.1
II/16	-0.1	0.7	0.8	-38.2
III/16	0.4	0.3	0.5	-36.5
IV/16	0.6	0.1	0.3	-35.2

prices standing at USD 100 a barrel over the entire forecast horizon. The effect of this hypothetical oil price path is incorporated into the scenario directly through the extended g3 model and indirectly through higher natural gas prices affecting domestic administered prices.[7]

The **impacts of the oil price decrease** reflecting the current market outlooks on selected variables are shown in Table II.4.2 in the form of deviations from the above hypothetical scenario of oil prices standing at USD 100 a barrel. The decline in oil prices and their continuing low levels expected by the forecast lead to a fall in fuel prices with a slight lag. Costs in the other sectors of the economy therefore fall, causing an across-the-board rise in demand at lower prices. Roughly one-half of the impact on consumer prices outside net inflation is due to lower administered price inflation. At its maximum this impact exceeds -1 percentage point. The favourable impact on GDP growth is roughly the same in absolute terms. The lower oil price has an effect on both corporate investment activity (about +1.3 percentage points) and household consumption (about +1 percentage point). The lower costs also allow firms to increase wage growth slightly.

7 By contrast, the scenario abstracts from the effect of oil prices on the outlooks for euro area effective GDP.

II.5 FORECASTS BY OTHER ENTITIES

Analysts' inflation expectations fell markedly below the CNB's target at the one-year horizon and remained at the target at the three-year horizon. The indicator of inflation perceived by households was slightly negative, while the indicator of expected inflation declined to its lowest level in almost five years. The analysts expect the economy to grow at a rate of around 2.5% this year. According to the analysts, the exchange rate of the koruna should appreciate slightly at the one-year horizon. A large majority of the analysts expect that the exchange rate commitment will not be discontinued before 2016 H2. All the analysts were expecting key interest rates to be left unchanged both at the CNB Bank Board's February meeting and at the one-year horizon. The market rate outlook one year ahead indicates only a slight decrease in interest rates and is therefore close to the interest rate path consistent with the new CNB forecast over the entire forecast horizon.

Inflation expected by financial market analysts at the one-year horizon fell noticeably below the CNB's target of 2% in late 2014 and remained there in January 2015. Inflation expected at the three-year horizon is still at the level of the target. The inflation expectations of business managers at the one-year horizon remain slightly below the target (see Table II.5.1).

The indicator of **inflation perceived by households**[8] was slightly negative in 2014 Q4 (see Chart II.5.1). This means that households on average felt that prices stayed roughly the same over the last 12 months. However, a relatively significant group perceived a price decline. By contrast, the indicator of **expected inflation** has long been positive. However, it fell moderately during 2014 Q4, reaching its lowest level since April 2010. This signals that the number of respondents who expect prices to rise more rapidly over the next 12 months is only slightly higher than the number of those who expect prices to stay the same or increase more slowly than in the recent past.

Both the FMIE and CF analysts expect GDP to grow by roughly 2.5% this year (see Tables II.5.1 and II.5.2). Next year the economy is expected to accelerate slightly, and expected wage growth should also pick up pace. At the one-year horizon, the analysts expect the koruna to appreciate only slightly from its current level. Based on the CNB's previous communication and the anti-inflationary developments, most analysts expect that the exchange rate commitment will not be discontinued before 2016 H2; the new CNB forecast expects the exchange rate to be used as a monetary policy instrument until the

8 A qualitative assessment of past inflation and expected future inflation by households. These indicators are collected as part of the European Commission Business and Consumer Survey, which is conducted monthly in the Czech Republic on a sample of 1,000 respondents. Overall indices of perceived inflation and inflation expectations of consumers are constructed as the balance of the responses. For more details on the construction of these indicators, see Box 2 in the July 2007 Inflation Report.

Table II.5.1

EXPECTED INDICATORS OF FMIE AND CORPORATIONS

The analysts' inflation expectations are noticeably below the CNB's target of 2% at the one-year horizon
(at 1Y; annual percentage changes unless otherwise indicated)

	9/14	10/14	11/14	12/14	1/15
FMIE:					
CPI	2.0	1.9	1.7	1.5	1.5
CPI, 3Y horizon	2.1	2.0	2.0	2.0	2.0
Real GDP in 2014	2.6	2.5	2.4	2.4	
Real GDP in 2015	2.7	2.5	2.4	2.3	2.3
Nominal wages in 2014	2.5	2.6	2.8	2.8	
Nominal wages in 2015	3.0	3.1	3.1	3.3	3.1
CZK/EUR exchange rate (level)	27.3	27.3	27.3	27.3	27.8
2W repo rate (in per cent)	0.05	0.05	0.05	0.05	0.05
1Y PRIBOR (in per cent)	0.6	0.6	0.6	0.6	0.6
Corporations:					
CPI	1.8			1.7	

Chart II.5.1

PERCEIVED AND EXPECTED INFLATION

Perceived and expected inflation both decreased at the end of last year
(source: European Commission Business and Consumer Survey)

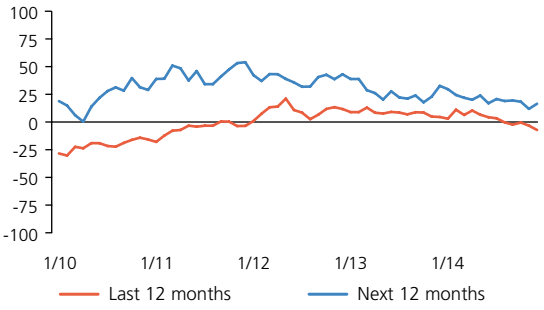


Table II.5.2

CF EXPECTED INDICATORS

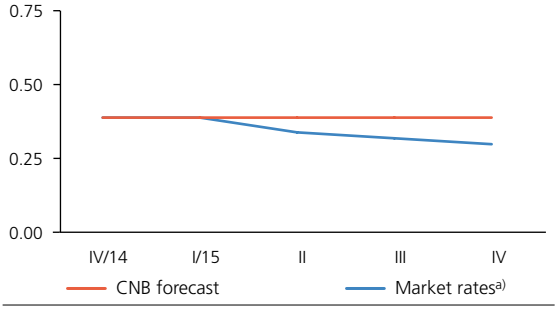
The CF analysts expect the economy to grow at a rate of 2.5% this year
(at 1Y; annual percentage changes unless otherwise indicated)

	9/14	10/14	11/14	12/14	1/15
Real GDP in 2014	2.6	2.5	2.4	2.4	
Real GDP in 2015	2.6	2.5	2.5	2.4	2.5
Nominal wages in 2014	2.5	2.7	2.8	2.7	
Nominal wages in 2015	3.3	3.5	3.6	3.5	3.6
CZK/EUR exchange rate (level)	27.3	27.3	27.3	27.3	27.5
3M PRIBOR (in per cent)	0.5	0.4	0.4	0.4	0.4

CHART II.5.2

FRA RATES VERSUS THE CNB FORECAST

Expected interest rates derived from FRA quotations are close to the interest rate path consistent with the new CNB forecast
(percentages)



a) for 2014 Q4 and 2015 Q1 the 3M PRIBOR and for 2015 Q2–2015 Q4 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 23 January 2015

end of 2016, i.e. over the entire forecast horizon. Before the CNB Bank Board meeting in February, all twelve FMIE analysts were expecting no changes in key interest rates at this meeting. All the analysts also expect the 2W repo rate to be flat at its current level of 0.05% at the one-year horizon.

Overall, the analysts expect slightly lower real GDP growth in both 2015 and 2016 **compared to the CNB's new forecast**. By contrast, inflation expected by the analysts at the one-year horizon is slightly above the CNB forecast. The analysts' expectations regarding the 2W repo rate and market rates are in line with the 3M PRIBOR path in the new CNB forecast.

Chart II.5.2 provides a **comparison of expected 3M market rates** derived from FRA quotations and the interest rate path consistent with the new CNB forecast. The current market outlook for 3M rates implies only a modest decrease at the one-year horizon. This is broadly in line with expectations of flat monetary policy interest rates at least until the same date and a marginal decline in the money market premium. The expected market rates are thus close to the interest rate path consistent with the new CNB forecast over the entire horizon.

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 INFLATION

The CNB's decision of November 2013 to start using the exchange rate as an additional monetary policy instrument contributed to averting the immediate threat of deflation linked with a drop in demand and a contraction in economic activity. Annual headline inflation stood at 0.5% in 2014 Q4, but decreased during the quarter due to falling fuel and food prices. The price level adjusted for changes to indirect taxes rose only marginally in 2014 Q4. Inflation was thus still well below the lower boundary of the tolerance band around the CNB's target. The pass-through of the weakened exchange rate of the koruna to inflation via higher import prices is fading, but the exchange rate is still contributing to growth in economic activity and a recovery in the labour market. The domestic economy has thus been fostering higher inflation for several quarters now. This is reflected in a further increase in adjusted inflation excluding fuels, which is the biggest contributor to the positive annual headline inflation. By contrast, the other two components of inflation – fuel prices and food prices – started to decline year on year in December, mainly due to falling global oil prices and a persisting fall in agricultural commodity prices. Administered prices continued to decline at the end of last year.

III.1.1 Fulfilment of the inflation target

In 2014 Q4, both **headline inflation and monetary policy-relevant inflation** were below the lower boundary of the tolerance band around the CNB's target (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 2014 Q4, we have to examine the period roughly from April 2013 to September 2014, which takes into account the different lengths of transmission of interest rates and the exchange rate. This is because monetary policy passes through to inflation with a substantially shorter lag in the regime where the exchange rate is used as a monetary policy instrument than when interest rates are used. For the sake of clarity, however, the analysis of the accuracy of the forecasts is limited here to a comparison of the Inflation Report III/2013 forecast with subsequent inflation.

The **Inflation Report III/2013 forecast** expected headline inflation to be slightly below the 2% target in 2013 and 2014 despite substantial impacts of rising indirect taxes (see Chart III.1.1). Monetary policy-relevant inflation was expected to be close to the lower boundary of the tolerance band in 2013 owing to subdued domestic economic activity and then return slowly to the target over the monetary policy horizon. Import prices were expected to be inflationary because of projected

CHART III.1.1

FORECAST VERSUS ACTUAL INFLATION

Inflation was well below the IR III/2013 forecast in 2014 Q4
(year on year in %)

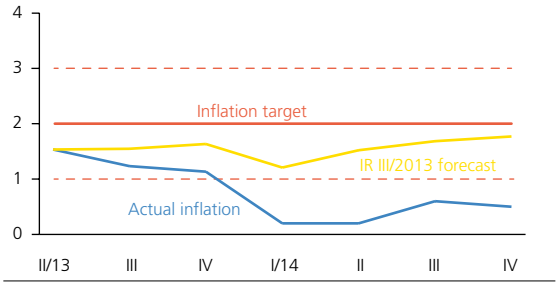


Table III.1.1

FULFILMENT OF THE INFLATION FORECAST

The deviation of inflation from the forecast was due mainly to an unexpected decline in administered prices

(annual percentage changes; contributions in percentage points)

	IR III/2013 forecast	2014 Q4 outturn	Contribution to total difference
CONSUMER PRICES	1.8	0.5	-1.3
Breakdown into contributions:			
administered prices	2.7	-2.1	-0.8
first-round impacts of changes to indirect taxes[a)]	0.1	0.1	0.0
food prices[b)]	1.7	0.7	-0.2
fuel prices[b)]	0.4	-1.2	-0.1
adjusted inflation excl. fuels[b)]	1.3	0.9	-0.2

a) impact in non-administered prices on total inflation
b) excluding the first-round effects of changes to indirect taxes

Table III.1.2

FULFILMENT OF THE EXTERNAL ASSUMPTIONS

External factors had an anti-inflationary effect overall, fostering a need for easier monetary conditions

(annual percentage changes unless otherwise indicated)

		III/13	IV/13	I/14	II/14	III/14	IV/14
GDP in euro area[a), b), c)]	p	0.2	0.9	1.3	1.4	1.5	1.7
	o	0.4	1.0	1.4	1.0	0.8	-
PPI in euro area[b), c)]	p	0.8	1.2	1.3	2.2	2.0	2.0
	o	-0.5	-1.2	-1.9	-1.6	-1.8	-
3M EURIBOR	p	0.2	0.2	0.3	0.3	0.4	0.4
(percentages)	o	0.2	0.2	0.3	0.3	0.2	0.1
USD/EUR exchange rate	p	1.30	1.28	1.27	1.27	1.27	1.26
(levels)	o	1.32	1.36	1.37	1.37	1.32	1.25
Brent crude oil price	p	106.1	104.9	103.4	101.8	100.3	98.8
(USD/barrel)	o	109.7	109.4	107.9	109.8	103.5	77.1

p – prediction, o – outturn
a) at constant prices
b) seasonally adjusted
c) IR III/2013 outlook for effective indicator

Table III.1.3

FULFILMENT OF THE FORECAST FOR KEY VARIABLES

Observed GDP growth was above the forecast until mid-2014

		III/13	IV/13	I/14	II/14	III/14	IV/14
3M PRIBOR	p	0.1	0.0	0.2	0.2	0.2	0.3
(percentages)	o	0.5	0.4	0.4	0.4	0.4	0.3
CZK/EUR exchange rate	p	25.8	25.8	25.7	25.7	25.6	25.5
(levels)	o	25.9	26.7	27.4	27.4	27.6	27.6
Real GDP[a)]	p	-1.2	-0.5	1.4	1.9	2.4	2.8
(annual perc. changes)	o	-0.5	1.1	2.6	2.3	2.4	-
Nominal wages[b)]	p	1.5	0.0	3.4	1.9	2.1	2.2
(annual perc. changes)	o	1.4	-1.7	3.3	2.3	1.8	-

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

stable foreign inflation and depreciation of the koruna against the euro in 2013 H1 and subsequent only very slow appreciation over the forecast horizon. The fading anti-inflationary pressures from the domestic economy were expected to push inflation slightly upwards only in 2014. This, together with a closing gap in profit mark-ups, was expected to cause both headline and monetary policy-relevant inflation to gradually converge towards the target at the monetary policy horizon. The forecast assumed modest growth in administered prices and food prices and a temporary decline in fuel prices.

Headline **inflation in reality** was below the forecast over the entire period and the deviation increased in 2014. The 1.3 percentage point deviation of actual inflation from the forecast in 2014 Q4 was due to an unexpected decline in administered prices and a slower recovery in adjusted inflation excluding fuels. The contributions of the deviations of fuel and food price growth from the forecast were also slightly negative (see Table III.1.1).

External economic factors contributed significantly to domestic inflation. External demand did not differ much from the assumptions of the forecast initially. Later on, however, its growth started to slow unexpectedly (see Table III.1.2). Foreign interest rates were also lower at the end of the forecast horizon. External production prices showed the biggest deviation. Their growth was well below the forecast, being negative over the entire period. Only oil prices were somewhat higher than assumed in the forecast (except at the end of 2014). Overall, then, external developments had a downward effect on domestic inflation and interest rates. In reality, however, the zero lower bound meant that rates could not be lowered, so the external price developments were thus reflected more strongly in lower domestic inflation.

Domestic market **interest rates** were broadly stable. They were affected by the zero lower bound on monetary policy rates amid a persisting money market risk premium. The **exchange rate** was slightly weaker than predicted in 2013, owing – among other things – to CNB communication. The deviation has increased significantly since November 2013 due to the use of the exchange rate as an additional instrument for monetary policy easing (see Table III.1.3).

Based on the CNB's current knowledge, the **developments in the Czech economy since the forecast under review was drawn up** can be summed up in the following way. Domestic GDP growth was higher than predicted until mid-2014 thanks to faster growth in real investment and government consumption. Real household consumption growth was around the forecasted levels. It turned positive in 2013 H2 despite being accompanied by a temporary slowdown in nominal wage growth. Actual export and import growth was close to the forecast in 2013. In 2014 H1 it rose noticeably above the forecast thanks to the weakened exchange rate of the koruna, and it then returned close to the forecast.

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 and other monetary policy instruments**. The Bank Board assessed the risks of the forecasts mostly as being either slightly on the downside or balanced over the entire key period. With the benefit of hindsight, it can be said that most of the identified risks materialised in the key period, with anti-inflationary risks (particularly subdued inflation in the euro area and subdued growth in domestic administered prices) clearly prevailing overall. The weakened koruna, affected initially by CNB communication and from November 2013 onwards also by the CNB's exchange rate commitment, fostered an easing of the monetary conditions in a situation where the zero lower bound on monetary policy rates had been reached at the end of 2012. The weakened exchange rate has so far been feeding through to inflation mainly via higher import prices, but it is also contributing to growth in the domestic economy, which is now also pushing prices upwards. The inflation target is being significantly undershot at present. However, without the November decision to start using the exchange rate as an additional monetary policy instrument, headline inflation would have been strongly negative in 2014.

Overall, based on current knowledge, it seems that the monetary policy pursued between April 2013 and September 2014 should have been substantially easier, i.e. the monetary policy easing implemented via the weakening of the koruna should have been made earlier and with even greater force. Nonetheless, thanks to the action taken to weaken the koruna, monetary policy was eased sufficiently to avert the immediate threat of deflation linked with a drop in demand, and thus also to avert the threat of overall macroeconomic instability.

III.1.2 Current inflation

Annual inflation[9] was 0.5% on average in 2014 Q4, but dropped to 0.1% in December (see Chart III.1.2) due mainly to pass-through of the sharp decline in oil prices to domestic fuel prices. Food prices also started to decline year on year in 2014 Q4. Administered prices kept falling as well, whereas adjusted inflation excluding fuels continued to rise slightly.

Turning to the **structure of annual inflation**, the decline in administered, fuel and food prices was offset by a rise in other market prices in 2014 Q4 (see Chart III.1.3). The contribution of adjusted inflation excluding fuels continued to increase gradually at the end of 2014. Changes to indirect taxes also had a slight upward effect on the price level.

CHART III.1.2

INFLATION

Annual inflation fell to a very low level at the end of 2014
(year on year in %)

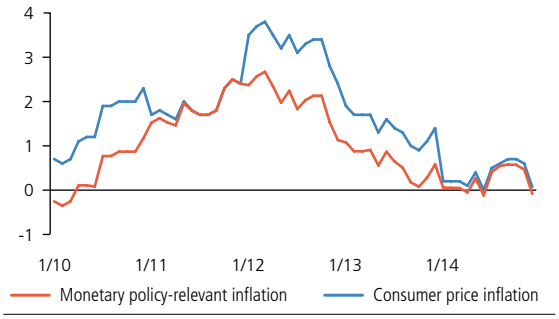
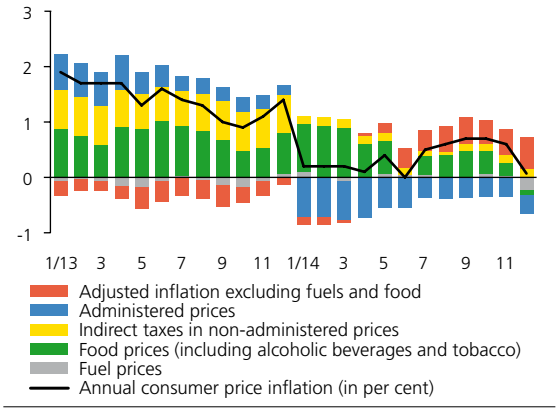


CHART III.1.3

STRUCTURE OF INFLATION

The year-on-year decline in fuel, food and administered prices was offset by a rise in other market prices
(annual percentage changes; contributions in percentage points)



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

CHART III.1.4

INFLATION COMPONENTS

Administered prices continued to decline, fuel and food prices also started to fall in December, and only adjusted inflation excluding fuels rose further
(annual percentage changes; excluding indirect tax changes except for administered prices)

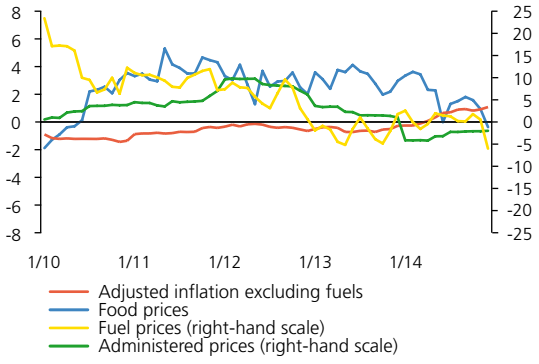


CHART III.1.5

FOOD PRICES

Food prices started to decline year on year due to a persisting fall in agricultural producer prices
(annual percentage changes)

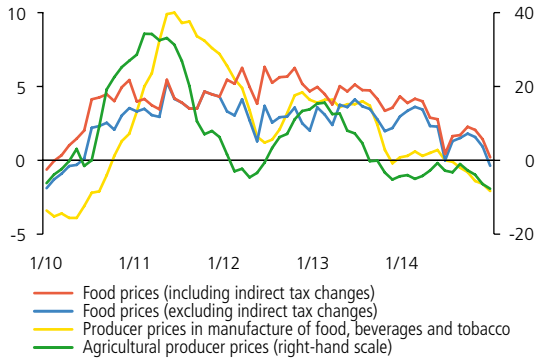
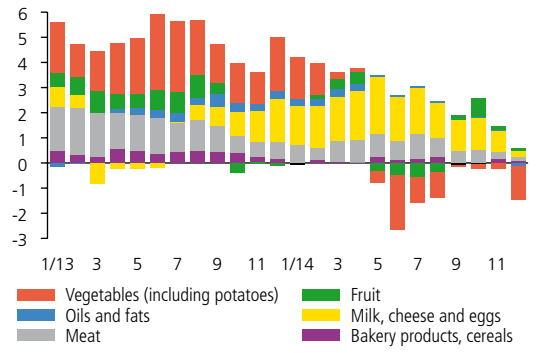


CHART III.1.6

STRUCTURE OF FOOD PRICE INFLATION

Growth in prices of fruit, meat, dairy products and eggs slowed, while the decline in vegetable prices deepened
(contributions in percentage points to annual percentage changes)



The contribution of changes to **indirect taxes** to annual inflation was 0.1 percentage point in 2014 Q4. It was linked with two harmonisation adjustments made to excise duty on cigarettes and tobacco in 2014. The impact of the increase in excise duty of 1 January 2014 was delayed significantly by substantial frontloading of tobacco products by retailers. The second hike in excise duty on 1 December 2014 had only a slight effect on prices in Q4.

Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, decreased in 2014 Q4 and turned slightly negative in December. It averaged 0.3% in 2014 Q4, well below the lower boundary of the tolerance band around the CNB's target.

The annual decline in **administered prices**, caused by a fall at the start of 2014, continued into 2014 Q4. However, the decline moderated slightly further compared to Q3, reaching -2.1% on average (see Chart III.1.4). The annual decline in administered prices reflected a reduction in retail energy prices in January (decreases in electricity and natural gas prices and a significant weakening of heat price growth) and the abolition of hospital stay fees. During the year, this decline was partly offset by other items of administered prices: in health care, the biggest contribution came from rising prices of medicines and spa stays, while retail gas prices were affected by the expiry of discounts offered in 2013.

Annual **market price inflation**, as measured by net inflation, slowed markedly in 2014 Q4 (from 1.2% in September to 0.3% in December). This was due mainly to falling fuel and food prices. By contrast, growth in other market prices rose slightly further. The evolution of market prices excluding food and fuels thus still reflected the weakened koruna and continuing economic growth.

Food price inflation (adjusted for tax changes) slowed in 2014 Q4 and recorded an annual decline in December (of 0.4%; see Chart III.1.5). This trend was a result of a persisting annual fall in agricultural producer prices, which – in addition to above-average harvests in 2014 in the Czech Republic and abroad – reflected the embargo on food exports to Russia. The switch to an annual decline in food prices was also due to a slowdown in the previous rapid growth in prices of dairy products and eggs. Growth in fruit prices also slowed significantly and the annual decline in prices of vegetables including potatoes deepened again (see Chart III.1.6). Meat price growth slowed as well (mainly due to falling pork prices).

Fuel prices switched to a strong annual decline in 2014 Q4 (from 0.1% in September to -6.0% in December). They thus still reflected the fall in global petrol and oil prices, whose impact on domestic prices was only partly offset by the weakening of the koruna against the dollar. At the same time the differences in fuel prices between

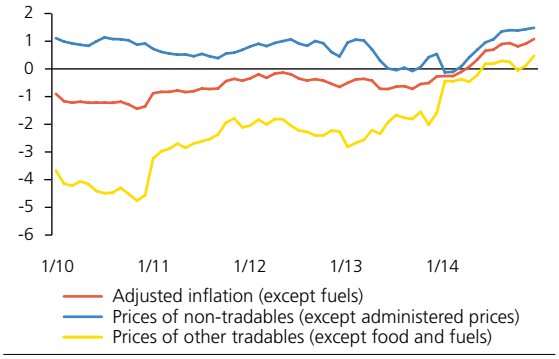
individual sellers widened because of uneven incorporation of the decline in cost items into end prices. Fuel prices can thus be expected to continue falling towards lower average levels (this trend was actually observed in early 2015).

By contrast, annual **adjusted inflation excluding fuels** rose further in 2014 Q4 (from 0.9% in September to 1.1% in December; see Chart III.1.7) This was due to prices of **other tradables**, which returned to growth after showing a slight annual decline in October. This growth, which rose further in December (to 0.5%), continued to reflect the weakening of the koruna against the euro, whereas foreign inflation slowed further at the end of 2014 as consumer prices in the effective euro area started to decline year on year and industrial producer prices continued to fall sharply. Annual growth in domestic **prices of non-tradables**[10] also showed a modest increase (from 1.4% in September to 1.5% in December). This primarily reflected the continuing growth in domestic economic activity and the gradually improving situation on the labour market.

CHART III.1.7

ADJUSTED INFLATION EXCLUDING FUELS

Adjusted inflation excluding fuels rose further, aided by both its components
(annual percentage changes)



10 This segment consists mainly of services.

CHART III.2.1

IMPORT PRICES AND PRODUCER PRICES

Import price inflation slowed sharply in November, the decline in prices in industry deepened in December, and prices in construction and market services continued to record modest growth
(annual percentage changes)

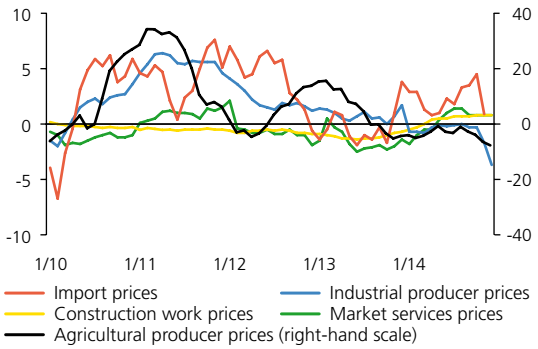


CHART III.2.2

IMPORT PRICES

High-value-added commodities and semi-finished products continued to contribute the most to import price inflation, while falling prices of mineral fuels had the opposite effect
(annual percentage changes; contributions in percentage points)

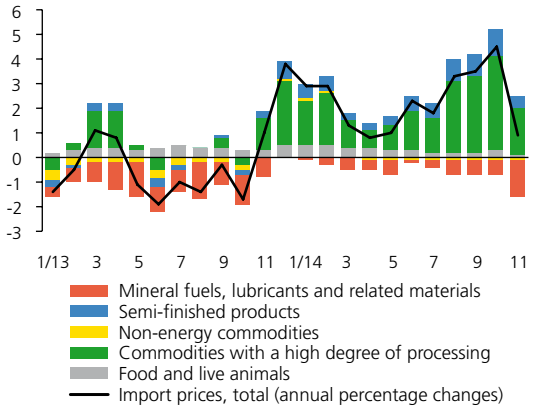


TABLE III.2.1

STRUCTURE OF IMPORT PRICE INFLATION

Import prices went up in most categories, but prices of energy and non-energy commodities went down
(annual percentage changes)

	8/14	9/14	10/14	11/14
IMPORTS, TOTAL	3.3	3.5	4.5	0.9
of which:				
food and live animals	3.9	3.7	4.7	0.9
beverages and tobacco	2.7	4.2	6.2	3.7
crude materials inedible, except fuels	-5.2	-4.1	-3.1	-5.4
mineral fuels and related products	-4.6	-5.3	-5.4	-11.8
animal and vegetable oils	-7.6	-7.6	-2.2	-0.9
chemicals and related products	3.7	3.0	3.8	1.2
manufactured goods classified chiefly by material	5.1	5.1	6.1	2.6
machinery and transport equipment	5.4	6.0	7.2	3.6
miscellaneous manufactured articles	3.3	4.3	5.5	3.0

III.2 IMPORT PRICES AND PRODUCER PRICES

According to the latest data, annual import price inflation slowed sharply in November. This change was due mostly to slowing growth in prices of products with a high degree of processing and a deepening decline in import prices of energy commodities, oil in particular. Import prices of non-energy commodities also kept falling year on year. The annual decline in industrial producer prices deepened in 2014 Q4. This was due not only to a continuing decline in producer prices in the energy and mining and quarrying industries, but also to weaker growth and a subsequent decline in prices in manufacturing, caused primarily by a sharp decrease in prices of oil products. Construction work prices and prices of market services in the business sector continued to show modest growth as observed in previous quarters. The decline in agricultural producer prices deepened again in year-on-year terms.

III.2.1 Import prices

The upward trend in **import price inflation** observed – except for July – since May 2014 continued until October. In November, however, the annual growth rate of import prices decreased to 0.9%, down by 3.6 percentage points from October (see Chart III.2.1). In 2014, import price volatility was recorded mainly for products with higher value added, semi-finished products and energy commodities.[11] At the end of the year, this volatility was also fostered by a significant deepening of the decline in prices of mineral fuels.

Annual import price inflation continued to be driven primarily by prices of **commodities with a high degree of processing** (see Chart III.2.2). The highest-weight category – machinery and transport equipment (with a positive contribution of 1.5 percentage points) – again had the biggest impact on overall annual import price inflation in November.[12] However, import price growth in this category slowed significantly to 3.6% in November from double that figure in October. Import prices of miscellaneous manufactured articles also rose more slowly than in the previous quarter (by 3% in November). Annual growth in import prices of chemicals and related products was only moderate in November, at 1.2%.

Import prices of **semi-finished products** saw a similar trend in the first two months of 2014 Q4. An increase in their annual rate of growth in October was replaced by a noticeable slowdown in November (of 3.5 percentage points to 2.6%; see Table III.2.1). Following previous fast growth, import prices of **food and live animals** recorded an even more pronounced slowdown, rising by only 0.9% in November.

11 In this period, they were affected not only by changes in foreign price inflation, but also by year-on-year changes in the exchange rate despite its stable level close to CZK 27.50 to the euro.

12 In this category, import prices of electrical equipment and office machines and equipment showed the fastest growth (6% and 7.5% respectively), while import prices of road vehicles and machinery and equipment recorded growth not exceeding 3%.

On the other hand, import prices of energy and non-energy commodities continued to fall year on year in 2014 Q4, with the decline deepening noticeably in November. These prices thus contributed significantly to the slowdown in import price inflation in this period. The largest decline was recorded for import prices of **mineral fuels** (-11.8%; see Table III.2.1). This change was linked mainly with the continuing slide in global oil prices, whose double-digit year-on-year decline deepened further to around -25% (see Chart III.2.3). The deepening of the decline in import prices of **non-energy commodities** was more moderate than in the case of mineral fuels. In November, their annual decline was about half the size of that seen for mineral fuels.

III.2.2 Producer prices

Industrial producer prices

The decline in **industrial producer prices** gradually deepened in 2014 Q4. After falling slightly year on year (by 0.3%) in September, they dropped by 3.7% year on year in December (see Chart III.2.4).

An analysis of the **structure of industrial producer price inflation** reveals that the substantial deepening of their overall decline in December 2014 was a result of a combination of a continuing decline in prices in the mining and energy supply sectors and a stronger decrease in producer prices in manufacturing (see Chart III.2.4). Prices in the former category were affected by changes in the dynamics of commodity prices on the European and global markets, where oil and coal prices fell at double-digit rates and gas prices also decreased to a lesser extent. This, coupled with a continuing annual decline in import prices of non-energy commodities, helped to reduce some producers' input costs, a factor which was also reflected in producer prices in manufacturing. A further deepening of the producer price decline in the food industry was chiefly due to a renewed strengthening of the annual decline in agricultural producer prices. Producer prices in the other branches of manufacturing recorded a considerable slowdown in annual growth in November and then dropped slightly in December.

Turning to the **individual branches of manufacturing**, annual producer price developments were very mixed in 2014 Q4, but the growth rates slowed in most branches. Following a sharp slowdown in growth in 2014 Q3, producer prices in the manufacture of coke and refined petroleum products switched to a decline in Q4, which deepened gradually (to -24.6% year on year in December). Their decrease in 2014 Q4 primarily reflected the pass-through of fast falling global oil prices in this period (see Chart III.2.4). For the above reasons, the decline in producer prices in the food industry deepened as well (to -2.1% in December). Producer prices in the manufacture of basic metals and fabricated metal products kept rising, although at a much slower rate than in the previous quarter (1.3% in December). Growth in producer prices in the manufacture of transport equipment also slowed significantly, approaching zero, while producer prices in the manufacture of machinery and equipment fell slightly year on year

CHART III.2.3

MINERAL FUELS AND LUBRICANTS

Prices of imported mineral fuels reflected falling world prices of oil and natural gas, while the koruna-dollar exchange rate had the opposite effect

(annual percentage changes)

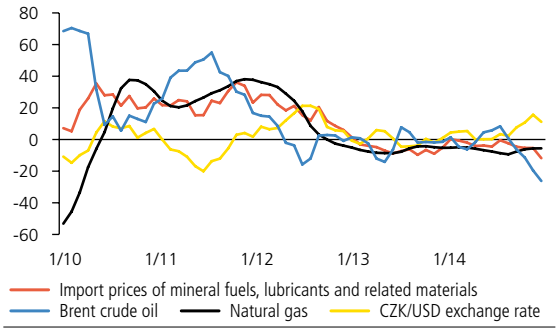


CHART III.2.4

INDUSTRIAL PRODUCER PRICES

The decline in industrial producer prices deepened in 2014 Q4, mainly due to falling prices of refined petroleum products

(annual percentage changes; contributions in percentage points)

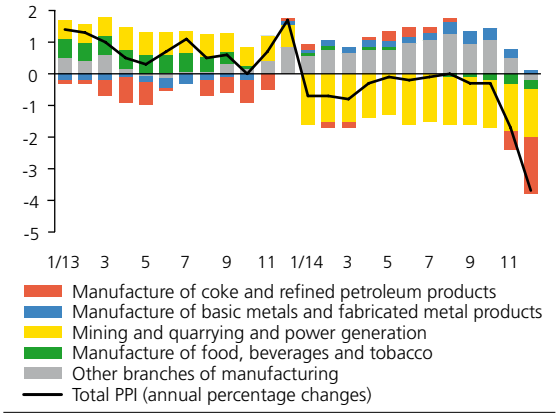


CHART III.2.5

PRODUCER PRICES BY MAIN INDUSTRIAL GROUPINGS

Energy prices were the biggest contributor to the decline in industrial producer prices

(annual percentage changes)

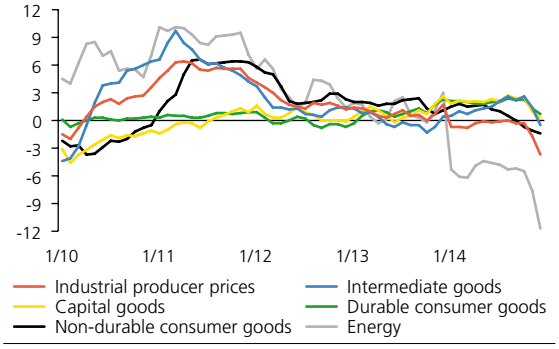


Chart III.2.6

PRICES OF ENERGY AND WATER-RELATED SERVICES

Electricity prices have been falling significantly since the start of 2014
(annual percentage changes)

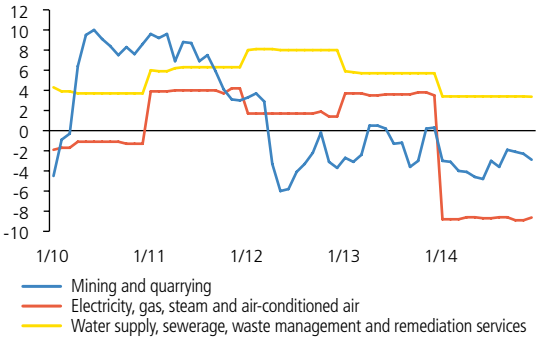
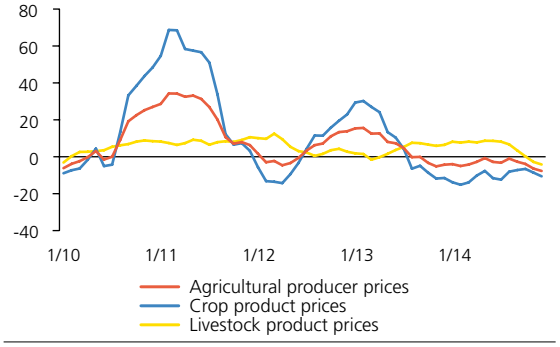


Chart III.2.7

AGRICULTURAL PRODUCER PRICES

The deepening decline in agricultural producer prices in 2014 Q4 was due not only to crop prices, but also to livestock prices
(annual percentage changes)



at the end of 2014. Producer prices in the remaining branches of manufacturing[13] recorded modest annual growth not exceeding 3%. Overall, producer prices in manufacturing have been falling year on year since November (by 2.8% in December). In addition to producer price developments in the euro area and falling oil prices, this was due to the fading effect of the weakening of the koruna-euro exchange rate in November 2013 in year-on-year comparison.

The annual decline in prices in **mining and quarrying** continued into 2014 Q4, deepening further to -2.8% in December. The falling producer prices in this sector in turn fostered a decrease in producer prices in the **electricity, gas, steam and air conditioning industries**, which have been declining at a rate of almost 9% since the start of 2014 (see Chart III.2.6). On the other hand, the negative contribution of these branches to annual producer price inflation was slightly offset by prices in the water supply and sewerage-related services industry. These prices rose by 3.4% year on year after going up in January 2014.

Agricultural producer prices

Agricultural producer prices saw a reversal in trend at the end of 2014 Q3 and their annual decline started to deepen in Q4 (see Chart III.2.7). According to the latest figures, they fell by 7.7% in December, more than double the decline recorded in September.

Turning to the **structure** of agricultural producer prices, the differences in the growth rates of the two main components persisted in 2014 Q4, but they did shrink significantly (see Chart III.2.7). The decline in crop product prices deepened year on year (to -10.6% in December). Growth in the higher-weight prices of livestock products switched to a decline in November, which then deepened further to (-4.2% in December). The persisting decrease in crop product prices was again due to prices of cereals, oil crops, vegetables and potatoes. The switch of livestock product prices to an annual decline was mostly a result of falling prices of pigs and, at the year-end, also milk.

The deepening decline in agricultural producer prices in 2014 Q4 was due to two **key factors**. The first factor was the above-average harvest in 2014 both in the Czech Republic and abroad. The second factor was the trade sanctions imposed on Russia by the EU and the subsequent retaliatory measures taken by Russia in connection with the geopolitical situation in Ukraine. These affected livestock product prices particularly strongly, with pig and milk prices both falling. Fruit and vegetable prices were also partly affected by the prohibition of imports to Russia. The year-on-year weakening of the koruna had only a minor impact on domestic prices of agricultural commodities. Overall, the above factors fostered a deepening of the annual decline in crop product prices in the last quarter of 2014.

13 Except for the manufacture of computers, electrical and optical equipment and electrical equipment, where producer prices dropped slightly year on year, and the manufacture of chemicals and chemical products, where producer prices also decreased.

Other producer prices

The modest growth in **construction work prices** continued into 2014 Q4 amid a gradual recovery in construction output (see Chart III.2.8). The growth went up slightly year on year to 0.8% in October and remained at this level in the following two months. By contrast, annual growth in prices of materials and products consumed in the construction industry slowed further (from 1.5% in September to 0.5% in December).

Prices of market services for the business sector recorded a similar trend as prices in construction. Their annual growth was flat at 0.8% in 2014 Q4. Underlying this generally subdued growth were mixed price movements in individual service categories. In most categories, however, prices went up. The strongest price growth was recorded by financial services (7.2% year on year in December). Growth in prices of other services was slower and did not exceed 3%. Only in advertising services and market research, in rental and operational leasing services and in real estate services did prices fall.

CHART III.2.8

OTHER PRICE CATEGORIES

Prices of construction work and market services continued to show modest growth in 2014 Q4
(annual percentage changes)

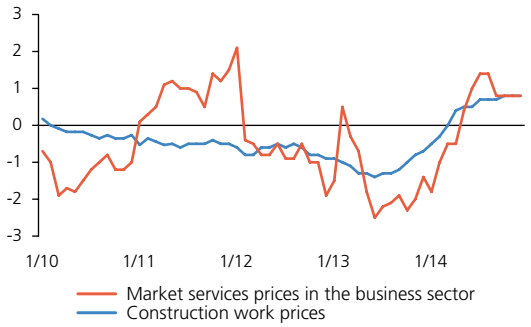


CHART III.3.1

GROSS DOMESTIC PRODUCT

Annual real GDP growth rose slightly in 2014 Q3
(annual and quarterly percentage changes at constant prices; seasonally adjusted data)

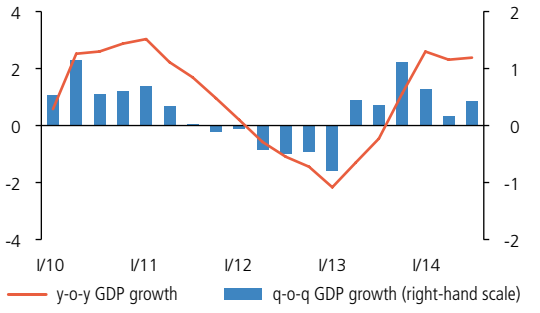


CHART III.3.2

STRUCTURE OF ANNUAL GDP GROWTH

All components of demand except net exports contributed to the annual GDP growth in 2014 Q3
(contributions in percentage points; seasonally adjusted data)

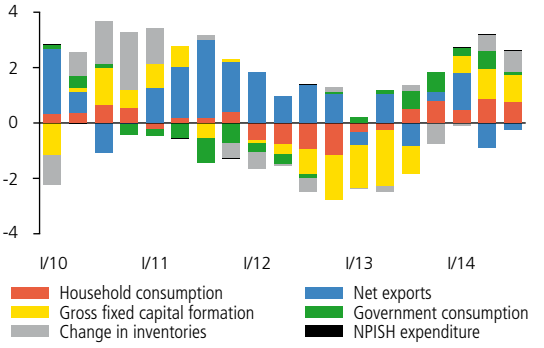
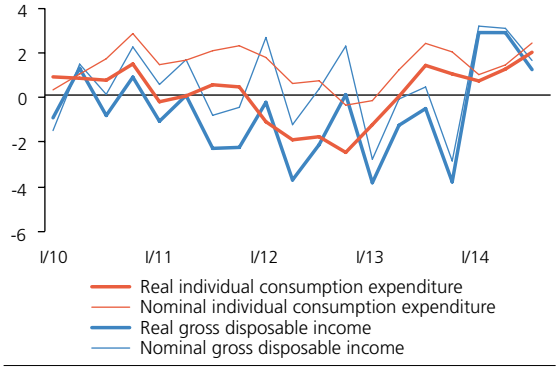


CHART III.3.3

HOUSEHOLD CONSUMPTION EXPENDITURE

Growth in gross disposable income slowed noticeably in 2014 Q3
(annual percentage changes; seasonally unadjusted data)



III.3 DEMAND AND OUTPUT

Annual real GDP growth rose slightly to 2.4% in 2014 Q3. In quarter-on-quarter terms, economic activity increased by 0.4%. The year-on-year GDP growth was due to all components of domestic demand, whereas the contribution of net exports was negative amid a persisting lead of import growth over export growth. On the supply side, increased manufacturing output was the biggest contributor to GDP growth, but gross value added also increased in most other sectors. The output gap was roughly flat but can be expected to start closing gradually again in the future.

III.3.1 Domestic demand

Annual **domestic demand** growth slowed somewhat in 2014 Q3 (to 2.6%). This was primarily due to government consumption, whose annual growth slowed noticeably. As a result, its positive contribution to GDP growth was only marginal in 2014 Q3 (see Chart III.3.2). Household consumption and fixed investment growth also weakened slightly, but this had a negligible effect on annual GDP growth. The positive contribution of additions to inventories to GDP growth increased, although only slightly.

Final consumption

Real final consumption expenditure of households continued to grow in 2014 Q for the fifth quarter in a row. Its annual growth rate moderated somewhat compared to the previous quarter (by 0.2 percentage point to 1.5% according to seasonally adjusted data). The annual growth rate of household consumption slackened amid a pronounced weakening of growth in real gross disposable income.

After rising at a rate of more than 3% in 2014 Q2, growth in **nominal gross disposable income** slowed to 1.7% in Q3. Its real purchasing power increased by 1.3% year on year amid low inflation (see Chart III.3.3). The weak annual gross disposable income growth overall in this period was primarily due to its lower-weight items (taxes and social contributions paid) rather than its main components.

Annual growth in the volume of **wages and salaries**, linked mainly with the evolution of demand for labour and productivity, continued into 2014 Q3. Its positive contribution to annual disposable income growth (1.7 percentage points) was still the largest and was little changed from the previous quarter (see Chart III.3.4). **Social benefits**, whose annual growth picked up to 3.4%, also made a significant contribution to disposable income growth in Q3. Income from other transfers, whose growth rate rose to double-digit figures in the same period, recorded the highest growth. Given its lower weight, however, its effect on the total year-on-year change in households' disposable income was less significant. The contribution of business income (gross operating surplus plus mixed income) was also still positive. It was higher than in the previous quarter, reaching 0.5 percentage

point. Unlike in 2014 Q2, the positive contributions of the above income items to overall disposable income growth were significantly dampened by a year-on-year increase in taxes and social contributions, whose negative contribution was 1.5 percentage points. The impact of falling property income on disposable income dynamics was less significant (see Chart III.3.4).

Household consumption expenditure grew faster than gross nominal disposable income in 2014 Q3. Households thus saved less from their income in this period than in the same period of 2013. This was reflected in a decline in the **saving rate** to 10.4% (seasonally adjusted; see Chart II.2.17). A slowdown in the annual growth rate of consumer credit (from 2.7% in June to 2.3% in September) meanwhile indicated persisting weak household interest in credit financing of consumption (see section III.5).

The **structure of consumption expenditure**[14] at the same time shows that household consumption increased year on year for the second consecutive quarter in all the categories under review (see Chart III.3.5). The largest amounts of funds were channelled into non-durable goods and services, which account for more than 80% of total household consumption expenditure. Expenditure on durable goods still rose the fastest in 2014 Q3 (by 10.7% year on year), but its share in total consumption expenditure is relatively low.[15] Households' consumption behaviour in the period under review was probably affected not only by continued growth in their main income sources (particularly income from wages and salaries), but also by an improving view of future economic developments and by the easy monetary conditions.

According to the latest available **leading indicators**, seasonally adjusted annual retail sales growth remained buoyant in October and November 2014. This was apparent in continuing rapid growth in sales not only in the automotive segment, but also in the rest of the retail sector. The consumer confidence indicator also rose noticeably in 2014 Q4, mainly thanks to improved perceptions of the outlook for the financial and economic situation in the next twelve months (see Chart III.3.6).

Annual growth in real **government final consumption expenditure** slowed markedly to 0.6% in 2014 Q3 from 3.3% in the previous quarter. Its positive contribution to annual GDP growth thus decreased to 0.1 percentage point in this period.

14 According to seasonally unadjusted data at constant prices.
15 In 2014 Q3 it accounted for 8%.

CHART III.3.4

DISPOSABLE INCOME

Rising taxes and contributions and falling property income contributed to the slowdown in disposable income growth
(annual percentage changes; contributions in percentage points; current prices)

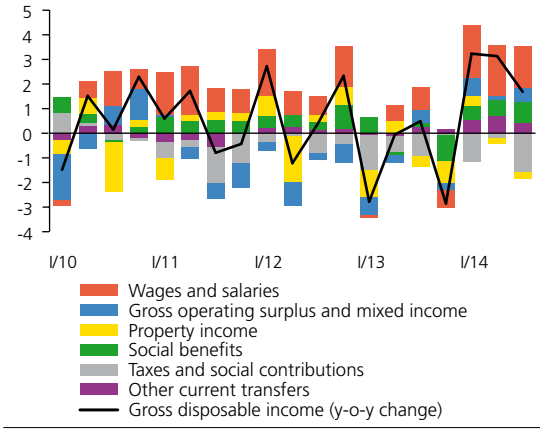


CHART III.3.5

STRUCTURE OF HOUSEHOLD CONSUMPTION

Household consumption increased in all categories in 2014 Q3
(annual percentage changes; contributions in percentage points; constant prices)

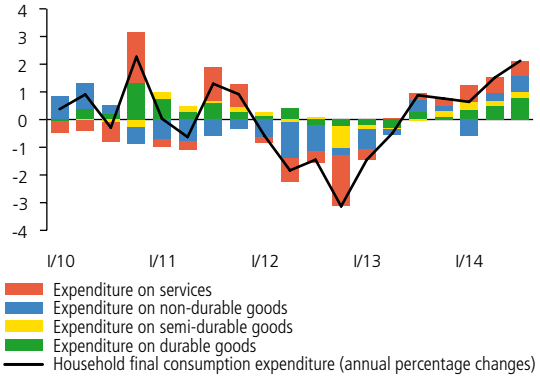


CHART III.3.6

CONFIDENCE INDICATORS

Consumer confidence continued to rise noticeably
(2005 average = 100; source: CZSO)

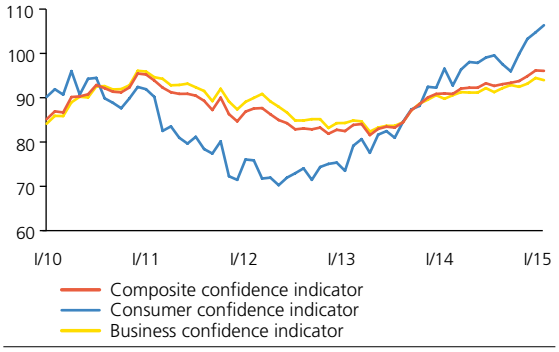


CHART III.3.7

INVESTMENT BY SECTOR

The continued growth in fixed investment was still driven by non-financial corporations and general government
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)

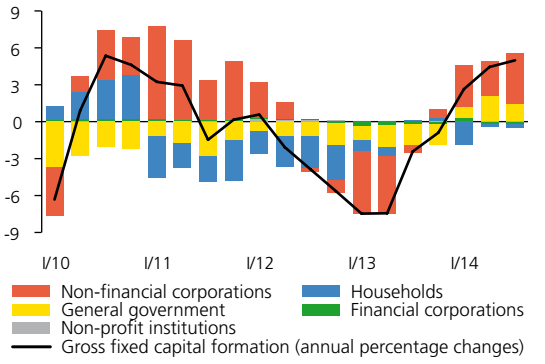


CHART III.3.8

FIXED CAPITAL FORMATION

There was growth in investment in machinery and equipment and buildings and structures in particular
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)

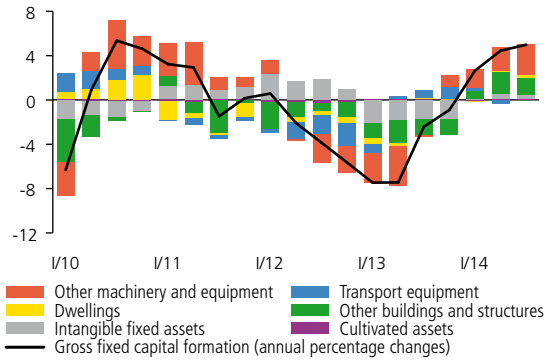
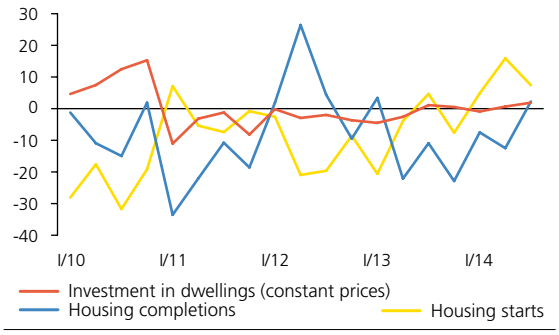


CHART III.3.9

INVESTMENT IN DWELLINGS

The number of housing starts continued to rise in 2014 Q3
(annual percentage changes)



Investment

In an environment of continuing economic recovery, investment activity grew quite quickly again in 2014 Q3 (see Chart III.3.7). According to seasonally adjusted data, **fixed investment** rose by almost 4% year on year and by 0.3% quarter on quarter.

The fixed investment growth observed since the start of 2014 after almost two years of decline was again driven mostly by **non-financial corporations** in 2014 Q3 (see Chart III.3.7). As in 2014 H1, annual fixed investment growth in this sector was linked mainly with investment in machinery and equipment,[16] whose growth picked up further to a significant 8.3% in 2014 Q3. Non-financial corporations also probably contributed partly to the increase in investment in other buildings and structures and transport equipment in this period (see Chart III.3.8). The continuing investment growth thus indicated a positive view of future demand among non-financial corporations, as confirmed by the CZSO's business indicators. This view is also supported by the latest business survey conducted by the CNB and the Confederation of Industry in January, according to which non-financial corporations expect investment to increase at the six-month and twelve-month horizons.

Overall fixed investment growth in 2014 Q3 was also supported by investment in the **government sector**, although to a lesser extent than in the previous quarter (see Chart III.3.7). Its annual growth remained in double figures (10.6%). The continuing fast growth in government investment in 2014 Q3 was chiefly due to an increased effort to accelerate the drawdown of EU funds. The implementation of this investment in 2014 was based on public contracts issued since the beginning of 2013. The upward trend in tenders and procurement activity then continued to an increased extent throughout 2014.

The annual decline in **household investment** continued into 2014 Q3, reaching 2.3%. However, investment in dwellings, which accounts for a significant proportion of the total fixed investment of households, continued to edge up for the second consecutive quarter (by 1.9% in 2014 Q3; see Chart III.3.9). Leading indicators are also signalling a gradual improvement in household investment in dwellings. Households' confidence in future growth of the economy, employment and wages, which is improving noticeably as the economy continues to grow, remains the main factor. Financing conditions for investment in dwellings are still favourable. A continuing marked year-on-year rise (of 7.4%) in the number of housing starts in 2014 Q3 at the same time indicates an improvement in developers' view of future household demand for investment in housing.

The continuing economic growth was accompanied by an increase in additions to inventories for the second quarter in a row. This was reflected in a positive contribution of **changes in inventories** to

16 Under CZSO methodology, this category includes ICT, other machinery and arms systems.

annual GDP growth in 2014 Q2 and Q3 (of 0.6 and 0.7 percentage point respectively; see Chart III.3.2). This was due to a rebound in inventories for future production (commodities, materials and semi-manufactures) and to increases in stocks of goods in the wholesale and retail trade sector. Growth in inventories in the above categories is indicated by a survey of non-financial corporations conducted by the CNB and the Confederation of Industry of the Czech Republic and by CZSO statistical data on the financial results of non-financial corporations.

III.3.2 Net external demand

Net exports of goods and services[17] decreased for the second consecutive quarter in 2014 Q3. However, the net export surplus shrank much less in year-on-year terms than in the previous quarter (by CZK 1.7 billion; see Chart III.3.10). It also dropped slightly in quarter-on-quarter comparison. The year-on-year decline in net exports was due to the balance of services, whose surplus narrowed for the third quarter in a row. About half of this decrease was offset by a year-on-year increase in the goods surplus in Q3. The contribution of net exports to GDP growth was thus only slightly negative in 2014 Q3 (-0.2 percentage point). This meant a moderation of its unfavourable effect on GDP (of 0.7 percentage point compared to Q2).

The year-on-year decline in net exports in 2014 Q3 was a result of import growth outpacing export growth, although this lead narrowed compared to Q2 (to 0.8 percentage point; see Chart III.3.11). This decrease was due to a more marked decline in import growth than export growth in this period. **Total exports** rose by 6.1% year on year, their growth rate slowing by 2.5 percentage points from the previous quarter. The further weakening of growth in total exports was linked mainly with more moderate growth in external demand in the Czech Republic's major trading partner countries. As in the previous quarter, the weaker growth in total exports was due solely to exports of goods, as exports of services picked up slightly further compared to 2014 Q2.

A year-on-year moderation of growth in **total imports** in 2014 Q3 (of 3.8 percentage points compared to Q2, to 6.9%) reflected not only a further slowdown of import-intensive exports, but also slowing growth in total domestic demand in this period. Turning to its structure, this significant weakening of import growth was apparent only in imports of goods, whose slower growth was slightly offset by faster growth in imports of services. As regards imports of goods, the fastest growth was recorded for commodities for investment purposes. Annual growth in total **foreign trade turnover** thus slowed further overall in 2014 Q3, mainly because of slackening growth in imports unlike in Q2.

17 At 2010 prices, seasonally adjusted.

CHART III.3.10

NET EXPORTS

The year-on-year decline in net exports slowed markedly in 2014 Q3

(seasonally adjusted data; constant prices)

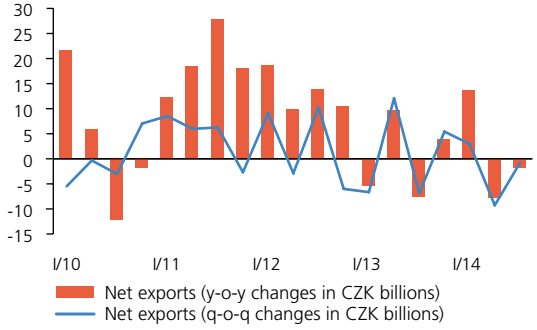


CHART III.3.11

EXPORTS AND IMPORTS

Growth in trade turnover slowed in 2014 Q3, with import growth outpacing export growth

(annual percentage changes; percentage points; constant prices; seasonally adjusted data)

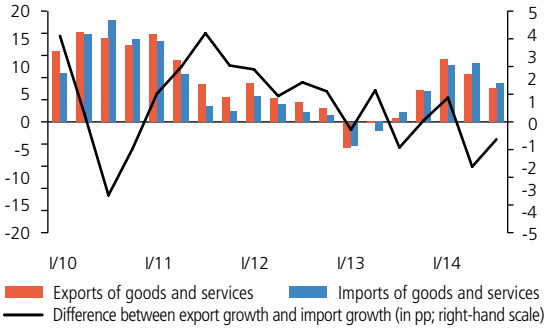


CHART III.3.12

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

Manufacturing was the biggest contributor to the growth in gross value added in 2014 Q3, but most other sectors increased as well

(annual percentage changes; contributions in percentage points)

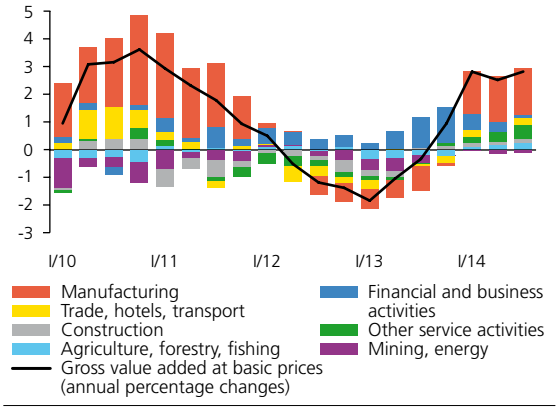


CHART III.3.13

INDUSTRIAL PRODUCTION

Industrial production grew in the first two months of 2014 Q4, but the growth slowed in year-on-year terms
(basic index; year 2010 = 100)

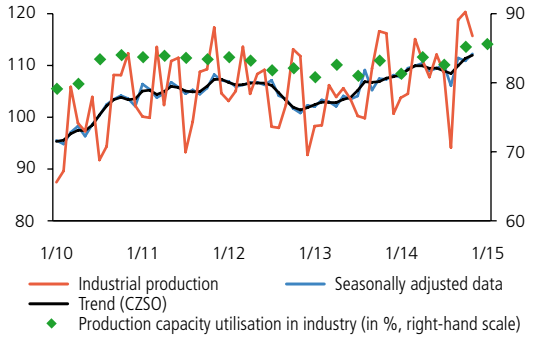


CHART III.3.14

NEW ORDERS IN INDUSTRY

Annual growth in new orders in industry slowed noticeably in November
(annual percentage changes)

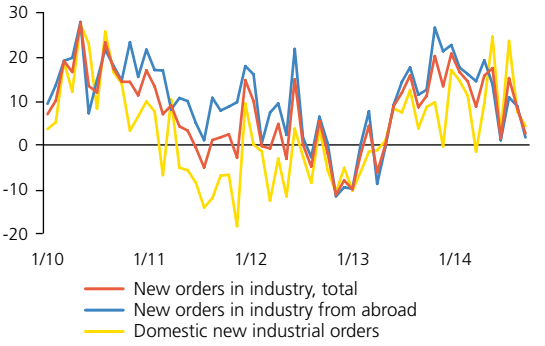
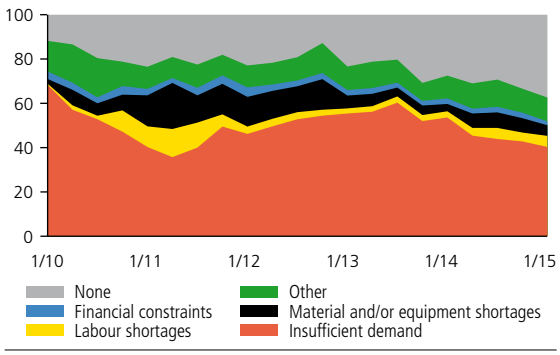


CHART III.3.15

BARRIERS TO GROWTH IN INDUSTRY

The effect of insufficient demand as the main barrier to growth in industrial production decreased further
(percentages)



III.3.3 Output

Gross value added at basic prices continued to rise in 2014 Q3 in line with the trend seen since the start of 2014 (see Chart III.3.12). As in 2014 H1, its annual growth rate was slightly below 3%. In quarter-on-quarter terms, value added grew for the sixth consecutive quarter. In 2014 Q3 alone the growth was 0.5%. This was due to rising domestic and external demand, even though the growth rates of both demand components slowed somewhat in 2014 Q3.

As in the previous two quarters, the pass-through of the rising demand to the output of **individual sectors** was again most apparent in industry and, within it, in manufacturing, as gross value added decreased in the other branches of industry (mining and energy supply; see Chart III.3.12). Manufacturing thus made the largest contribution (1.7 percentage points) to overall annual gross value added growth again in 2014 Q3. By contrast, the negative contribution of mining and energy supply to annual value added growth was insignificant.

The continuing gross value added growth in industry in 2014 Q3 was achieved amid almost 3% real annual growth in **industrial production** (see Chart III.3.13).[18] Its growth was mostly due to **manufacturing**, whose year-on-year growth rate reached 4.2%.[19] In terms of use, growth in production for investment remained buoyant, rising to 8.5% year on year. Relatively rapid growth, albeit lower than in the previous quarter, was also recorded in production for long-term and intermediate consumption (4.5% and 3.6% respectively). Growth in production for short-term consumption eased as well, falling to low levels (0.7% year on year). The growth in manufacturing output was still quite broad-based, with most of the industries under review (almost 80%) contributing to it.

According to the latest available **monthly indicators**, annual industrial production growth slowed further on average in October and November (see Chart III.3.13). However, total **sales from industrial activity** (at current prices) grew noticeably faster than industrial production. Growth in **industrial orders** also slowed markedly in November, with new orders rising by only 2.6% year on year overall. Growth in foreign orders was even lower, whereas growth in domestic orders increased by 4.2% (see Chart III.3.14).

Nevertheless, according to the January results of the CZSO's business survey, the effect of **insufficient demand as a barrier** to growth in industry decreased, while the proportion of industrial firms not constrained by any barriers increased (see Chart III.3.15). At the same time, capacity utilisation in industry as a whole and in its main component – manufacturing – remained high in January at roughly the level of the previous survey.

18 According to seasonally adjusted data.
19 Production in mining and quarrying dropped by 5.8% year on year in 2014 Q3 and production in the gas, heat and air-conditioned air supply industry decreased by 1.7%.

The overall contribution of **trade and services** to annual gross value added growth was also positive in 2014 Q3 (0.8 percentage point). As in the previous quarter, its growth was due to all service sectors except financial services.[20] The biggest contribution was made by scientific, technical and administrative activities, where annual value added growth rose to 8.3%. The latest November data on retail sales are still favourable, although growth is being recorded more in the automotive segment than in the non-automotive segment.

Annual value added growth in **construction** accelerated further to 2.5% in 2014 Q3. This was largely a result of a recovery in output in civil engineering. The CZSO's latest available monthly data show that this trend continued into October and November. The CZSO's business survey in 2014 Q3 also indicates fast double-digit growth in new orders and continued construction work growth in the period ahead, primarily in civil engineering. On the other hand, the latest CZSO information on the approximate value of building notifications and the number of permits issued reveals a year-on-year decline in these indicators in November.

An **international comparison of economic sentiment**, based on the latest available data for December, shows a continued upward tendency in this indicator in the Czech Republic. It is thus higher than in Germany and the EU as a whole, where, by contrast, its previous upward trend halted following a decline in August. This indicator was subsequently flat or slightly falling (see Chart III.3.16).

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

According to the **Cobb-Douglas production function** calculation, the annual growth rate of potential output stood at 1.4% in 2014 Q3 (see Chart III.3.17). The acceleration in quarterly growth in economic activity observed in 2014 Q3 resulted in stagnation of the output gap, which thus remained significantly negative (-2.5% of potential output; see Chart III.3.18). This method suggests an insignificant pick-up in potential output growth this year and the next to just under 2%.

The **individual factors entering the production function** point to an increasing contribution of productivity to potential output growth over the forecast horizon, amid a broadly flat aggregate contribution of capital and a falling contribution of employment (see Chart III.3.19). The output gap will continue to close gradually, nearing zero in mid-2016.

20 Their negative contribution to annual gross value added growth was 0.7 percentage point in 2014 Q3.

CHART III.3.16

ECONOMIC SENTIMENT

Economic sentiment continued to improve in the Czech Republic, but was flat or falling in Germany and the EU
(long-term average = 100; seasonally adjusted data; source: Eurostat)

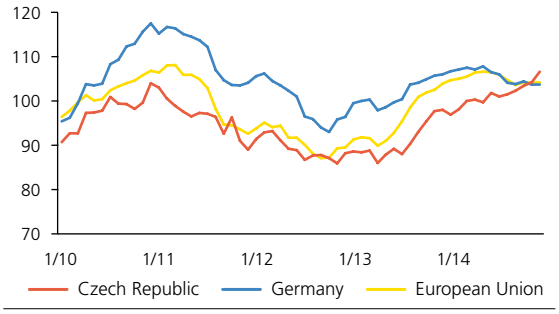


CHART III.3.17

POTENTIAL OUTPUT

The rate of growth of potential output was just below 1.5% in 2014 Q3 according to all the methods used
(annual percentage changes)

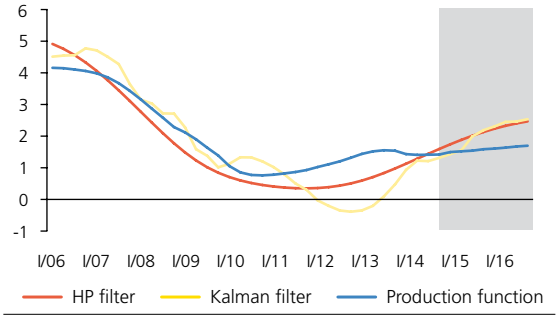


CHART III.3.18

OUTPUT GAP

The output gap is gradually closing
(in % of potential output)

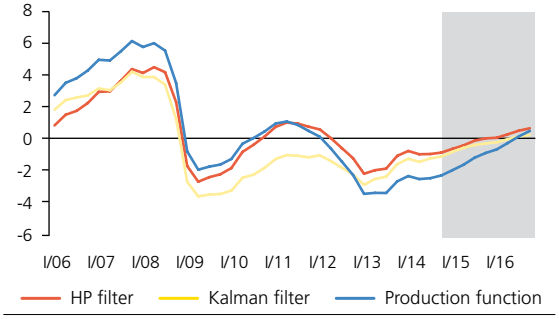
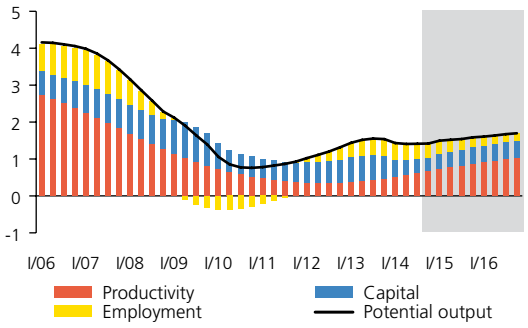


CHART III.3.19

CONTRIBUTIONS TO POTENTIAL OUTPUT GROWTH

The contribution of productivity will gradually increase over the forecast horizon

(production function; annual percentage changes)



An alternative estimate using the **HP filter**[21] indicates the same growth rate of potential output (1.4% in 2014 Q3) as that calculated using the production function. Under this method, the output gap is currently less negative (by more than 1 percentage point) and the HP filter indicates closure of the gap in 2015 H2 amid faster potential output growth going forward. A calculation using the **Kalman filter** shows a similar annual potential output growth rate in 2014 Q3 as the two aforementioned methods, and its pattern over the forecast horizon is similar to that using the HP filter. Compared to the Cobb-Douglas production function calculation, the Kalman filter also indicates a more moderate opening of the output gap to negative levels at present and convergence to zero at the end of 2016 H1.

21 The estimate using the HP filter used coefficient $\lambda = 1{,}600$.

III.4 THE LABOUR MARKET

The labour market continued to be positively affected by ongoing growth in economic activity in 2014 Q3. Growth in total employment and in the number of employees converted into full-time equivalents picked up. Amid a pronounced annual rise in employment, accompanied by only a slight decline in the labour force, the general unemployment rate went down further. The share of unemployed persons also decreased in 2014 Q3 and Q4. Average wage growth slowed due to developments in the business sector. Whole-economy labour productivity growth moderated only slightly. Unit labour costs recorded a slight annual decline, largely because of lower growth in the volume of wages and salaries

III.4.1 Employment and unemployment

Following a slowdown in the previous quarter, annual growth in **total employment**[22] strengthened significantly again in 2014 Q3 (by 0.6 percentage point to 0.8%; see Chart III.4.1). Employment also increased in quarter-on-quarter terms (by 0.3% when adjusted for seasonal effects) following a previous slight decline. Annual employment growth picked up as a result of a sizeable increase in the number of employees, while growth in the number of entrepreneurs slowed to almost zero.

As regards sectors, employment grew most in the secondary sector (see Chart III.4.2). This continued to suggest rising demand for labour mainly in industry owing to continued growth in its output. Employment in the tertiary sector increased – albeit moderately – after a surprise decline in 2004 Q2. However, its renewed growth was entirely due to the non-market services sector, as in market services the pronounced annual decline in employment observed in the previous quarter persisted. Employment also continued to decline year on year in the primary sector.

Growth in employment in the **secondary sector** continued at a slightly higher rate (2.4% year on year) in 2014 Q3 than in the first half of the year. Although the strongest annual growth in the number of employed persons continued to be observed in manufacturing, the electricity supply sector also showed fast growth in employment. According to the latest figures for October and November, the registered number of employees[23] in industry rose further (by 2.1% and 2.2% year on year respectively). In construction, however, the

22 Employment according to the LFS. These data differ from the national accounts concept of employment. The LFS uses the national concept and expresses the employment of all residents of the Czech Republic, whereas the national accounts work with the domestic concept, under which employment of both residents and non-residents in domestic production units is followed. As for the sector structure of employment, the LFS uses the activity principle, while the national accounts apply the institutional principle.

23 Corporations with 50 employees or more, excluding agency workers.

CHART III.4.1

LABOUR MARKET INDICATORS

Growth in total employment and in the number of employees converted into full-time equivalents picked up, while nominal unit labour costs fell slightly

(annual percentage changes)

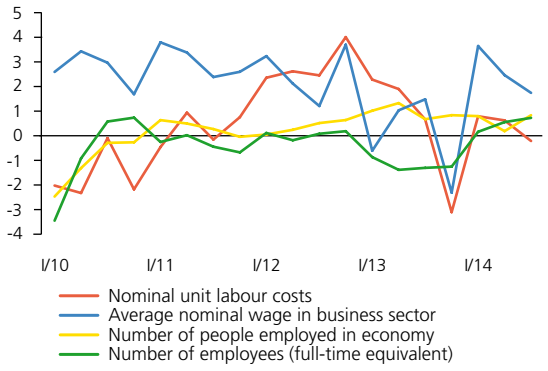
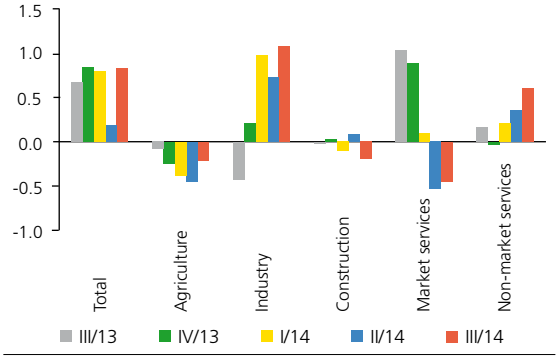


CHART III.4.2

EMPLOYMENT BREAKDOWN BY BRANCHES

The continuing growth in employment was due to industry and non-market services, as employment fell in other branches

(contributions in percentage points to annual change; selected branches; source: LFS)



registered number of employees continued to decrease in the same period (by 2.9% and 3.3% respectively), even though construction output started to recover.

The renewed annual growth in employment in the **tertiary sector** (from -0.3% in 2014 Q2 to 0.3% in 2014 Q3) was due to a rise in employment in non-market services. Market services saw a slightly slowing decline in the number of employed persons. As regards non-market services, the number of employed persons increased most of all in public administration and defence[24] and health and social care. Conversely, market services showed a rapid annual decline in employment in financial intermediation and insurance, wholesale and retail trade and repair of motor vehicles and real estate activities.[25] Annual growth in the number of employed persons in market services was recorded only in hotels and restaurants and information and communication activities, although in the latter sector the growth rate of the number of employed persons has been declining for several consecutive quarters now.

With economic activity continuing to rise, growth in the **number of employees converted into full-time equivalents** rose slightly further in 2014 Q3 (to 0.7% year on year; see Chart III.4.3). This was fostered mainly by the business sector, as annual growth in this indicator in the non-business sector remained broadly the same as in the previous quarter. Unlike in the previous quarter, though, the increase in the converted number of employees at the whole-economy level was due exclusively to growth in the number of employees amid slightly shorter average hours worked per employee.

However, the number of employees and average hours worked per employee were still very mixed across the sectors of the national economy. Average hours worked per employee were shortened in **industry** and **non-market services**, where the number of employees grew faster than the converted number of employees. By contrast, **market services**, where the number of employees has been declining year on year for three consecutive quarters, saw a slight increase in the converted number of employees via a rise in the average number of hours worked per employee. The converted number of employees in **construction** has long been decreasing, mainly because of a decline in the number of employees.

Amid a pronounced annual rise in employment, accompanied by a slight decline in the labour force, the **general unemployment rate**[26] decreased further in 2014 Q3 (to 6%; see Chart III.4.4). A slight year-on-year decline in the labour force coupled with an even more pronounced decline in the population resulted in a further increase in

CHART III.4.3

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

Growth in the converted number of employees picked up slightly further, but average hours worked per employee decreased

(annual percentage changes; contributions in percentage points)

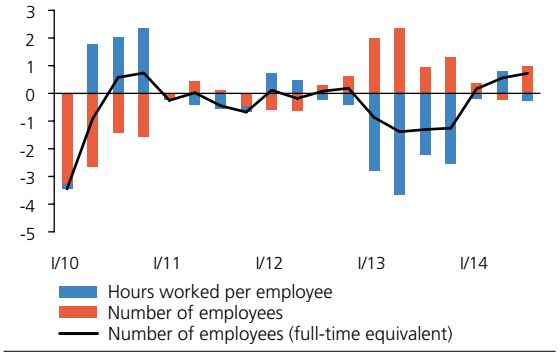
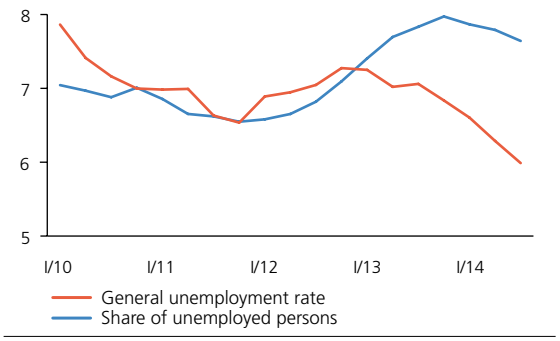


CHART III.4.4

UNEMPLOYMENT INDICATORS

The general unemployment rate and the share of unemployed persons both decreased further in 2014 Q3

(percentages; seasonally adjusted data; source: MLSA, CZSO)



24 The number of employees rose by 10,600 year on year in public administration and defence and by 15,200 in health and social care.

25 The number of employees fell by 16,200 year on year in financial intermediation and insurance and by 14,400 in wholesale and retail trade and repair of motor vehicles.

26 In the 15–64 age category. Measured by the ILO methodology according to the LFS.

the **rate of economic activity**,[27] which reached the highest level in the history of the Czech Republic (73.5% after seasonal adjustment). This increase was due, among other things, to an increase in the retirement age, demographic developments and the use of shorter working hours. According to the latest figures, the seasonally adjusted general unemployment rate was 5.9% and 6.0% in October and November respectively, and the rate of economic activity rose slightly further.

The **share of unemployed persons**,[28] published by the MLSA, also decreased further in 2014 Q3 (see Chart III.4.4). This (seasonally adjusted) unemployment indicator then continued to decline to 7.4% in 2014 Q4 owing to a larger decrease in the number of available job applicants than in the population in the given age group.

A gradual improvement of the labour market situation is also indicated by the latest available data for 2014 Q4, according to which the **Beveridge curve**[29] is continuing to shift in the north-westerly direction. This shift is due to a cyclical decrease in the seasonally adjusted number of registered job applicants (driven by a continued increase in the number of persons excluded from the register due to finding jobs) coupled with growth in the number of vacancies (see Chart III.4.5).

III.4.2 Wages and productivity

Growth in the **average nominal wage** remained subdued in 2014 Q3, slowing to 1.8% in year-on-year terms, down by 0.5 percentage point from the previous quarter (see Chart III.4.6). This was due to slower average wage growth in the business sector. By contrast, wage growth in the non-business sector rose modestly. With annual inflation low, the **real average wage** increased by 1.2% (see Table III.4.1).

After reaching the high level of 3.6% at the start of 2014, annual growth in the average wage in the **business sector** gradually slowed in the following two quarters, amounting to just 1.7% in Q3. Wages in the business sector were still significantly affected by the tax optimisation recorded in late 2012 and early 2013, when corporations shifted the payment of bonuses from 2013 to 2012 Q4.[30] Even when

27 The rate of economic activity is defined as the ratio of employed and unemployed persons to the population in each age category.
28 The share of unemployed persons is the ratio of available job applicants aged 15–64 to the population of the same age.
29 The Beveridge curve has been affected by legislative changes in effect since 1 January 2012. Since that date, corporations have not been obliged to report the number of vacancies to labour offices.
30 A "solidarity" tax, i.e. an increase of 7 percentage points in the tax rate for employed persons with income exceeding CZK 103,536 a month, was introduced on 1 January 2013, and the cap on health insurance premium payments was abolished at the same time. In many sectors that usually display the largest proportions of performance-related bonuses for the previous year, these bonuses were therefore moved from 2013 to 2012 Q4. These sectors mainly included financial intermediation, energy and heat supply, and cultural, entertainment and recreational activities.

Chart III.4.5

BEVERIDGE CURVE

The number of vacancies has been rising and the number of unemployed persons falling since the start of 2014
(seasonally adjusted numbers in thousands; source: MLSA)

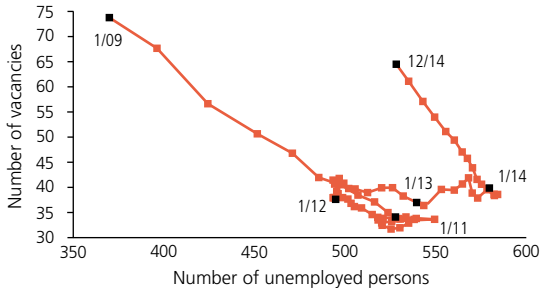


Chart III.4.6

AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Average wage growth and productivity growth both slowed in 2014 Q3
(annual percentage changes)

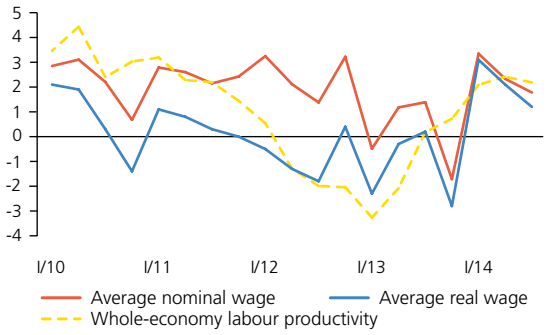


Table III.4.1

WAGES, PRODUCTIVITY, UNIT LABOUR COSTS

Growth in the average nominal wage decreased below 2%, while labour productivity growth stayed above that level
(annual percentage changes)

	IV/13	I/14	II/14	III/14
Average wage in Czech Republic				
nominal	-1.7	3.3	2.3	1.8
real	-2.8	3.1	2.1	1.2
Average wage in business sector				
nominal	-2.3	3.6	2.5	1.7
real	-3.4	3.4	2.3	1.1
Average wage in non-business sector				
nominal	0.9	2.0	1.8	1.9
real	-0.2	1.8	1.5	1.3
Whole-economy labour productivity	0.7	2.1	2.4	2.2
Nominal unit labour costs	-3.1	0.8	0.6	-0.2

adjusted for this extraordinary effect, annual growth in the average wage in the business sector was subdued in an environment of continued economic growth.[31]

Annual average wage growth was below 2% in many **branches of the business sector**, and in two branches the average wage even declined. The fastest wage growth was achieved in hotels and restaurants (2.5%), information and communication activities and wholesale and retail trade (both 2.4%). The average wage in the highest-weight manufacturing recorded a year-on-year increase of 2.3%. The latest data for October and November from industry and especially from construction suggest a slight increase in wage growth in these sectors in 2014 Q4.[32] Box 1 below provides a detailed look at the causes of the subdued average wage growth in the period under review.

BOX 1
Wage growth structure in the business sector

Wage growth is one of the most important indicators of the macroeconomic environment and inflation pressures in the economy. Wage data can be significantly affected over the business cycle by **structural changes in the labour market**. The aim of this box is to estimate the degree to which the recently observed relatively low growth rates of the average wage in the business sector may be due to these structural effects. This analysis draws on detailed data from the Average Earnings Information System (ISPV) from corporations with 250 employees or more combined with statement P304 (CZSO).[33] The calculations of regional effects on the average wage work with data from the CZSO's wage growth publications.

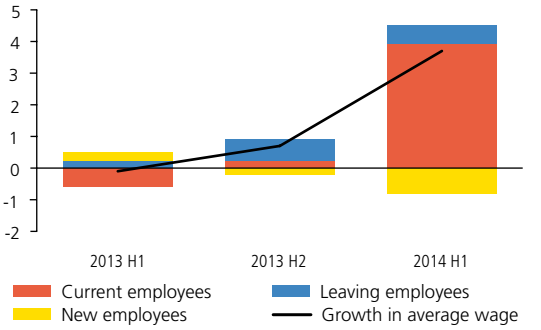
The detailed nature of the ISPV data enables us to quantify **average wage growth in terms of current, leaving and new employees**.[34] Annual growth in the average wage of current employees in the data sample was 4.5% in the first half of 2014. Their contribution to average wage growth was thus 3.9 percentage points (see Chart 1). Growth in the average wage of leaving employees was significantly higher (8.9%) and

CHART 1 (BOX)

CONTRIBUTIONS TO WAGE GROWTH ACCORDING TO THE AEIS

In corporations with 250 or more employees, the pick-up in wage growth in 2014 H1 was offset by a fall in wages of new employees

(annual percentage changes; contributions in percentage points; source: AEIS, CZSO, CNB calculation)



31 For details see section III.4 of Inflation Report IV/2014.

32 Annual growth in the average wage in industry amounted just to 1.1% in October but rose significantly to 3.2% in November. The average wage in construction grew by 6.0% year on year in October and 3.4% in November.

33 The business sector is defined differently in the ISPV methodology than in the CZSO methodology. The ISPV data were therefore combined with the CZSO statement for non-financial institutions supplemented with financial institutions. Even so, the results are not fully comparable with the average wage in the business sector according to the CZSO, as the methodology used leads in particular to a higher-than-appropriate weight of manufacturing, where the representation of corporations with 250 employees or more is the highest.

34 As regards the number of employees converted into full-time equivalents, in the first half of 2014 about 85% of employees fall into the "current employees" category (i.e. no change in employment), 10% into the "new employees" category and 5% into the "leaving employees" category (with terminated registration with the employer in the given half-year).

their contribution to average wage growth was 0.6 percentage point despite their small share in the total number of employees. The AEIS data suggest that employment was also terminated in the period under review in the case of staff with higher-than-average wages. On the other hand, the contribution of new employees, whose average wage fell by 3.2% year on year, was negative (-0.8 percentage point). The recovery in employment growth in 2014 H1 thus fostered, ceteris paribus, weaker growth in the average wage, as enterprises on average paid lower wages to new employees than in the previous year.

As regards the level of wages, new employees receive around 30% lower wages on average than current ones. This difference is due not only to a lower level of skills and experience applicable in the job, but also to the qualification structure of new employees in the period under review. According to the 2014 H1 data, corporations hired relatively more employees in low-income categories, doing so to the greatest extent in the categories of plant and machine operators, elementary occupations, and service and sales workers (see Chart 2).

Differences in average wage growth are also apparent from the **regional perspective**. These are due in part to the nature of the economic recovery, which is being driven mainly by manufacturing (see Chart III.3.12). The effects of individual regions (NUTS 2) on annual average wage growth were very mixed in 2014 Q3 (see Chart 3).[35] National average wage growth was dampened most strongly by developments in Prague. In addition to markedly slower wage growth, the developments in Prague were characterised by rather faster growth in employment than in the rest of the country. It is likely that Prague was most affected by the above-mentioned effect of new employees, whose wages fell year on year. A hampering effect on average wage growth was also recorded in the Moravia-Silesia region, due mainly to the poor economic situation in the mining industry. In the other regions, by contrast, growth in average wages and change in employment were both above the national average.

CHART 2 (BOX)

STRUCTURE OF NEW AND CURRENT EMPLOYEES BY CZ-ISCO

In corporations with 250 or more employees, new employees are being hired to the greatest extent in the category of plant and machine operators

(percentage shares; source: AEIS, CZSO, CNB calculation)

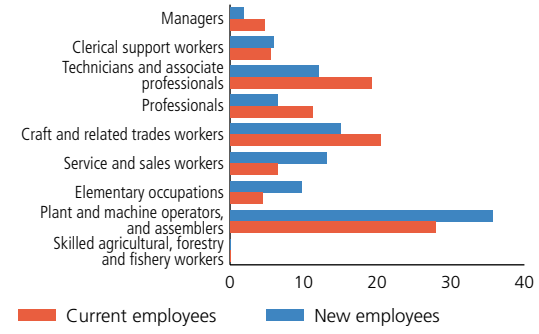
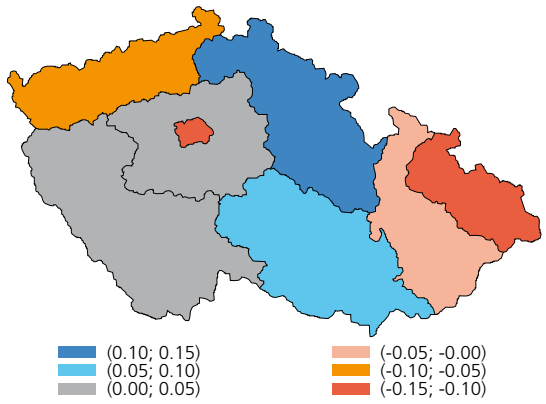


CHART 3 (BOX)

REGIONAL EFFECTS ON AVERAGE WAGE GROWTH IN THE BUSINESS SECTOR

Average wage dynamics were dampened mainly by the Prague and Moravia-Silesia regions in 2014 Q3

(percentage points; source: CZSO, CNB calculation)



35 The calculation of the effect of individual regions on average wage growth uses the "jack-knife resampling" method, which calculates the hypothetical change in the national average wage excluding a given region. The contribution of that region to national average wage growth is then computed as the difference between this hypothetical growth and the official annual growth in the national average wage.

CHART III.4.7

WHOLE-ECONOMY PRODUCTIVITY

Growth in labour productivity was strongest in industry, but was also recorded in most other sectors
(annual percentage changes)

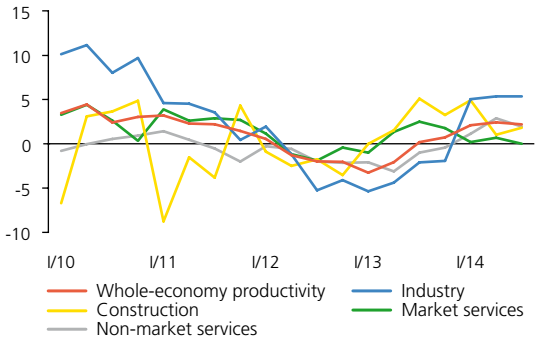
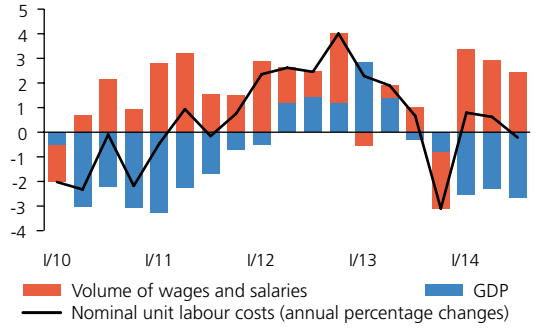


CHART III.4.8

UNIT LABOUR COSTS

Nominal unit labour costs fell slightly in 2014 Q3, mainly due to lower growth in the volume of wages and salaries
(contributions in percentage points; annual percentage changes)



Annual average wage growth in the **non-business sector** increased slightly in 2014 Q3 (to 1.9%). This was due to a rise in the average wage in central government (of 2.6%), whereas wages grew much more slowly in local government (by 1.5%). Given the low annual inflation, real average wage growth was again only slightly different from nominal wage growth, reaching 1.3% in 2014 Q3 (see Table III.4.1).

Amid continued growth in real GDP, accompanied by less pronounced growth in employment,[36] annual growth in **whole-economy labour productivity**[37] slowed slightly (to 2.2%). This was mostly due to industry, where labour productivity rose by a considerable 5.3% year on year[38] (see Chart III.4.7). Productivity growth was visibly slower in the other sectors. It was below 2% in non-market services and construction and was flat in market services. However, annual growth in **hourly labour productivity** slowed more markedly (from 2.3% in 2014 Q2 to 0.3%).[39] This slower growth was due mainly to a sharp annual decline in hourly labour productivity in market services, although decreases were also recorded in construction and non-market services. Only industry maintained the fast growth in hourly labour productivity observed in the previous quarter (4.8% year on year).

With economic activity rising faster than the volume of wages and salaries,[40] the **wage cost-output ratio**[41] fell slightly in 2014 Q3 (by 0.2%; see Chart III.4.8). With the exception of market services, where nominal unit wage costs recorded a year-on-year increase of 2.2%, the wage cost-output ratio decreased in all the monitored sectors of the national economy. Nominal unit labour costs dropped most of all in construction (-3.9%), although manufacturing also recorded a substantial decline (-3.1%).

36 According to the CZSO's national accounts.
37 Productivity is calculated on the basis of seasonally unadjusted data.
38 Annual productivity growth in manufacturing amounted to 6.8%.
39 Amid GDP growth of 2.7% and an increase of 2.3% in hours worked.
40 After rising by 3.4% in 2014 Q1, growth in the volume of wages and salaries slowed to 2.9% in 2014 Q2 and 2.5% in 2014 Q3.
41 The wage cost-output ratio as measured by nominal unit wage costs was calculated on the basis of seasonally unadjusted data.

III.5 FINANCIAL AND MONETARY DEVELOPMENTS

The annual growth rates of M2 and M3 increased slightly during 2014 Q4. This was due mainly to household deposits and was reflected in growth in their net financial assets. The growth rate of deposits of non-financial corporations also increased somewhat and the acid-test ratio rose slightly in this context. Although annual growth in corporate loans has been low and volatile over the last year, monthly flows of loans were positive in 2014 Q4. The growth rate of loans for house purchase remained broadly unchanged. The growth rate of consumer credit declined further despite growth in household consumption. The availability of loans improved and, according to banks' perceptions, demand for loans increased in all segments of the credit market. Client interest rates on new corporate loans rose slightly, while those on house purchase loans dropped to new historical lows. Ten-year government bond yields recorded a further sharp fall. The koruna was stable against the euro in 2014 Q4 and depreciated against the dollar. Residential property prices recorded a year-on-year rise in Prague, while their growth halted in the rest of the Czech Republic.

III.5.1 Money

Following a previous slowdown, the annual growth rate of **M2** rose slightly during 2014 Q4, reaching 4.4% in November (see Chart III.5.1). On the bank asset side, the faster M2 growth mainly reflected higher growth in domestic loans (net credit to government in particular) amid a continued pronounced slowdown in growth in net foreign assets. The money stock grew at a lower rate than nominal GDP last year. This was reflected in a slight rise in the velocity of money. The annual growth rate of M3 also increased slightly in 2014 Q4 (to 5.2% in November). **M3** growth in the Czech Republic was about two percentage points above the euro area average. However, this difference narrowed slightly further due to a more pronounced recovery in M3 growth in the euro area.

As in the euro area, a **preference for liquidity** in conditions of low interest rates and low inflation is fostering a further acceleration in the already high M1 growth in the Czech Republic (to 9.7% year on year in November; see Chart III.5.1). This reflects increased demand of households and non-financial corporations for overnight deposits (see Chart III.5.2). The decline in other short-term deposits moderated at the same time. Long-term deposits remained flat.

Turning to the **sector structure of deposits**, M2 growth was fostered most of all by household deposits in 2014 Q4 (see Chart III.5.3). The growth rate of deposits increased, reaching 5.1% in November, the highest level recorded since the start of 2012. Foreign currency deposits of households have been edging up recently, but their share in total deposits remains negligible. The annual growth rate of deposits of non-financial corporations rose slightly after a recent slowdown, exceeding 3% in November. This was accompanied by an increase

Chart III.5.1

MONETARY AGGREGATES

Money aggregate growth increased slightly in 2014 Q4
(annual percentage rates of growth)

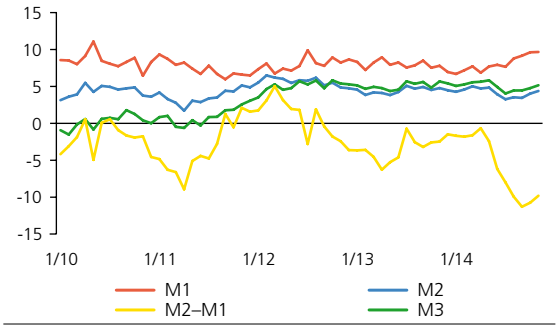


Chart III.5.2

MAIN COMPONENTS OF M2

The preference for liquid overnight deposits continued to increase in conditions of low interest rates
(annual flows in CZK billions)

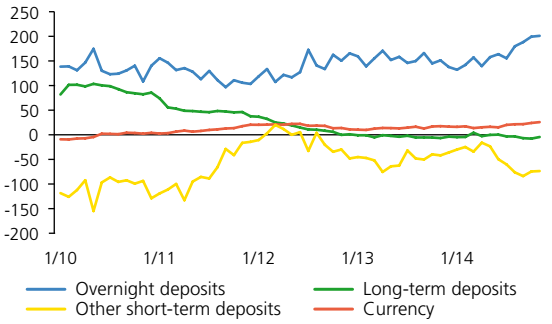


Chart III.5.3

DEPOSIT STRUCTURE OF M2

The money supply growth was fostered most of all by household deposits
(contributions in percentage points; annual percentage rates of growth)

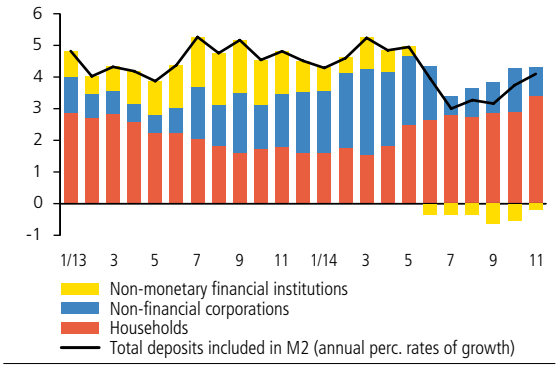


Table III.5.1

CHANGES IN BANKS' CREDIT CONDITIONS

Bank relaxed their credit standards and perceived quarter-on-quarter growth in demand in all segments of the credit market in 2014 Q4

(net percentages; positive value = tightening standards/conditions, demand growth; negative value = easing standards/conditions, demand decrease)

	Credit supply: of which			Demand for loans
	Credit standards	Average margin for loans	Margin on riskier loans	
Loans to non-financial corporations				
I/14	0 (2)	0	20	-26 (29)
II/14	-28 (-16)	-29	3	30 (54)
III/14	-21 (-32)	-46	-18	36 (56)
IV/14	-35 (-38)	-46	-6	55 (51)
I/15	(-61)			(1)
Loans for house purchase				
I/14	-4 (-4)	-2	36	-11 (-2)
II/14	4 (4)	-37	-33	57 (35)
III/14	1 (-42)	-25	-4	-29 (31)
IV/14	-9 (-11)	-46	24	24 (8)
I/15	(-18)			(0)
Consumer credit				
I/14	-18 (16)	-25	-25	76 (-28)
II/14	35 (22)	0	4	-5 (69)
III/14	25 (9)	-9	0	-21 (-12)
IV/14	-47 (-27)	-40	-25	4 (-28)
I/15	(-31)			(20)

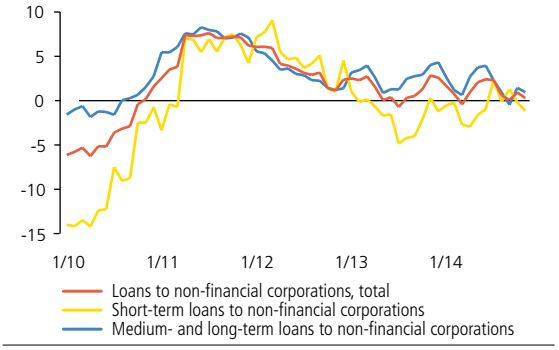
Note: Net percentages are calculated as the difference between the percentage share of loans provided by banks reporting that standards/conditions have been tightened (or demand increased) and the percentage share of loans provided by banks reporting that standards/conditions have been eased (or demand decreased). The individual responses are thus weighted by the volumes of loans of a given type. Banks' expectations for the current period reported in the previous quarter's survey given in parentheses.

Chart III.5.4

LOANS TO NON-FINANCIAL CORPORATIONS

Growth in corporate loans slowed and was close to zero

(annual percentage rates of growth)



in the acid-test ratio of corporations. Corporate deposits reflected growth in both koruna and foreign currency deposits in 2014 Q4. Deposits of financial non-monetary financial institutions continued to decline year on year.[42] The share of foreign currency deposits in total resident deposits included in M2 increased to just above 9%.

III.5.2 Credit

The annual growth rate of **loans to the private sector** has recently been fluctuating around 4%. According to the bank lending survey, lending was supported in 2014 Q4 by a further improvement in credit availability (continued relaxation of credit standards by banks), due mainly to competition. As regards the terms and conditions for approving loans, this was reflected most significantly in a decline in average interest margins and an easing of loan size restrictions for corporate loans (see Table III.5.1). In 2014 Q4, banks perceived growth in demand in all segments of the credit market, in line with the continuing economic growth.

The results of the bank lending survey in the **euro area** also suggest an overall easing of credit standards and growing demand in all credit market segments. However, standards remain fairly strict. The introduction of the ECB's long-term refinancing operations (TLTROs) for the period from September 2014 to June 2016 is fostering an easing of the loan supply. Nevertheless, the euro area credit market remains fragmented in terms of interest rates on loans, the speed of deleveraging, the availability of loans and the use of alternative forms of financing (internal resources and, in the case of larger corporations, issues of debt securities).[43] The current data indicate a positive turnaround in loans in 2014 Q2. The decline in loans to the private sector moderated further to -0.2% (November 2014), reflecting weak growth in loans to households and signs of levelling-off in the decline in loans to enterprises.

Domestic growth in **loans to non-financial corporations** is low and highly volatile. The annual growth rate of corporate loans fell back to 0.3% in November 2014 following an increase in October (see Chart III.5.4). Growth in loans with longer maturities slowed and short-term loans started to decline. On the other hand, monthly flows

42 Within their financial asset structure, conversely, there were increases in purchased long-term debt securities, investment fund shares and unquoted shares.

43 The easing of standards applied to corporate loans in the euro area in 2014 Q3 was due to increased competition and an improved liquidity situation of banks. By contrast, unlike in the recent past, expectations regarding the overall economic situation and the situation in some sectors fostered a tightening of standards. Corporations' demand for loans reflects a greater need for financing of mergers and acquisitions and debt restructuring, while demand for fixed investment financing decreased. As regards loans to households for house purchase, the easing of credit standards was also fostered by factors associated with banks' balance sheets and competition. Risk perceptions regarding economic activity and the property market started to foster a tightening of standards. Turning to the terms and conditions for approving loans, euro area banks further reduced their average interest margins while increasing their margins on riskier loans. Housing market prospects and consumer confidence continued to have a positive effect on demand for house purchase loans.

of corporate loans were positive at one of the highest levels recorded last year. The highly volatile growth in corporate loans has recently been due mainly to loans to developers. The interest of Czech corporations in foreign currency loans decreased in 2014 Q4 and the growth rate of such loans adjusted for exchange rate movements and other non-transaction effects declined significantly to 1% in November 2014. The share of foreign currency loans in total corporate loans remained at 21%. New koruna loans recorded no major annual change following a slight increase in November (see Chart III.5.5). According to the bank lending survey, banks perceived overall growth in demand for loans for the fourth consecutive quarter in 2014 Q4. Demand grew most strongly in large corporations and for long-term loans, whereas small and medium-sized enterprises (SMEs) showed a decrease in demand. This was due to an increase in financing of investment and working capital and inventories, as well as to a continued effect of mergers and acquisitions and business and debt restructuring. By contrast, corporate financing through bond issues had an adverse effect on demand for loans. Banks expect no changes in corporations' demand for loans in 2015 Q1.

Investment loans, which account for 55% of total corporate loans, dropped by 1% in November 2014 following a sharp increase in October (see Chart III.5.6). The decline in investment loans was due to a decrease in loans to developers coupled with more moderate growth in loans to manufacturing. Loans to trade and energy showed weak growth. Investment loans to construction and some other sectors (such as mining and quarrying) recorded a slight decline.

Banks' **credit standards** applied to corporate loans were eased further in 2014 Q4, mainly due to competition from other banks, non-banks and market financing (see Table III.5.1). To a lesser extent, banks perceived a decline in risks associated with expectations about the overall economic situation. On the other hand, worsened perceptions of the outlook for some industries and corporations, more specifically the outlook for some exporting firms owing to developments in Ukraine and Russia, persisted for the second consecutive quarter. The easing of standards was reflected in more favourable terms and conditions applied by banks to new loans. Overall, about half of the banking market lowered average interest margins (as expressed by the spread between banks' client and reference rates) and relaxed loan size restrictions. Although the easing of standards and terms and conditions affected all size categories of corporations, it was more pronounced for large corporations. Banks expect the standards to ease further in 2015 Q1 to a similar extent for both small and large corporations (see Table III.5.2).

Growth in loans to non-financial corporations is subdued despite improved availability. This is partly due to greater use of **alternative forms of financing** than in the pre-crisis period. In particular, large corporations are using bond financing. In recent years, the volume of bonds has reached around one-quarter of the level of bank loans (see Chart III.5.7). Issues of corporate bonds (long-term in particular) rose sharply in year-on-year terms at the aggregate level in 2014 Q3

Chart III.5.5

NEW KORUNA LOANS TO NON-FINANCIAL CORPORATIONS

New koruna loans to corporations recorded no major change
(annual percentage rates of growth; interest rate in %)

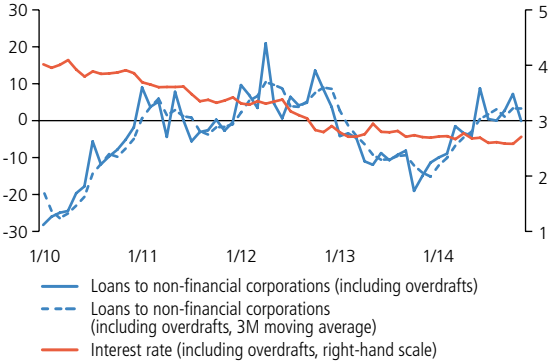


Chart III.5.6

LOANS TO CORPORATIONS FOR FUNDING FIXED INVESTMENT

Investment loans decreased during 2014 Q4 mainly due to loans to property developers, while loans to other sectors were broadly unchanged
(contributions in percentage points; annual percentage rates of growth; annual percentage changes)

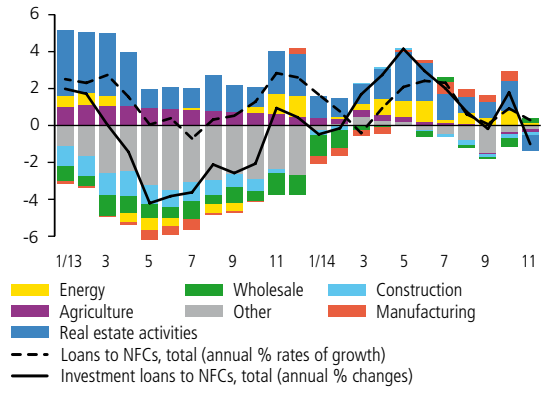


Table III.5.2

CREDIT STANDARDS AND SELECTED CREDIT CONDITIONS BY CORPORATION SIZE

An easing of standards and terms and conditions applied to new loans was recorded for all size categories of corporations
(net percentages; positive value = tightening standards/conditions; negative value = easing standards/conditions)

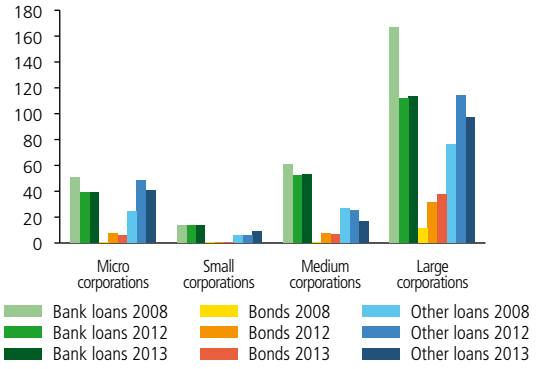
	Quarterly averages						
	2012	2013	I/14	II/14	III/14	IV/14	I/15[a]
Credit standards							
Small and medium-sized enterprises	13	4	0	-26	-4	-37	(-67)
Large corporations	22	0	0	-46	-21	-44	(-61)
Banks' average loan margin							
Small and medium-sized enterprises	-1	-16	0	-27	-27	-29	
Large corporations	18	-8	-18	-46	-46	-46	
Size of loans							
Small and medium-sized enterprises	13	3	0	0	0	-27	
Large corporations	29	10	-4	-4	-21	-44	
Collateral requirements							
Small and medium-sized enterprises	26	9	9	0	-21	-37	
Large corporations	25	1	-8	-35	-35	-35	

Note: Net percentages are calculated as the difference between the percentage share of loans provided by banks reporting that standards/conditions have been tightened and the percentage share of loans provided by banks reporting that standards/conditions have been eased. The individual responses are thus weighted by the volumes of loans of a given type.
a) Banks' expectations for current period reported in the IV/14 survey given in parentheses.

CHART III.5.7

LOANS AND BONDS BROKEN DOWN NFC SIZE

Besides borrowing from domestic banks, large firms are using alternative forms of funding (bonds and other loans)
(volumes in CZK billions; source: Bach database, CNB calculations)



Note: Micro-corporations – 0–9 employees, small corporations – 10–49 employees, medium-sized corporations – 50–249 employees, large corporations – 250 employees or more. The sample consists of corporations over the last six years.

CHART III.5.8

LOANS TO HOUSEHOLDS

Growth in loans to households slowed slightly
(annual percentage rates of growth; annual percentage changes)

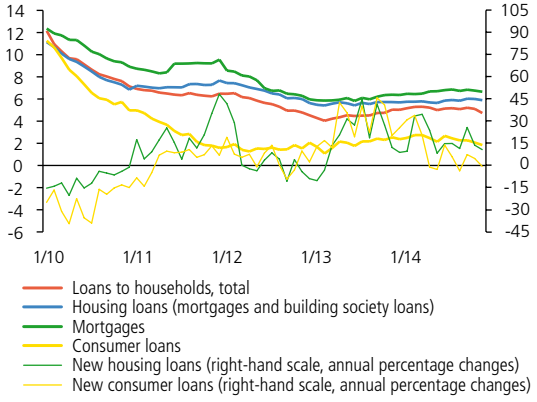
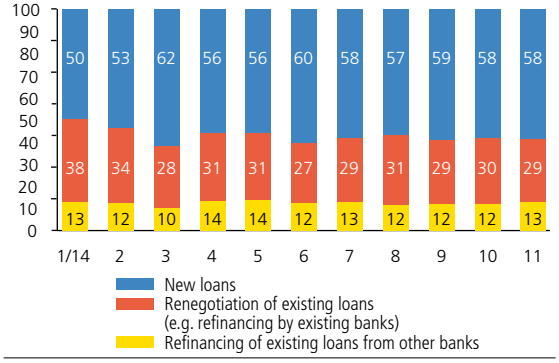


CHART III.5.9

STRUCTURE OF NEW LOANS FOR HOUSE PURCHASE

The share of new loans for house purchase net of refinancing and other renegotiation increased slightly in the course of 2014
(new business; shares in %)



(by around 15%), contributing significantly to higher growth in the financial liabilities of corporations. In recent years, corporations have also been raising funds increasingly by borrowing outside the domestic banking sector, i.e. from abroad or from domestic non-banks and other corporations. Loans from non-residents account for about 64%, loans from other domestic non-financial corporations for around 22% and loans from domestic non-bank financial institutions for about 14% of total other loans at the aggregate level.

In 2014 Q4, a significantly elevated growth rate of loans, foreign currency ones in particular, persisted for **non-monetary financial institutions**, especially financial intermediaries (e.g. leasing and factoring companies). The annual growth rate of loans to these institutions was around 22% in November 2014.

The annual growth rate of **loans to households** fell slightly in 2014 Q4, reaching 4.7% in November (see Chart III.5.8). This reflected lower growth in consumer credit and other loans. Growth in **loans for house purchase** was little changed amid a continuing decline in interest rates. Mortgage growth slowed slightly to 6.7% in November amid a continued decline of almost 5% in building society loans. Annual growth in new loans for house purchase slowed, but remained just above 10% (see Chart III.5.8). The share of refinancing of existing loans from other banks stabilised at around 13% and the share of renegotiated loans went down to around 29% last year. Conversely, the share of new loans for house purchase increased slightly (see Chart III.5.9).

According to the bank lending survey, **households' demand for loans for house purchase** rose in 2014 Q4, due mainly to marketing campaigns. This demand continues to be fostered by improved consumer confidence and housing market prospects, in line with the slight rise in investment in dwellings and property prices (especially in Prague). **Banks' credit standards** eased in a small section of the market due to increased competition and expectations about future economic activity. A decrease in the financing costs of some banks acted in the same direction. This was reflected in a fall in average interest margins, while margins on riskier loans increased. Banks' expectations for 2015 Q1 indicate a further easing of standards and unchanged demand. Increased demand for mortgages at the end of 2014 is confirmed by the current Hypoindex data for December 2014, according to which the volume of new mortgages increased year on year and interest rates decreased further.

Despite growth in household consumption, the annual growth rate of **consumer credit** slowed, reaching 1.8% in November (see Chart III.5.8). According to banks' perceptions, household demand for consumer credit was flat in 2014 Q4. Demand was positively affected by consumer confidence and financing of durable goods. At the same time, credit standards were relaxed most significantly since the start of 2012, mainly as a result of competition from other banks and non-banks. This was reflected in a decrease in average interest margins and margins on riskier loans. Banks expect a further easing of standards in

2015 Q1, accompanied by expected growth in demand for consumer credit. The volume of consumer credit provided by non-banks rose for the second consecutive quarter (by 5.7% in 2014 Q3).

Total household debt decreased somewhat to 65.4% of total annual gross disposable income in 2014 Q3. This reflected income growth accompanied by slower annual growth in the total financial liabilities of households (see Chart III.5.10). This ratio is still much lower than in the euro area, where it remains at 97% on average. The net interest burden on Czech households (including interest expenses and income on bank loans and deposits) fell slightly to 1.7% of disposable income, above the average for the last four years.

III.5.3 Interest rates

Monetary policy interest rates

The monetary policy decision-making of the CNB Bank Board in 2014 Q4 was based on the macroeconomic forecast published in the previous Inflation Report. The forecast assumed that market interest rates would be flat at their current very low level and the exchange rate would be used as a monetary policy instrument until 2016 Q1. At its meeting in November, the Bank Board decided unanimously to leave **key interest rates** unchanged at their current level, i.e. at technical zero[44] (see Chart III.5.11). The Board also decided to continue using the **exchange rate as an additional instrument** for easing the monetary conditions. It also confirmed the CNB's commitment to intervene on the foreign exchange market if needed to weaken the koruna against the euro so that the exchange rate of the koruna is kept close to CZK 27 to the euro. At the Bank Board meeting in November, the risks of the previous forecast were assessed as being balanced. The Bank Board stated that the Czech National Bank would not discontinue the use of the exchange rate as a monetary policy instrument before 2016. At its meeting in December, the Bank Board again decided unanimously to leave key interest rates unchanged. At the same time, it confirmed the above foreign exchange commitment. At the December meeting, the balance of risks to the forecast was assessed as being anti-inflationary. In this situation, the Bank Board repeated that the Czech National Bank would not discontinue the use of the exchange rate as a monetary policy instrument before 2016. At the same time, the Bank Board stated that the deflation pressures from abroad were currently associated largely with a positive supply shock, in particular a fall in energy commodity prices. Only if there were to be a long-term increase in deflation pressures capable of causing a slump in domestic demand, renewed risks of deflation in the Czech economy and a systematic decrease in inflation expectations, would it be necessary to consider moving the exchange rate commitment to a weaker level.

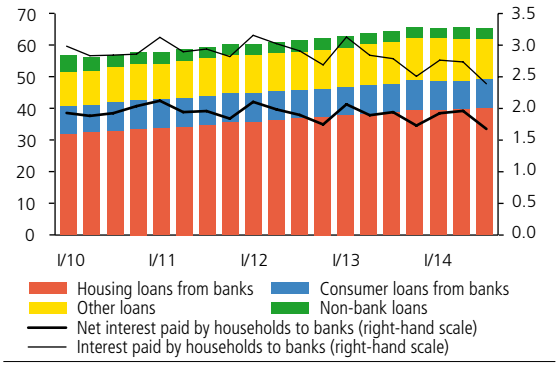
44 The two-week repo rate and the discount rate were set at 0.05% and the Lombard rate at 0.25% with effect from 2 November 2012.

CHART III.5.10

HOUSEHOLD DEBT

Households' debt-to-income and interest-to-income ratios decreased somewhat

(quarterly data; percentage ratios to gross disposable income)



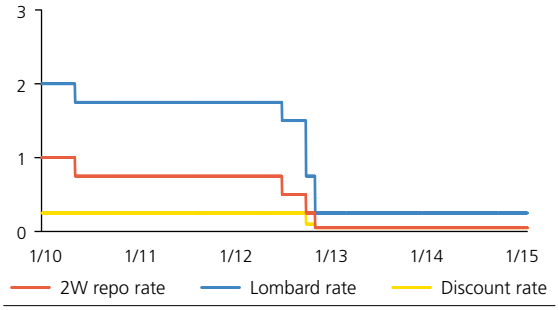
Note: Net interest paid represents the difference between households' loan interest expenses and bank deposit interest income. Interest paid consists of households' borrowing-related interest expenses.

CHART III.5.11

CNB KEY RATES

The CNB left its key interest rates at "technical zero" in 2014 Q4

(percentages)

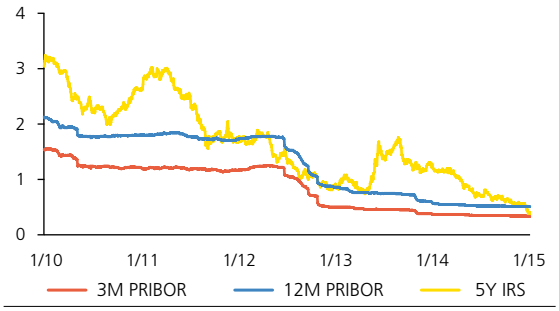


At its monetary policy meeting on 5 February 2015, the Bank Board decided unanimously to keep interest rates unchanged at technical zero. The Bank Board also decided to continue **using the exchange rate as an additional instrument for easing the monetary conditions** and confirmed the CNB's commitment to intervene on the foreign exchange market if needed to weaken the koruna against the euro so that the exchange rate of the koruna is kept close to CZK 27 to the euro. The asymmetric nature of this exchange rate commitment is unchanged. The Bank Board considers the risks to the new forecast to be balanced, although the degree of uncertainty has increased. In this situation, the Bank Board stated that the Czech National Bank would not discontinue the use of the exchange rate as a monetary policy instrument before the second half of 2016. The Czech National Bank stands ready to move the level of the exchange rate commitment if there were to be a long-term increase in deflation pressures capable of causing a slump in domestic demand, renewed risks of deflation in the Czech economy and a systematic decrease in inflation expectations.

CHART III.5.12

MARKET INTEREST RATES

Money market interest rates were flat at historical lows, while rates with longer maturities went down
(percentages)



Financial market interest rates

PRIBOR interest rates remained at historical lows at all maturities in 2014 Q4. They thus reflected the setting of the CNB's key interest rates at technical zero (see Chart III.5.12). Three-month **FRA derivative rates** were little changed overall, too. Their slight decline at the start of January probably reflected the published data on low inflation for December 2014. The market outlook for 3M rates according to end-January FRA quotations thus implies only a negligible decrease in the 3M PRIBOR at the one-year horizon. This is broadly in line with the expectations of unchanged monetary policy interest rates at least over the same time horizon and a marginal decline in the money market premium. The expected market rates are thus close to the interest rate path consistent with the new CNB forecast over the entire horizon (see section II).

Domestic **interest rates with longer maturities** mostly decreased in line with euro area rates, which mainly reflected the continued decline in inflation and the falling inflation outlook linked with the drop in global prices of oil and other commodities. Medium-term and long-term rates were also affected by the expected – and later implemented – use of additional monetary policy stimulus measures by the ECB (purchases of government and quasi-government bonds of euro area countries), which are aimed at further easing the monetary conditions in an environment of deflation and only weak economic growth in the euro area. The downward trend in foreign rates was partly also due to geopolitical risks (the situation in Ukraine and the Middle East, parliamentary elections in Greece), which increased market nervousness and thus boosted demand for safer assets. In Q4, the decline in domestic IRS interest rates and longer-maturity bond yields amounted to as much as 0.6 percentage point depending on maturity. This decline continued into January. Moreover, the decline in domestic bond yields was fostered by a lower volume of primary issues (only two government bond auctions were held in Q4; the Christmas auction of state saving bonds held over the previous few years was not

conducted last year) and the prospect of a further decline in issuance activity of the Ministry of Finance. IRS rates and bond yields were thus at historical lows at all maturities at the end of January, with the market yield on the ten-year Czech government bond even dropping below the Bund yield during January.

The average **3M PRIBOR** in 2014 Q4 was just below 0.4%, in line with the level foreseen by the previous forecast. The premium on the money market, as measured by the spread between the 3M PRIBOR and the 2W repo rate, stood at 0.3 percentage point.

The shape and slope of the **PRIBOR yield curve** were unchanged in 2014 Q4. The spread between the 1Y PRIBOR and 2W PRIBOR was 0.3 percentage point on average in December 2014. The **IRS yield curve** shifted to a lower level in 2014 Q4, although only at its longer end, so its positive slope decreased at the same time. In December, the average 5Y–1Y spread was 0.2 percentage point and the 10Y–1Y spread 0.6 percentage point.

Short-term **interest rate differentials** vis-à-vis the two main world currencies (PRIBOR/CZK–EURIBOR/EUR and LIBOR/USD) reflected the approximate stability of Czech and euro area rates. Short-term rates fell slightly on the US market in December. The differentials vis-à-vis euro rates were thus flat at slightly positive levels, while those vis-à-vis the dollar were close to zero (see Chart III.5.13). The 3M PRIBOR–3M EURIBOR differential was 0.3 percentage point on average in 2014 Q4 and recorded the same figure at the end of January 2015.

One auction of fixed coupon bonds and one auction of variable coupon bonds were held on the primary **government bond market** in Q4. The total volume of bonds issued was CZK 16.6 billion.[45] Demand exceeded supply in both auctions. The bid-to-cover ratio was 1.6 on average. The government bonds were subscribed at historically low yields. For example, the ten-year government bond was sold at an average yield of 1.3% in October. The government bond yield curve – like the IRS curve – shifted downwards in its medium and longer sections. Its positive slope thus decreased noticeably (see Chart III.5.14).

Client interest rates

Client interest rates on new loans and deposits showed mixed developments in 2014 Q4. They edged up for corporate loans in nominal terms, while edging down for house purchase loans. These developments were recorded in an environment of a stable 3M PRIBOR and a continued decline in the ten-year government bond yield to 0.7% in December. Ex ante real interest rates increased in all segments

45 Overall, sales of government bonds on the primary market amounted to CZK 144.3 billion in 2014. The Funding and Debt Management Strategy for 2014 had assumed issues amounting to CZK 119.2–280.1 billion.

CHART III.5.13

INTEREST RATE DIFFERENTIALS

Interest rate differentials vis-à-vis the euro remained flat at slightly positive levels
(percentage points)

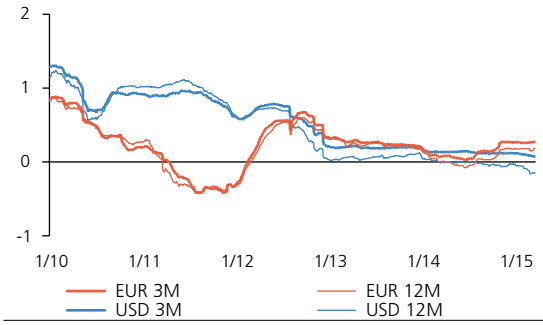


CHART III.5.14

GOVERNMENT BOND YIELD CURVE

The positive slope of the government bond yield curve decreased noticeably
(percentages)

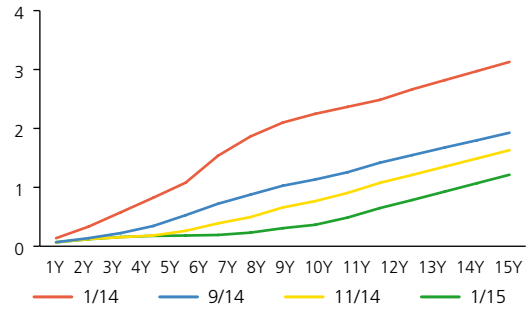


CHART III.5.15

INTEREST RATES ON LOANS TO CORPORATIONS

The interest rate on loans to non-financial corporations increased slightly

(new business; percentages)

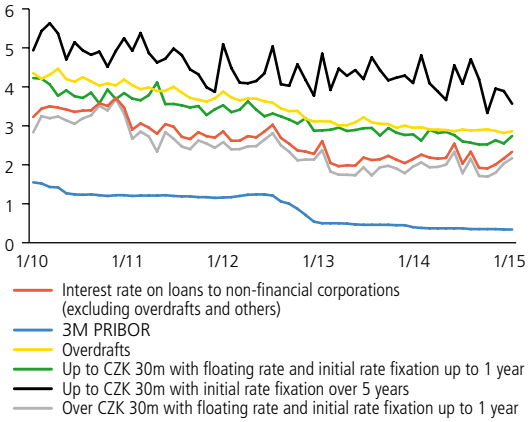


CHART III.5.16

INTEREST RATES ON LOANS TO HOUSEHOLDS

The interest rate on loans to households for house purchase reached a new historical low

(new business; percentages)

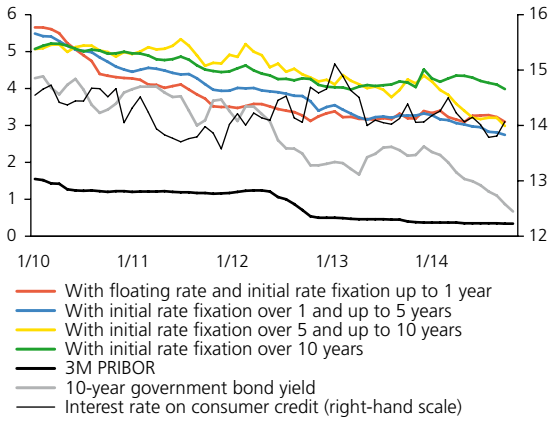
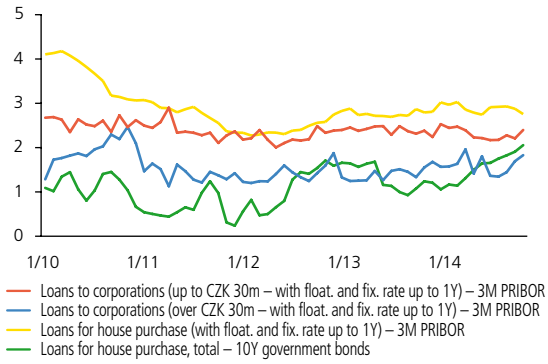


CHART III.5.17

CLIENT AND MARKET INTEREST RATE SPREADS

The spread between short-term client and market rates narrowed in the case of loans to households for house purchase but widened for other client rates

(percentage points)



of the credit market amid a decline in inflation expectations. The real rate on corporate loans was 0.6%, that on house purchase loans for households was 1.2% and that on consumer credit was 12.2%. The real interest rate on short-term household deposits with agreed maturity remained negative at -0.3%, while that on deposits with an agreed maturity of over two years was 0.3%.

The **interest rate on loans to non-financial corporations** increased slightly in nominal terms in 2014 Q4, being just above 2% on average. Rates with short-term fixations increased (see Chart III.5.15). The average rate on large loans of over CZK 30 million increased to almost 3% and the rate on small loans to more than 2%. At less than 1 percentage point, the spread between these rates was slightly below the average recorded since 2007. The spread between the short-term rate on corporate loans and the 3M PRIBOR widened slightly (see Chart III.5.17). By contrast, rates on corporate loans in the euro area continued to go down gradually (averaging 2.5%) and were only slightly higher than in the Czech Republic.

On the other hand, the **interest rate on loans for house purchase** for households edged down further to a new historical low of just under 3% (2.7% for mortgages). The rate on loans fixed for over one year and up to five years, which account for the largest share (around 68% of all house purchase loans), fell slightly to 2.7%, the lowest of all the rate fixation periods (see Chart III.5.16). Rates with other fixations also dropped somewhat. According to Hypoindex, mortgage rates also declined at the very end of last year. The spread between short-term client and market rates narrowed slightly. By contrast, the spread between the average rate on loans for house purchase and the long-term financial market rate increased further, mainly on account of a more pronounced decline in long-term government bond yields than in client rates (see Chart III.5.17). The interest rate on house purchase loans in the euro area also fell further to 2.6%.

The **interest rate on consumer credit** increased slightly in Q4 and stood at around 14% (see Chart III.5.16). This was fostered by rates with both short-term and long-term fixations. The APRC also rose slightly to almost 15%. Conversely, the rate on overdrafts and revolving loans declined to 14% and the rate on credit card debt went down to 24.5%. Due to higher credit risk, the rate on consumer credit remains well above that in the euro area, where it was around 6% on average last year.

Interest rates on client deposits remained little changed overall in the period under review. Rates on overnight deposits fell slightly to 0.3% for households while remaining at 0.2% for non-financial corporations. The rate on deposits redeemable at notice of up to three months, comprising relatively highly and stably remunerated building society deposits, was also flat at 1.7%. In recent months, some banks have been trying to make rates on short-term household deposits with agreed maturity more attractive. This rate edged up to 1.4% on average, while the rate on long-term deposits was flat at 2%

(November 2014; see Chart III.5.18). The equivalent rates in the euro area decreased slightly and are currently generally lower than those in the Czech Republic.

Real client interest rates[46] increased slightly during 2014 Q4 owing to a decrease in expected inflation[47], while nominal rates showed no major changes. Real rates on new loans were 4.1% on average in November, while real rates on time deposits were -0.1% (see Chart III.5.19).

III.5.4 The exchange rate

The average **exchange rate of the koruna against the euro** was CZK 27.6 in 2014 Q4. This represents a year-on-year depreciation of 3.6% and quarter-on-quarter stagnation (see Chart III.5.20). In the quarter under review, the koruna fluctuated within a relatively narrow range of CZK 27.5–27.8 to the euro without showing any signs of a trend. In the first half of January, the koruna started to weaken relatively sharply, briefly falling as low as CZK 28.5 to the euro. However, it then reversed this swing. Shortly after mid-January the exchange rate of the koruna was around CZK 27.9 to the euro.

In 2014 Q4, **world financial markets** experienced continuing appreciation of the US dollar. On the other hand, the currencies of oil-producing countries, the euro and the Japanese yen weakened. The Russian rouble recorded highly unusual developments, weakening sharply by more than 30% in a single quarter as a result of the combined impacts of the financial sanctions, the fall in oil prices and a continuing outflow of domestic capital abroad (including demand among households for foreign cash).

The slight depreciation of the koruna at the start of 2014 Q4 was due mainly to adverse information on euro area economic developments and concerns among some investors that the CNB might weaken the koruna. However, the koruna later returned to its initial levels around CZK 27.6 to the euro on the back of favourable news from the domestic economy (growth, employment, retail sales). However, early January saw a renewal of investors' concerns that the CNB would shift the level of its exchange rate commitment, and the koruna started to depreciate. This weakening accelerated markedly following the publication of the December inflation figures. Thus, the koruna weakened by almost 3% in a few days shortly before the middle of January. Statements made by several Bank Board members refuting any need for an immediate monetary policy reaction to the current price developments resulted in a rebound of the koruna. The appreciation of the koruna was also partly due to the exit of the Swiss

46 Ex ante real interest rates: nominal interest rates are deflated by the consumer price inflation expected by financial market analysts.
47 For details see section II.5.

Chart III.5.18

INTEREST RATES ON DEPOSITS

The interest rate on short-term household deposits increased slightly while that on long-term deposits stayed at 2%
(percentages)

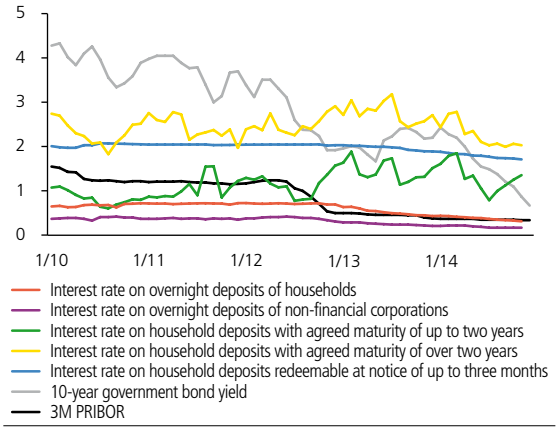


Chart III.5.19

EX ANTE REAL RATES

Ex ante real interest rates on new loans fluctuated near the 4% level
(percentages)

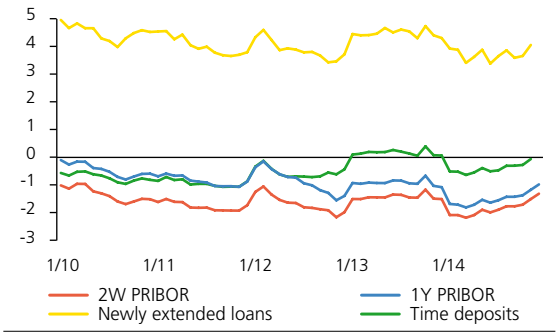
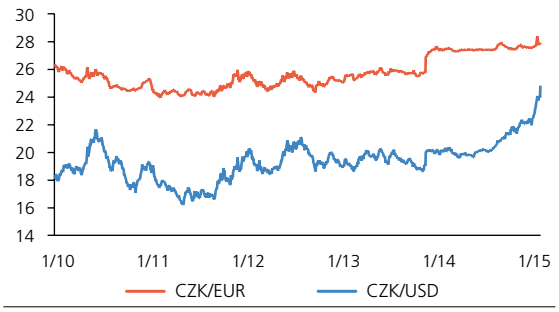


Chart III.5.20

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna was stable against the euro and weakened against the dollar in 2014 Q4



central bank from its exchange rate commitment, after which the Swiss franc strengthened sharply. No foreign exchange interventions by the CNB affecting the koruna exchange rate were made in 2014 and early 2015.

The average **exchange rate of the koruna against the dollar** was CZK 22.1 in 2014 Q4. This represents a year-on-year depreciation of 12.8% and a quarter-on-quarter depreciation of 6.0%. During the quarter, the koruna depreciated against the dollar from around CZK 21.8 to almost CZK 23.0 at the end of the year owing to appreciation of the dollar vis-à-vis the euro. In late January, the koruna depreciated further to CZK 24.6 against the dollar as the latter continued to strengthen against the euro.

III.5.5 Economic results of non-financial corporations

The **financial results** of non-financial corporations with 50 employees or more[48] continued to develop favourably in 2014 Q3, with total annual growth in output and profits still reaching high levels (see Chart III.5.21). Although the growth rates of output and sales decreased slightly, output still rose faster than intermediate consumption and the gap between their annual growth rates widened moderately again. This, in turn, was reflected in an acceleration of annual growth in book value added to almost 10%. At a strong 16.4%, gross operating surplus (operating profit) also rose faster in 2014 Q3 than in the previous quarter.

The rapid annual growth in the main financial indicators of non-financial corporations in 2014 Q3 was again due to a combination of **factors**, especially continuing growth in domestic and external demand and the weakened koruna exchange rate since November 2013. Although the growth rates of both demand components slowed somewhat, annual growth in both sales and output still exceeded 7%.

Prices of production inputs also contributed to the acceleration of growth in corporations' operating profit. Although the exchange rate weakening was still reflected in the annual change in import prices of commodities and materials, the **material cost-output ratio**[49] fell year on year in 2014 Q3 (by 0.4 percentage point; see Table III.5.3), doing so to a larger extent than in the previous quarter. Its deeper decline was due chiefly to weaker growth in world prices of energy commodities (natural gas and oil) amid a continuing annual decline in electricity prices. The **personnel cost-output ratio**[50] also fell year on year (by 0.6 percentage point in 2014 Q3), even though personnel costs increased owing to growth in the number of employees and the

48 The segment of corporations with 50 employees or more consisted of almost 9,000 non-financial corporations at the end of 2014 Q3.
49 The material cost-output ratio defined as the ratio of intermediate consumption to output.
50 The personnel cost-output ratio defined as the ratio of personnel costs to output.

Chart III.5.21

KEY FINANCIAL INDICATORS

The main financial indicators of non-financial corporations continued to rise rapidly in 2014 Q3

(annual percentage changes)

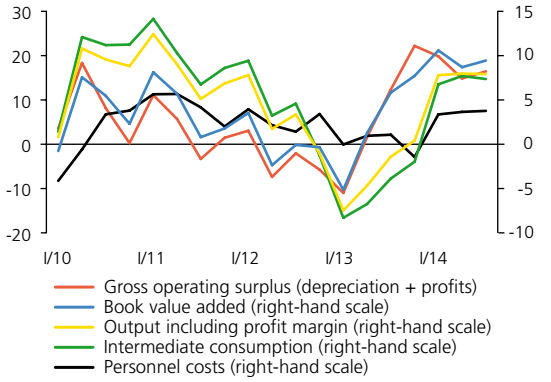


Table III.5.3

PERFORMANCE INDICATORS OF NON-FINANCIAL CORPORATIONS

The material cost-output ratio and the personnel cost-output ratio both continued to decrease

	2013 Q3	2014 Q3	Annual percentage changes
Output incl. profit margin (CZK billions)[a]	1,363.5	1,471.5	7.9
Personnel costs (CZK billions)	205.0	212.7	3.8
Intermediate consumption (CZK billions)	992.3	1,065.4	7.4
Book value added (CZK billions)	371.1	406.2	9.4
Sales (CZK billions)	1,813.1	1,950.6	7.6
Gross operating surplus (CZK billions)	166.2	193.5	16.4
	%	%	Annual changes in pp
Ratio of personnel costs to value added[a]	55.2	52.4	-2.9
Material cost-output ratio	72.8	72.4	-0.4
Personnel cost-output ratio	15.0	14.5	-0.6
Ratio of book value added to output	27.2	27.6	0.4
Margin rate – ratio of gross operating surplus to value added	45.1	47.6	2.5

a) CNB calculation

volume of wages paid. However, output grew at a considerably faster pace (see Table III.5.3).

The annual growth in sales, output and operating profit was still due mainly to corporations in **manufacturing** (see Chart III.5.22), which generated more than 50% of gross operating surplus in the monitored set of corporations with 50 employees or more. With regard to the **ownership structure of corporations**, this indicator was again affected above all by foreign-owned corporations, whose production is mostly export-oriented. Their share in the annual increase in operating profit within the same set of non-financial corporations was 60% in 2014 Q3.

Data for the narrower **segment of large corporations** (with 250 employees or more)[51] indicate similar trends in the main financial indicators in 2014 Q3 as in the larger segment of corporations, albeit amid rather lower annual growth in gross operating surplus than in the larger segment of corporations with 50 employees or more. Manufacturing companies account for most of the rise in operating surplus in the segment of large corporations.

III.5.6 Financial position of corporations and households

The annual growth rate of **financial liabilities of non-financial corporations** increased to 2.4% in 2014 Q3 (see Chart III.5.23). This was due to higher growth in debt securities and quoted shares[52] coupled with a rise in the value of shares and other equity excluding quoted shares. By contrast, the contribution of loans decreased. In 2014 Q3, **financial assets of non-financial corporations** maintained the annual growth rate recorded in 2014 Q2, i.e. 5.6%. This was due mainly to loans and shares and other equity. Growth in currency and deposits remained flat at 1.4%. The overall negative net financial position of non-financial corporations therefore continued to moderate gradually.

The main trends in the **balance sheets of non-financial corporations** are reflected in the financial indicators: the acid-test ratio[53] rose further in 2014 Q3, the market-based financing ratio[54] went up slightly, and corporate solvency – as measured by the ratio of total financial assets to liabilities excluding shares and other equity – increased in 2014 Q3.

Households are traditionally net creditors in the national economy.

CHART III.5.22

OPERATING PROFIT BY SECTOR

Corporations in manufacturing were the biggest contributor to the high growth in operating profit
(annual percentage changes; contributions in percentage points)

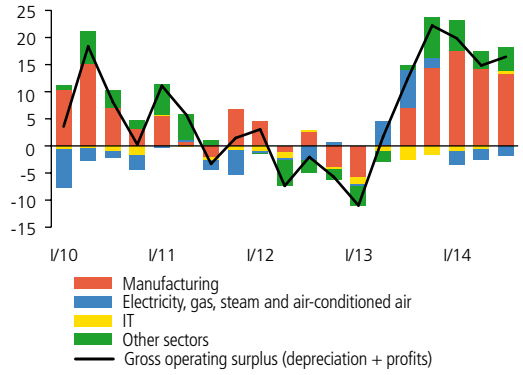
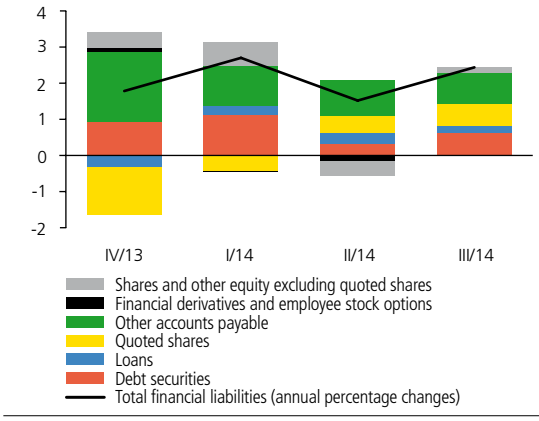


CHART III.5.23

FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

Debt securities and shares and other equity contributed to the faster growth in financial liabilities in 2014 Q3
(annual percentage changes; contributions in percentage points)



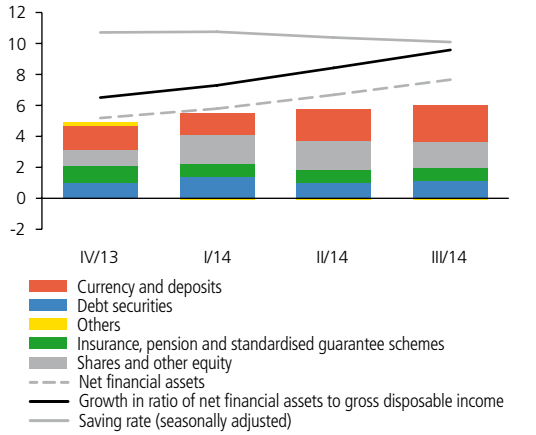
51 The segment of corporations with 250 employees or more consisted of more than 1,700 non-financial corporations at the end of 2014 Q3.
52 The rising other liabilities item, dominated by trade credits and advances, usually makes high contributions to the growth.
53 A ratio with currency in circulation, transferable deposits, short-term debt securities and short-term loans provided in the numerator and short-term debt securities issued and short-term loans accepted in the denominator.
54 A ratio with the sum of bonds issued and quoted shares issued in the numerator and total liabilities in the denominator.

CHART III.5.24

STRUCTURE OF HOUSEHOLD FINANCIAL ASSETS

Growth in the gross and net financial assets of households accelerated

(contributions in percentage points; annual percentage changes and percentage ratios)



Annual growth in the **net financial assets of households** accelerated to 7.7% in 2014 Q3. This increase represented almost 10% of the annual gross disposable income of households (see Chart III.5.24). Growth in gross **financial assets** went up slightly to almost 6% year on year. It was fostered mainly by currency and deposits (especially transferable deposits[55]). As regards shares and other equity, growth in investment fund shares and units held by households increased slightly. The other categories of financial assets rose roughly at the same pace as in the previous quarter. Growth in the financial liabilities of households slowed further to 2.4% year on year on account of a smaller contribution of long-term loans and a larger negative contribution of short-term loans.

III.5.7 The property market

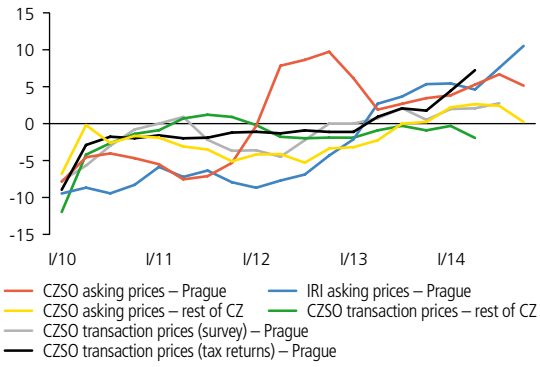
Asking prices of older apartments in Prague continued to rise quite rapidly in late 2014. Annual growth in these prices slowed from 6.7% to 5.1% according to the CZSO, but alternative IRI data point to an increase to a strong 10.5% year on year (see Chart III.5.25). By contrast, asking prices of apartments outside Prague switched from growth (of 2.2%–2.6%) to year-on-year stagnation on average (negligible growth of 0.2%) in 2014 Q4 according to the CZSO. According to the IRI, however, the movements in asking prices in regions outside Prague were still very mixed, ranging from -4% to 6.8%.[56]

CHART III.5.25

TRANSACTION AND ASKING PRICES OF APARTMENTS

Apartment prices continued to rise quite rapidly in Prague, but asking prices stopped rising in the rest of the Czech Republic

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



The CZSO revised downwards its earlier estimates of **transaction prices based on property transfer tax returns** – prices at the end of 2013 were lowered by 0.8% for both Prague and the rest of the Czech Republic. Besides this revision, the CZSO published new estimates of transaction prices based on tax returns in 2014 H1. These estimates confirm a widening differential in price dynamics between Prague and the rest of the Czech Republic (strong growth of 7.2% compared to a decrease of 1.9%; see Chart III.5.25).[57] On the other hand, **transaction prices of older apartments based on the CZSO survey** rose by 2.8% year on year in Prague and 5.8% year on year outside Prague in 2014 Q3. According to the survey, annual growth in prices of new apartments was more moderate, at 1.5%. Overall, asking and transaction prices indicate a continuing market recovery, albeit highly differentiated across regions. The market recovery is also confirmed by an increase in new apartment sales in development projects in Prague of 18.6% in 2014 as a whole and 9.6% year on year in 2014 Q4.[58]

55 These are current account deposits (demand deposits); term deposits are included in other deposits.

56 The average growth was 1.7%.

57 However, the half-yearly estimates of transaction prices based on tax returns are often significantly revised.

58 Harmonised data from property developers Ekospol, Skanska Reality and Trigema. These data are currently the only available information on transactions, as earlier COSMC data on the number of entries of proceedings ceased to be published at the end of 2013 due to legislative changes (the new Civil Code). Publication is expected to resume in January 2015.

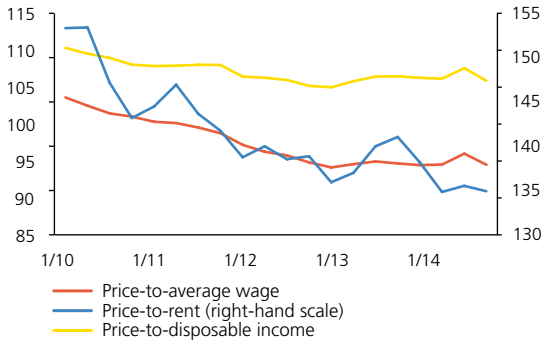
Property price sustainability ratios declined in 2014 Q4, reversing the increases recorded in the previous quarter (see Chart III.5.26). The indicators of housing affordability,[59] i.e. the **price-to-average wage ratio** and the **price-to-disposable income ratio**, fell by 1.6% quarter on quarter. At the same time, they were revised downwards due to the aforementioned revision of transaction prices. Overall, these indicators are close to the lows reached in early 2013.The **price-to-rent ratio** saw a quarterly decline of 0.4% and is also close to its minimum.

The property market recovery is in line with the gradual growth in domestic economic activity, the related labour market improvement and the decreases in interest rates on loans for house purchase. The property price sustainability indicators, as well as other methods, still **suggest no marked overvaluation of property prices overall**. Therefore, the current growth in property prices can still be regarded as a correction of the previous declines. In 2015, roughly the same moderate growth in property prices can be expected as in 2014, while the growth rates of asking prices and transaction prices are expected to converge.

CHART III.5.26

APARTMENT PRICE SUSTAINABILITY INDICATORS

Property price sustainability indicators were close to their lows in 2014 Q4, reversing the growth recorded in Q3
(2000–2007 average = 100; source: CZSO, Institute for Regional Information)



59 In the calculation of the housing affordability indicators for 2014 Q4, the increase in apartment transaction prices was proxied by growth in asking prices according to the CZSO.

III.6 BALANCE OF PAYMENTS[60]

As in the previous quarter, the balance of payments in 2014 Q3 was characterised by a high primary income deficit, linked mainly with direct investment income in the form of dividends paid to non-residents. However, its effect on the current account was largely offset by a goods and services surplus resulting from a rising goods surplus. On the financial account, the highest net borrowing from abroad (i.e. net inflow) was recorded by direct investment as a result of a relatively rapid inflow of foreign investment in the Czech Republic, in particular reinvested earnings. However, net borrowing on direct investment and a drop in reserve assets was largely offset by net lending abroad (i.e. net outflow) on other investment, linked mainly with repayments to non-residents of financial loans and trade credits.

III.6.1 The current account

As in the previous quarter, the **current account** recorded a deficit (of CZK 35.1 billion) in 2014 Q3. The deficit shrank by almost CZK 5 billion, owing solely to the evolution of the goods balance (see Chart III.6.1). The annual moving current account total thus turned from a slight deficit into a marginal surplus in Q3. The annual moving ratio of the current account total to GDP was zero, up by 0.1 percentage point on Q2.

The **goods** surplus amounted to CZK 51.6 billion in 2014 Q3 and increased again year on year (by CZK 21 billion). The rise in the trade surplus was due mainly to price developments associated with a positive year-on-year change in the terms of trade, and partly also to developments in real terms. Annual growth in nominal trade turnover slowed further in 2014 Q3, owing chiefly to imports, but still reached almost 12%. The increase in external demand and the weakening of the koruna were reflected in growth in goods exports of 13%. A more pronounced slowdown in imports than in exports was associated with slower growth in total domestic demand and a decline in energy commodity prices. By contrast, exchange rate developments, above all a marked depreciation of the koruna against the US dollar, acted towards faster nominal import growth. As regards the dominant flows by use, imports for investment purposes again recorded the fastest growth. Turning to the commodity structure, a moderation of the mineral fuels deficit was the biggest contributor to the year-on-year rise in the overall surplus (see Chart III.6.2). The total goods surplus continued to rise year on year during Q4, growing by almost CZK 6 billion in October to November.

CHART III.6.1

CURRENT ACCOUNT

The current account deficit shrank slightly year on year in 2014 Q3 due to an increase in the goods surplus
(CZK billions)

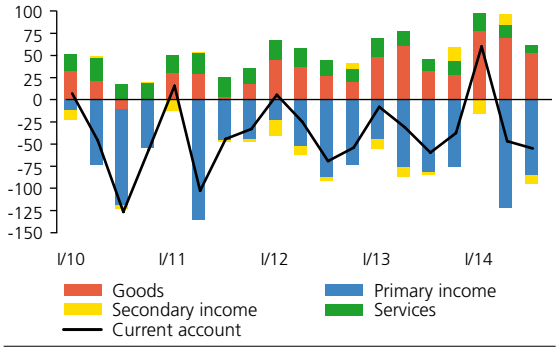
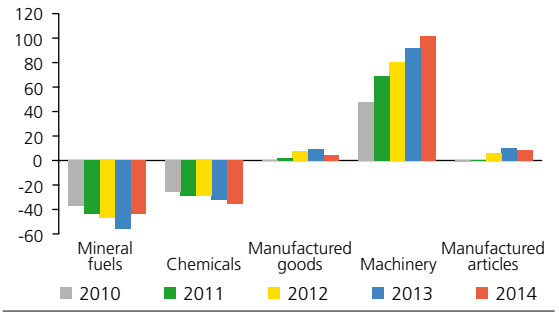


CHART III.6.2

EXTERNAL TRADE IN GOODS

The year-on-year growth in the surplus on external trade in goods was affected most strongly in 2014 Q3 by a decrease in the mineral fuels deficit
(Q3 of relevant year in CZK billions; national concept)



60 The data in the text are based on data compiled according to the new BPM6 balance of payments manual.

The goods and services surplus was also due to a surplus on **services** totalling CZK 9.3 billion (see Chart III.6.3). However, the services surplus declined further in Q3 (by more than CZK 5 billion). It was due mainly to travel (CZK 7.7 billion) and production and repair services. Transport also recorded a slight surplus. By contrast, other services as a whole ended in a deficit of CZK 7.9 billion, due mainly to deficits on research and development, charges for the use of intellectual property and insurance services. Other services were also the main contributor to the year-on-year decrease in the overall surplus, mainly on account of a sharp rise in expenditure on other business services.

In contrast to the goods and services surplus, **primary income** (roughly equivalent to the former income balance[61]) showed a deficit of CZK 85.5 billion, up by CZK 4 billion year on year. The largest component of the overall balance was the investment income deficit (see Chart III.6.4), stemming mainly from a direct investment income deficit of CZK 90 billion. It was linked mainly with income in the form of dividends paid to non-residents and, to a lesser extent, with estimated reinvested earnings in the Czech Republic. Portfolio investment income also recorded a deficit, mainly as a result of share dividends and interest on debt securities paid to non-residents. The year-on-year increase in the overall deficit was also due above all to a widening of the portfolio investment income deficit as a result of a rise in dividends paid to non-residents. By contrast, slight surpluses were recorded by compensation of employees, other investment income and income on reserve assets.

Secondary income (formerly current transfers) recorded a deficit of CZK 10.5 billion. This represented a year-on-year increase of more than CZK 7 billion. The Czech Republic's VAT- and GNI-based payments to the EU budget were the most important component. Deficits were also recorded by most other components, notably social contributions and non-life insurance compensation payments. In year-on-year comparison, net drawdown of funds from the EU budget recorded under secondary income switched from a slight surplus to a deficit of CZK 4.5 billion in 2014 Q3. The year-on-year rise in the overall deficit was linked mainly with considerably lower drawdown of funds from the EU budget.

III.6.2 The capital account

The **capital account** recorded only a modest surplus of CZK 2.4 billion, resulting mainly from drawdown of funds from the EU budget totalling CZK 1.9 billion. Owing to the absence of significant drawdown from the EU budget and a decrease in other capital transfer credits, the overall surplus decreased by almost CZK 54 billion year on year.

61 According to the previous BPM5 manual.

CHART III.6.3

SERVICES

Travel, manufacturing and repair and transport contributed to the services surplus in 2014 Q3
(CZK billions)

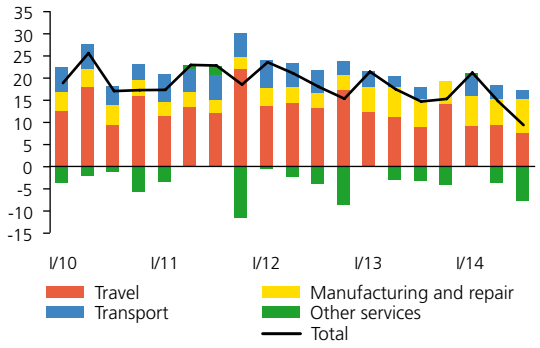


CHART III.6.4

PRIMARY INCOME

Within primary income, the investment income deficit increased year on year in 2014 Q3
(CZK billions)

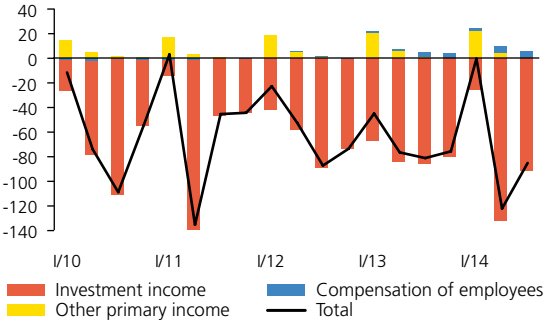


CHART III.6.5

FINANCIAL ACCOUNT

Net borrowing on the financial account in 2014 Q3 was primarily due to net borrowing from direct investment
(CZK billions)

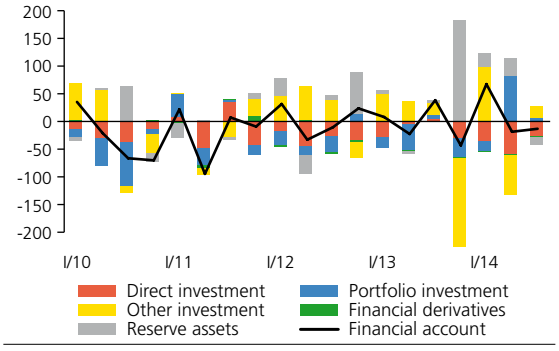


CHART III.6.6

DIRECT INVESTMENT

Reinvestment of earnings contributed the most to net borrowing from direct investment in 2014 Q3
(CZK billions)

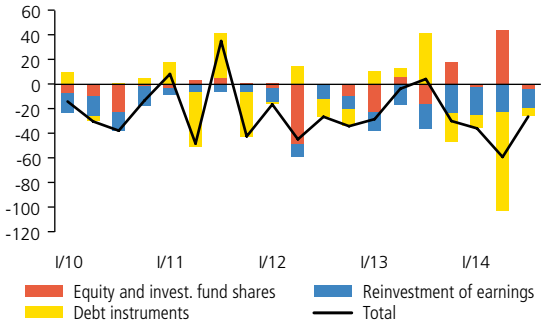


CHART III.6.7

PORTFOLIO INVESTMENT

Portfolio investment recorded net lending in 2014 Q3 due mainly to purchases of foreign securities by residents
(CZK billions)

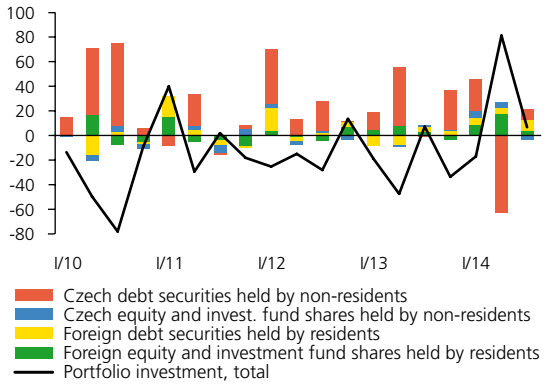
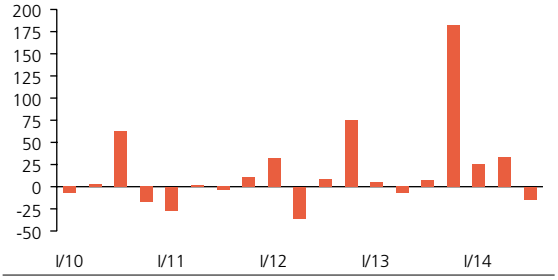


CHART III.6.8

RESERVE ASSETS

Reserve assets decreased in 2014 Q3 due to a deficit on transactions for CNB clients
(changes in CZK billions)



III.6.3 The financial account

The **financial account** recorded net borrowing from abroad (a net inflow) of CZK 13.2 billion in 2014 Q3, due above all to a net inflow of direct investment and a decrease in reserve assets, two-thirds of which, however, was offset by net lending abroad (a net outflow) on other and portfolio investment (see Chart III.6.5).

Direct investment recorded net borrowing from abroad of CZK 26.2 billion in Q3, in contrast to a slight net outflow in the same period of 2013 (see Chart III.6.6). The inflow of foreign investment into the Czech Republic was almost CZK 41 billion, roughly one-half of which was linked with estimated reinvestment of earnings. At the same time, it was aided on the liabilities side by growth in shares and other equity (inflows into equity capital) and a rise in debt instruments (net drawdown of loans). Czech investment abroad was mainly linked with an increase in net acquisition of assets for shares and with reinvestment of earnings. The year-on-year switch of direct investment from net lending (net outflow) to net borrowing (net inflow) was due chiefly to changes in credit relations.

Unlike direct investment, **portfolio investment** recorded net lending abroad (a net outflow) of CZK 6.7 billion, i.e. a similar amount as in the same period of 2013 (see Chart III.6.7). The biggest transactions were purchases of foreign securities by residents, which exceeded CZK 12 billion. They were related above all to purchases of foreign bonds by financial institutions and non-financial corporations. Holdings of foreign investment fund shares and units by domestic investors increased slightly as well. Overall, purchases also dominated trading in domestic securities by non-residents. However, they were associated solely with purchases of Czech bonds, whereas net sales were recorded in the case of shares.

Settlement of **financial derivatives and employee stock options** led to net borrowing (a net inflow) of CZK 0.8 billion, almost unchanged from a year earlier.

Other investment recorded net lending abroad (a net outflow) of CZK 21.5 billion, i.e. a similar amount as in 2013 Q3. The overall net outflow was due chiefly to a net outflow of loans, which reached almost CZK 37 billion and was related mainly to repayments of short-term financial loans and trade credits to non-residents by the corporate sector. Only a net inflow of currency and deposits of CZK 22 billion, stemming mainly from a decrease in short-term deposits of residents with foreign banks, moderated the overall net outflow.

Following an annual increase, **reserve assets** decreased by CZK 14.4 billion in 2014 Q3 (see Chart III.6.8) due to a deficit on transactions executed for CNB clients.

III.7 THE EXTERNAL ENVIRONMENT

In the period under review, the external environment was affected mainly by a sharp fall in oil prices resulting from a rapidly rising excess supply of oil. In December 2014, the falling oil prices were reflected in strong anti-inflationary pressures in the euro area and the USA, with the euro area falling into deflation. GDP continued to rise moderately in the euro area in 2014 Q3, albeit at a much lower pace than in the USA. Better US growth outlooks and a further easing of the ECB's monetary policy in January, in the shape of a sizeable expansion of its bond purchase programme, led to depreciation of the euro against the dollar to an eleven-year low.

III.7.1 The euro area

The quarterly GDP growth rate in the **euro area** rose by 0.1 percentage point to 0.2% in 2014 Q3. As in the previous quarter, annual GDP growth was 0.8% (see Chart III.7.1). The annual increase was due to accelerating growth in private consumption, as well as government consumption and net exports. By contrast, the contribution of changes in inventories to GDP growth was negative. The highest quarterly growth rates were recorded by Greece and Slovenia (0.7%). Germany and France recorded subdued growth following a contraction in the previous quarter, while Italy found itself in technical recession.

Continuing modest growth in economic activity, supported among other things by falling oil prices, is expected in **2014 Q4**. Industrial production showed a month-on-month rise in November (of 0.2%), with a fall in production in the energy sector being offset by a pronounced increase in the production of durable goods. Retail sales recorded similar monthly growth in November. Leading indicators are also signalling a slight improvement in economic activity at the close of 2014. For example, the PMI in manufacturing rose to 50.6 in December, with its new orders component (in particular new orders from abroad) improving for the first time in four months. However, economic growth so far has not been strong enough to be reflected in a drop in the unemployment rate, which has been flat at 11.6% since June. For the whole of 2014, euro area GDP is expected to increase by 0.6%. Economic growth is expected to accelerate to around 1% in 2015 and to speed up further to 1.5% in 2016.

Compared to November, **inflation in the euro area** fell by 0.5 percentage point to -0.2% in December 2014 (see Chart III.7.3). The switch to negative figures was due to falling energy prices, while core inflation – and services price inflation in particular – remained unchanged from previous months (at 0.8% and 1.2% respectively). Average inflation declined by almost 1 percentage point to 0.4% in 2014. Its levels this year will be affected on the one hand by the low oil prices and subdued economic activity and on the other hand by the accommodative monetary policy of the ECB and a weaker euro. The January CF expects negligible growth in the price level in 2015

CHART III.7.1

GDP IN THE EURO AREA

GDP growth remained unchanged in 2014 Q3, with higher contributions from household consumption and net exports counteracting a negative contribution of inventories

(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)

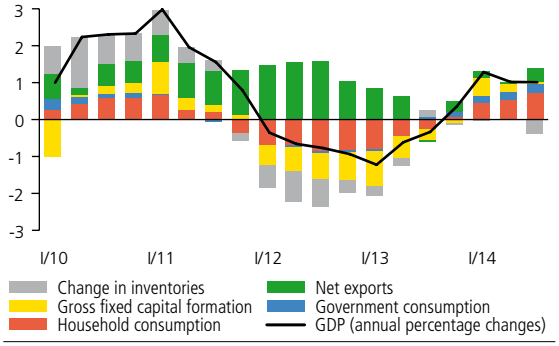
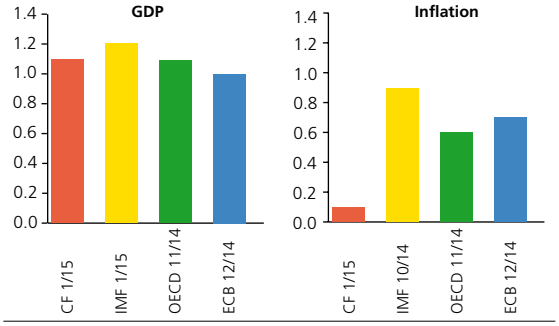


CHART III.7.2

EURO AREA GDP AND INFLATION OUTLOOKS FOR 2015

Euro area GDP growth is expected to be around 1% in 2015, while inflation is expected to remain very low

(annual percentage changes; source: CF, IMF, OECD, ECB)



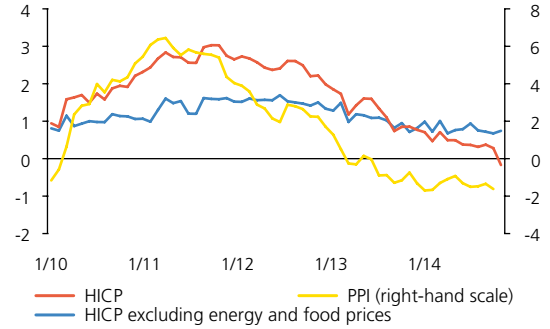
Note: Horizontal axis shows most recent forecast data in format "Source month/ year of publication". Midpoint of range for ECB.

CHART III.7.3

INFLATION AND PRODUCER PRICES IN THE EURO AREA

Inflation went down further in 2014 Q4, reaching negative figures, while producer prices continued to decline

(annual percentage changes; source: Datastream)



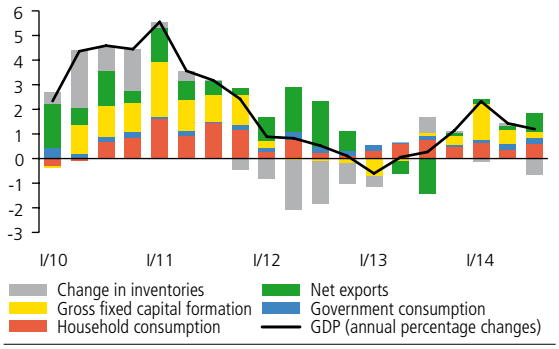
and a rise in inflation of 1 percentage point in 2016. Other monitored institutions expect higher inflation rates (see Chart III.7.2), but their forecasts do not yet take into account the fall in oil prices in December 2014 and January 2015.

At the close of the year, the **ECB** continued to implement its programmes to ease monetary policy. In October it launched a covered bond purchase programme (CBPP3). The total amount of bonds purchased under this programme reached EUR 31.3 billion in early January 2015. In November, the ECB launched an asset-backed securities purchase programme (ABSPP), under which it held assets totalling EUR 1.8 billion in early January. In addition, the second of the total of eight rounds of targeted longer-term refinancing operations took place; its take-up (EUR 130 billion) was higher than in the first round (EUR 83 billion) but fell short of expectations. At its January meeting, the ECB therefore decided to substantially expand the existing bond purchase programme and lowered the interest rate for further TLTRO auctions by 0.1 percentage point to 0.05%. The overall volume of bond purchases will be EUR 60 billion a month from March 2015 to September 2016, of which roughly EUR 50 billion will now be purchases of government bonds.[62] The additional monetary policy easing was reflected in an immediate decline in bond yields in most euro area countries. However, yields had already been falling earlier in January 2015, influenced by long-running expectations of this move by the ECB and a decrease in longer-term inflation expectations signalled, among other things, by inflation swaps. By contrast, yields on Greek bonds increased on concerns about the expected results of the snap elections held in late January.

CHART III.7.4

GDP IN GERMANY

The rate of economic growth fell in 2014 Q3, as faster growth in household consumption and net exports was outweighed by lower growth in fixed investment and a decline in inventories
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)



Economic growth in Germany reached 0.1% quarter on quarter in 2014 Q3, compared to a decline of the same magnitude in the previous quarter. This economic improvement was a result of faster household consumption growth, a more moderate decrease in fixed investment and an increase in net exports. By contrast, annual GDP growth fell by 0.2 percentage point to 1.2% (see Chart III.7.4). The stronger growth in household consumption and the contribution of net exports were outweighed by a slowdown in fixed investment growth and a decline in inventories.

Economic growth probably increased somewhat **in 2014 Q4** due to a rise in domestic demand. Owing mainly to faster growth in household consumption (unemployment is at its lowest level since 1990 and real wages have risen by 2%) and exports, GDP growth in 2014 as a whole increased by 1.5% according to a preliminary estimate, even though many institutions were predicting growth of around 1.3% as recently as December. The January CF expects economic growth to

62 The purchases of government bonds will be proportional to the shares of individual euro area countries in the ECB's capital. The ECB will purchase 8% of the total volume of bonds. The rest will be purchased by euro area national central banks, with 12% of this volume being subject to risk sharing and the remaining risk being borne by the national central banks.

stand roughly at the same level this year. Given the drop in oil prices and the depreciating euro exchange rate, however, economic growth could be higher. This is also suggested to some extent by increasing values of leading indicators.

As a result of higher economic growth and low interest rates, the **German government** achieved a balanced federal budget in 2014. It is therefore likely that the additional investment that the government intends to release into the economy will be higher than the EUR 10 billion announced by the German Ministry of Finance in November.

Inflation in Germany fell by 0.4 percentage point to 0.2% in December, chiefly due to falling energy and food prices. Core inflation edged up to 1.3% (see Chart III.7.5). Inflation amounted to 0.9% in 2014 as a whole and is expected to drop to 0.7% this year.

In 2014 Q3, the **Slovak economy** maintained relatively high quarterly and annual rates of GDP growth (0.6% and 2.5% respectively). A slowdown in domestic demand growth was offset by a rise in net exports. The robust economic growth was also reflected in a year-on-year decline in the unemployment rate of 1.5 percentage points in November and a year-on-year rise in employment of 1.4% in Q3.

According to the January CF, the Slovak economy grew roughly at the same pace **in Q4** as in the previous quarter, and GDP for 2014 as a whole increased by 2.4%. Its growth is expected to accelerate to 2.7% this year. Many other institutions (the Slovak Ministry of Finance, the European Commission, the IMF and the EBRD) have presented similar forecasts in recent months.

In December, **consumer prices in Slovakia** fell by 0.1% year on year. The deflation was driven by falling prices of food and energy, counteracted only by rising services prices. The consumer price level decreased by 0.1% in 2014 as a whole. According to the January CF, inflation is expected to rise to 0.8% this year.

III.7.2 The United States

As in 2014 Q2, **US GDP** recorded robust quarterly growth in 2014 Q3 (1.2%). GDP rose by 2.7% year on year. The output growth was driven chiefly by household consumption, reflecting an improving labour market situation. Fixed investment also contributed positively, while the contributions of the other GDP components were insignificant (see Chart III.7.6). Real exports and real imports rose at approximately the same pace (3.8% and 3.4% respectively). The annual cumulative current account deficit stabilised at 2.2% of GDP in 2014 Q3. The government deficit has long been around 3% of GDP following a previous long-running gradual decline. The internal and external imbalance of the US economy thus seems to have stabilised at longer-term levels.

CHART III.7.5

INFLATION AND PRODUCER PRICES IN GERMANY

Inflation fell by 0.4 percentage point to 0.2% in December, while industrial producer prices continued to fall
(annual percentage changes; source: Datastream)

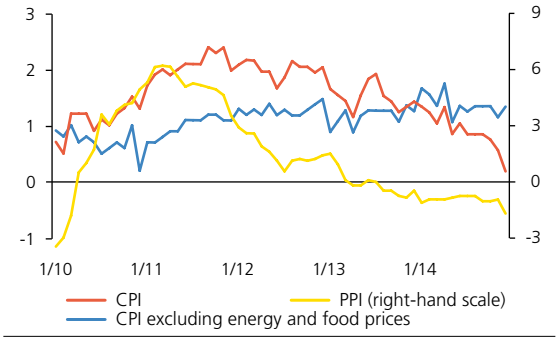


CHART III.7.6

GDP IN THE USA

Household consumption contributed significantly to GDP growth
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)

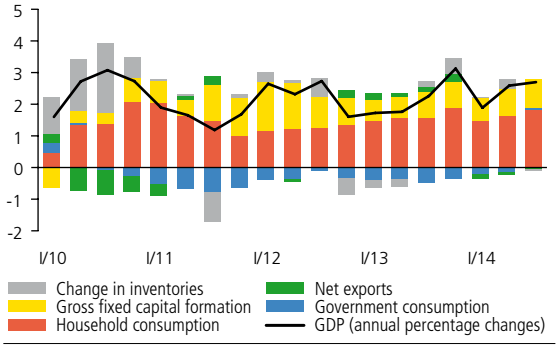
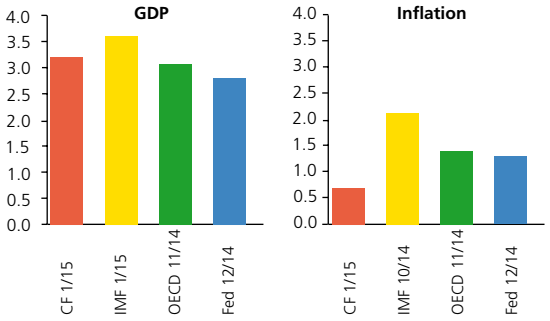


Chart III.7.7

US GDP AND INFLATION OUTLOOKS FOR 2015

Rapid GDP growth is expected in 2015, while inflation will be very subdued

(annual percentage changes; source: CF, IMF, OECD, Fed)



Note: Horizontal axis shows most recent forecast data in format "Source month/year of publication". Midpoint of range for Fed.

Chart III.7.8

INFLATION AND PRODUCER PRICES IN THE USA

The fall in oil prices caused consumer price inflation to slow sharply and producer prices to fall in December 2014

(annual percentage changes; source: Datastream)

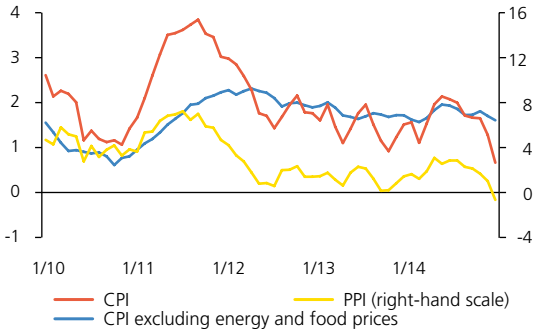
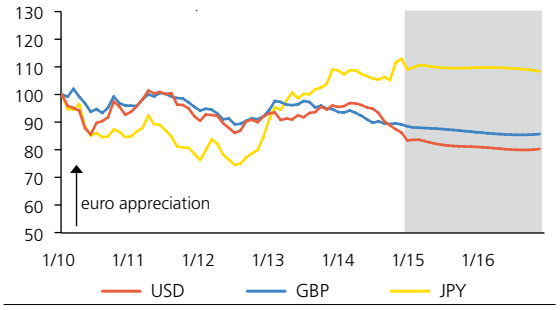


Chart III.7.9

EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

The euro depreciated most strongly against the US dollar in 2014 Q4

(January 2010 = 100; source: Datastream, CNB calculation, outlook from Consensus Forecasts)



Data for **2014 Q4** indicate continuing favourable economic developments. Industrial production rose by 4.8% year on year in this quarter and the PMI in manufacturing leading indicator is signalling growth for the months ahead as well, as it remains in the growth band despite weakening in December. The University of Michigan Consumer Sentiment Index increased considerably in both December and January, pointing to positive outlooks for household consumption. This was significantly aided not only by falling oil prices, but also by the labour market situation, as the unemployment rate went down further to 5.6% in December. Household consumption will therefore probably still play the main role in the continuation of rapid economic growth.

The **expected GDP growth** for 2014 as a whole is 2.4%. A further marked acceleration is expected in 2015 (see Chart III.7.7). In its January forecast, the IMF expects growth of 3.6% in 2015 and 3.3% in 2016. By contrast, inflation expectations according to the January CF, which already reflect the fall in oil prices, have been lowered significantly to 0.7% in 2015. Inflation averaged 1.6% in 2014.

In December 2014 alone, annual growth in **consumer prices** slowed by 0.5 percentage point to 0.7%. In month-on-month terms, prices decreased for the second consecutive month. The decrease was driven above all by the fall in oil prices, as inflation excluding energy and food prices slowed only marginally to 1.6% in December. Industrial producer prices fell by 0.7% year on year in December (see Chart III.7.8).

The lower inflation pressures are stirring up a discussion about the **Fed** postponing its first interest rate hike, which will probably not take place until the second half of 2015. Ten-year government bond yields fell to their lowest levels in more than a year and a half, suggesting that the monetary policy tightening may not be as fast as recently expected.

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

In 2014 Q4, the **exchange rate of the euro against major world currencies** reflected not only the different dynamics of the world's economies, but also further policy easing in the euro area and Japan (see Chart III.7.9). The euro depreciated most strongly against the US dollar in 2014 Q4. The US economic outlooks improved, so the Fed abandoned further monetary stimulus. The monthly bond purchase programme was discontinued in October. The US central bank did not specify the timing of its first interest rate hike. By contrast, the ECB announced two additional stimulus programmes in October. This was prompted by a continuing decrease in inflation expectations and by a none-too-optimistic economic outlook for the euro area. In December 2014 the average exchange rate of the euro against the US dollar was USD 1.23, representing a year-on-year depreciation of the euro of more than 10%.

The **euro weakened against the British pound** by about half this amount in the same period. The recovery of the British economy is still being supported by domestic consumption, whereas services and foreign trade recorded a slowdown. The drop in oil prices at the end of the year also contributed to the lowest ever inflation outturn (0.5% year on year in December 2014).

By contrast, the euro strengthened **against the Japanese yen** at the close of 2014. A fall into recession in 2014 Q3 and slowing consumer price inflation prompted the Bank of Japan to raise its target for annual monetary base growth from JPY 60–70 trillion to JPY 80 trillion. Tax hikes were postponed and an additional support package totalling JPY 3.5 trillion was approved.

In the first half of January 2015, the euro weakened further against major world currencies. In the second week of January, the euro-dollar exchange rate broke through the USD 1.18 level. The depreciation was due to newly available data on deflation in the euro area and speculation that the ECB would launch government bond purchases. The ECB's January decision on the size of its bond purchases exceeded market expectations and the euro weakened further to an eleven-year low.

International foreign exchange markets were also strongly affected by the **decision of the Swiss National Bank** (SNB) on 15 January to abandon the intervention level of CHF 1.20 to the euro introduced in August 2011, when the SNB was trying to prevent sharp appreciation of the franc. The SNB's January decision also included a reduction in the key interest rate from -0.25% to -0.75% in order to at least partially dampen the initial shock and prevent further appreciation of the Swiss currency. The Swiss franc responded immediately to this decision by appreciating by 29% against the euro, reaching CHF 0.8517 for a short time. In the second half of January, the franc gradually depreciated to close to CHF 1.05 to the euro.

The **January CF** expects the exchange rate of the euro against the dollar to stand at USD 1.16 at the one-year horizon. The euro is expected to depreciate by 2.4% against the British pound, whereas a correction to weaker levels is expected for the euro-yen exchange rate during the first two months of 2015, followed by stability at the level recorded in October 2014.

III.7.4 Prices of oil and other commodities

The average monthly oil price has been falling for seven months now. **Brent crude oil** lost about 60% of its dollar value between mid-June 2014 and mid-January 2015. Brent prices dropped below USD 50 a barrel for the first time since April 2009 (see Chart III.7.10). In koruna terms, the price fell by roughly 50% in the above period (see Chart III.7.11). In addition to the appreciating dollar, this drop was driven by rapidly rising excess supply, and from the end of November 2014 onwards also by a change in OPEC policy.

CHART III.7.10

OIL AND NATURAL GAS PRICES IN USD

Oil prices dropped significantly, but current prices of long-term natural gas contracts have yet to reflect this decline

(oil in USD/barrel; natural gas [Russian in Germany] in USD/1,000 m³ – right-hand scale; source: IMF, Bloomberg, CNB calculation)

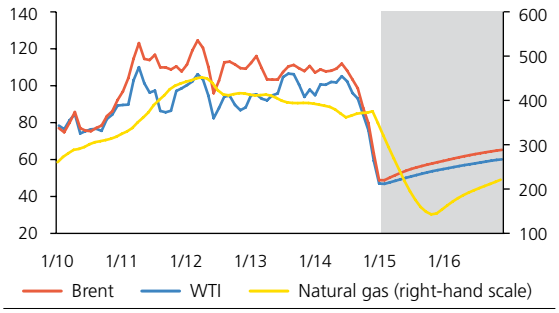


CHART III.7.11

DECOMPOSITION OF KORUNA OIL PRICE GROWTH

The year-on-year fall in dollar prices of oil strengthened further and is only partly offset by depreciation of the koruna against the dollar

(Brent crude oil in CZK/litre – annual percentage changes; contributions of dollar price of Brent crude oil and CZK/USD exchange rate in percentage points; source: Bloomberg, CNB calculation)

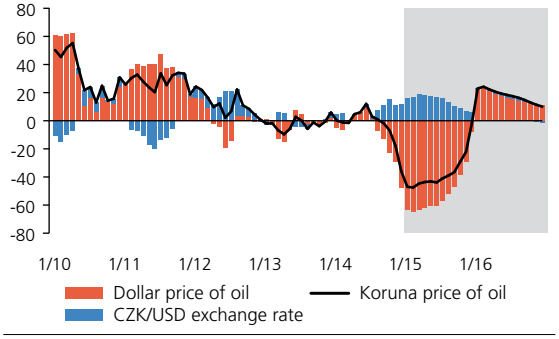
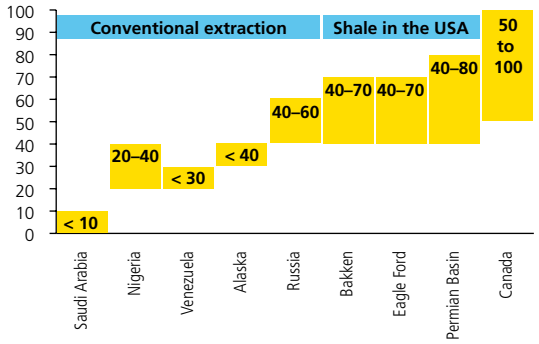


Chart 1 (Box)

BREAKEVEN PRICE OF OIL FOR FIELDS IN VARIOUS REGIONS OF THE WORLD

Estimates of the breakeven price of oil differ widely depending on extraction technology and specific geological conditions
(USD/barrel; source: CNBC)



Note: Oil sands extraction in Canada. The breakeven price for investing in Arctic regions and deep waters exceeds USD 100 a barrel.

Table 1 (Box)

VARIOUS INSTITUTIONS' ESTIMATES OF THE BREAKEVEN PRICE OF OIL FOR SHALE EXTRACTION IN THE USA

The estimates of individual institutions of the breakeven price for new projects lie within a wide range, but the majority are above the current market price
(USD/barrel; source: Reuters, Bloomberg)

Institution	Shale play				
	Eagle Ford	Bakken	Permian Basin	Barnett	Niobrara
Baird Equity res.	53–65	61–75	57–75	93	64–68
Bloomberg	50–65	67–74	59–77		
Credit Suisse	46–55	65	53–65	84	46
Goldman Sachs	80–90	70–80	70–80		
Morgan Stanley	60–80				
Scotia Bank	50	69	68		
UBS	43	65	53–75		73
Wood Mackenzie	50–75	60–80			

Until recently, OPEC was playing a stabilising ("swing producer") role in the oil market, covering global extraction shortfalls stemming from geopolitical conflicts on the one hand and not fully utilising its extraction capacity to keep oil prices sufficiently high on the other. High oil prices, cheap investment financing and successful development of horizontal-drilling and fracking technology facilitated **rapid growth in unconventional extraction** of shale oil in North America. Coupled with weakening growth in global oil demand, this led to a fall in oil prices and a drop in the market share of OPEC countries. OPEC representatives therefore agreed at their November meeting not to cut back extraction and to leave the return of the oil market to equilibrium solely to market forces. This decision, adopted at the end of November 2014, further accelerated the decline in oil prices and caused speculation as to how far oil prices could fall. The reaction of oil supply to the sharp price decline will play an important role, as discussed in Box 2.

BOX 2
Future oil supply on world markets with regard to extraction profitability in different oil plays given falling oil prices

The estimates of various analytical teams as to **how oil extraction will respond to current price developments** differ widely. The breakeven price is important for new projects (and for existing projects in the long run). Where the market price is not sufficiently high above the breakeven price, and this situation lasts for an extended period of time, existing projects cease to be profitable and new investments cannot be justified. The estimates of individual institutions of the breakeven price for different extraction methods and in different regions lie within a wide range (see Chart 1 Box and Table 1 Box). Many planned projects have already been shelved during the current oil price decline on the basis of this criterion. However, the currently observed decline in new investment will not limit oil extraction until the relatively distant future. Extraction will continue in existing projects at least as long as the oil price covers operating costs,[63] which are much lower than the total costs over the entire investment cycle. In addition, some projects will continue to extract temporarily even in a situation of operating loss (e.g. wells in the North Sea and oil sands extraction in Canada), as halting production would make renewal of extraction impossible or excessively costly. At the

63 A recent analysis by Wood Mackenzie states that wells accounting for a mere 0.2% of global extraction (i.e. 190,000 barrels a day) would post an operating loss in the event of Brent selling at USD 50 a barrel. The volume of loss-making production would rise to 400,000 barrels a day at USD 45 a barrel and to 1,500,000 barrels a day (1.6% of global extraction) at USD 40 a barrel. Some Canadian oil sands projects would get into trouble at this price. Shale extraction in the USA will start to experience bigger difficulties at Brent prices around USD 30 a barrel. However, loss-making extraction does not automatically mean that production will be halted immediately, as producers may increase their stocks for a while.

same time, many firms have hedged their production against sizeable price declines using financial derivatives, so they can continue to extract for some time regardless of the current price. In countries where budget funding and foreign exchange income are critically dependent on oil extraction, production is unlikely to be limited even when profitability is low.

Shale extraction in North America has the largest potential for reduction, as the yields of these wells decline very quickly during the production cycle. In North Dakota, for example, the natural decrease in a well's yield is 65% on average in the first year, 35% in the second year, 15% in the third year and 10% in the fourth year, while for conventional wells the yield decreases evenly at a pace of around 9% a year. Consequently, new wells must constantly be drilled to keep the extraction volume unchanged. However, rapid adjustment to market conditions cannot be expected here either. First of all, a decline in drilling permits can already be observed – with a lag of roughly three months since oil prices started to fall. The number of rigs actively being drilled (the "rig count") begins to react with an even longer delay (4–6 months; see Chart 2 Box). After drilling, which at present is a matter of a few days, it usually takes another 1–6 months before the well is completed and ready to produce oil.

It can be illustrated on detailed data from North Dakota (especially Bakken) that **operators are now in no hurry to complete new wells** so that they do not increase supply to the currently oversupplied oil market. The backlog of uncompleted wells is thus increasing (see Table 2 Box). The number of rigs drilled in North America peaked in mid-October 2014 and their high initial yields will therefore contribute to further rapid growth in US extraction at least in the first half of this year. This period is also characterised by the seasonally low global demand for oil, so the highest excess supply and the highest pressure on oil prices can be expected. Production growth in the USA should then start to slow as the well count falls. The largest numbers of wells will be closed in marginal areas of individual shale plays, but part of the conventional extraction from low-yield "stripper" wells, which produce less than 10 barrels a day and thus have high operating costs, will also be curtailed. Extraction is also likely to be cut back in the Bakken area, which is the furthest from the processing and transport infrastructure (and so actual wellhead prices there are significantly lower than the benchmark WTI price) and in the Permian Basin, where extraction costs are high because of complex geological conditions.

CHART 2 (BOX)

RIG COUNT IN THE USA

The rig count in the USA started plummeting in December 2014
(source: Baker Hughes rig count)

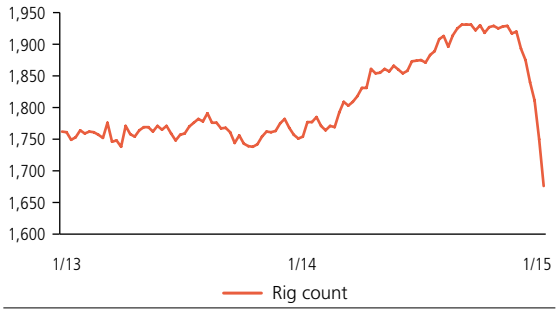


TABLE 2 (BOX)

SHALE EXTRACTION IN NORTH DAKOTA

The numbers of permitted and drilling rigs are falling in response to the drop in the local oil price. Moreover, operators are delaying well completion, so the backlog of uncompleted wells is increasing
(source: North Dakota Department of Mineral Resources)

	2014				2015
	Sep	Oct	Nov	Dec	Jan
Local oil price (USD/barrel)	74.9	68.9	60.6	40.7	29.3
No. of permitted rigs	261	328	235	251	
Drilling rig count	193	191	188	181	156
No. of well completions	193	145	39		
Backlog of uncompleted wells	610	650	775		
No. of producing wells	11,758	11,903	11,942		
Daily oil production (million bbl)	1.186	1.184	1.187		

Note: Data as of 14 January given for 2015.

The current oil price decrease is being amplified to a large extent by **financial investors** who purchased futures in the past and are now having to sell them gradually, as they cannot take physical delivery and store the oil. Some are being forced to sell contracts even before expiration, as they purchased on margin and do not have funds for margin calls given the current price decrease. Commercial traders, who can store oil in onshore tanks or huge tankers on the sea, are the counterparties to these trades. On the other hand, the number of investors who are again betting on future growth in oil prices is already increasing. Whether this growth will be as sharp as in 2009 or only gradual will depend solely upon the size of the reduction in oil supply actually observed on the market, possibly coupled with the strength of the recovery in oil demand. Even a small shortage of oil in the market could lead to rapid growth in the oil price. However, any sharp growth will be dampened by stocks, which are currently rising considerably, owing among other things to the contango in the futures market. Contango means that the oil price is rising with more distant delivery dates. Arbitrage between Brent and WTI is also taking place on the market, reducing the spread between their prices to less than USD 2 a barrel. This is because spare storage capacity in the USA (at Cushing) is increasing demand for WTI oil.

Most forecasts expect oil prices to recover in 2015 H2, when extraction growth should start to slacken[64] and seasonal demand growth could push the market close to fundamental equilibrium. According to the market outlook based on futures, the Brent price should rise to about USD 59 a barrel by the end of this year and USD 65 a barrel a year later. In addition, the Brent-WTI spread is expected to widen to around USD 5 a barrel. The January CF expects faster price growth at both the three-month and one-year horizons, to roughly USD 57 and USD 68 a barrel respectively. By contrast, Goldman Sachs, which revised its outlook significantly downwards, predicts Brent and WTI crude oil prices of USD 42 and USD 41 a barrel respectively at the three-month horizon and average prices of USD 50.4 and USD 47.2 a barrel respectively for this year.

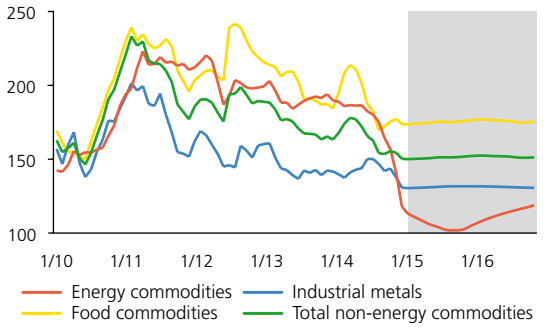
The downward trend in the **non-energy commodity price index** halted in October 2014, but the index fell again in the first half of January (see Chart III.7.12). This conceals opposite movements in its components. While the industrial metals price index remained under pressure from the appreciating dollar and weak global industrial demand, falling continuously except in November 2014, the average food commodity price index edged up throughout 2014 Q4 and only declined slightly at the start of this year as a result of a favourable outlook for the new harvest and sufficient stocks. Looking ahead, market outlooks suggest that both indices will be flat.

CHART III.7.12

COMMODITY PRICES

The industrial metals and food commodity price indices moved in opposite directions in the past quarter, but the outlook for both indices is flat

(January 2007 = 100; source: Bloomberg, CNB calculation)



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

64 The latest IEA report lowered the non-OPEC production growth estimates for Colombia, Canada, the USA and Russia in particular.

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ABBREVIATIONS

ABSPP	asset-backed securities purchase programme
AEIS	Average Earnings Information System
APRC	annual percentage rate of charge
CF	Consensus Forecasts
CNB	Czech National Bank
COSMC	Czech Office for Surveying, Mapping and Cadastre
CPI	consumer price index
CZK	Czech koruna
CZSO	Czech Statistical Office
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
ESA	European System of Accounts
ESCB	European System of Central Banks
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
FDI	foreign direct investment
Fed	US central bank
FMIE	Financial Market Inflation Expectations
FRA	forward rate agreement
GBP	pound sterling
GDP	gross domestic product
GNP	gross national product
GVA	gross value added
HICP	harmonised index of consumer prices
HP filter	Hodrick-Prescott filter
IEA	International Energy Agency
ILO	International Labour Organization
IMF	International Monetary Fund
IRI	Institute for Regional Information
IRS	interest rate swap
JPY	Japanese yen
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
M1, M2, M3	monetary aggregates
MLSA	Ministry of Labour and Social Affairs
NFCs	non-financial corporations
NPISH	non-profit institutions serving households
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PMI	Purchasing Managers Index
pp	percentage points
PPI	producer price index
PRIBOR	Prague Interbank Offered Rate
(1W, 1M, 1Y)	(one-week, one-month, one-year)
repo rate	repurchase agreement rate
SMEs	Small and medium-sized enterprises
TLTROs	targeted longer-term refinancing operations
USD	US dollar
VAT	value added tax
WTI	West Texas Intermediate

Forecasts for general government debt and debt service, and sensitivity analyses	(Box)	I/2011
Price-setting behaviour in the Czech Republic (micro data evidence) in relation to the pricing mechanism in the g3 forecasting model	(Box)	II/2011
The relationship between the Brent crude oil price and the dollar exchange rate	(Box)	II/2011
The impacts of changes to VAT rates on the budget and inflation and their components in 2012 and 2013	(Box)	III/2011
Labour market developments during the economic recession and the subsequent recovery	(Box)	III/2011
The debt situation in Italy	(Box)	III/2011
Publication of the Graph of Risks to the Inflation Projection (GRIP)	(Annex)	III/2011
Pension system reform	(Box)	IV/2011
The credit rating of the Czech Republic	(Box)	IV/2011
Germany – the Czech Republic's main trading partner	(Box)	IV/2011
The pass-through of VAT to food prices at the end of 2011	(Box)	I/2012
Extraordinary revision of the quarterly national accounts	(Box)	I/2012
An analysis of the impacts of fiscal measures in the Czech Republic in 2001–2011	(Box)	I/2012
Revision of the consumer basket	(Box)	II/2012
Factors affecting retail fuel prices	(Box)	II/2012
The Bank Lending Survey	(Box)	III/2012
The CZK/USD exchange rate at a time of uncertainty	(Box)	III/2012
Easy monetary policy and commodity prices	(Box)	III/2012
The household saving rate	(Box)	IV/2012
Consumption and money savings by household income group	(Box)	IV/2012
The share of reinvested earnings in total FDI income	(Box)	IV/2012
Revision of the quarterly national accounts	(Box)	I/2013
Consumption, savings and debt burden of household income groups in 2012	(Box)	III/2013
The announced reduction of quantitative easing in the USA and its effect on yield curves	(Box)	III/2013
Using the exchange rate as an instrument to ease the monetary conditions	(Box)	IV/2013
New steady-state settings in the g3 model	(Box)	IV/2013
Comparison of corporate investment and employment from the perspective of ownership and reinvestment	(Box)	IV/2013
The impact of the growth in unconventional gas extraction on global prices of energy commodities	(Box)	IV/2013
Effects of the weakened exchange rate on consumer prices (input-output analysis)	(Box)	I/2014
Evolution and structure of shorter working hours	(Box)	II/2014
The Czech Republic's trade relations with Ukraine and Russia	(Box)	II/2014
The life cycle of foreign direct investment and its impact on the balance of payments	(Box)	III/2014
Assessment of the economic situation one year after the exchange rate commitment was adopted	(Box)	IV/2014
Revision of the national accounts following the switch to ESA 2010	(Box)	IV/2014
The impacts of the military and political crisis in Ukraine on the Czech Republic	(Box)	IV/2014
Wage growth structure in the business sector	(Box)	I/2015
Future oil supply on world markets with regard to extraction profitability in different oil plays given falling oil prices	(Box)	I/2015

This glossary explains some terms frequently used in the Inflation Report. A more detailed glossary can be found on the CNB website (www.cnb.cz/en/general/glossary/index.html).

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

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

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

Bid-to-cover ratio: The ratio of total demand to demand coverage in primary auctions of medium-term and long-term government bonds.

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, financial derivatives and employee stock options, other investment and reserve assets.

Fiscal impulse: A variable taking into account the effect of fiscal policy on economic activity in the short run.

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

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

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

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

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

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

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

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

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

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

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

Monetary aggregates: Represent the amount of money in the economy covered in the monetary survey. According to the national definition, they are calculated from the monetary liabilities of resident monetary financial institutions to other resident sectors in the Czech Republic (households, non-financial corporations and financial institutions excluding the general government). Monetary aggregates differ according to the degree of liquidity of the individual components. The narrow monetary aggregate M1 comprises currency in circulation and overnight deposits. The broad monetary aggregate M2 comprises M1 plus total deposits with agreed maturity and redeemable at notice and repurchase agreements. The broad monetary aggregate M3 (harmonised with EU standards) comprises currency in circulation, overnight deposits, deposits with agreed maturity of up to two years, deposits redeemable at notice of up to three months, repurchase agreements, money market fund shares/units and issued debt securities with maturity of up to two years.

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

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

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

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

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

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

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

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

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

Price-to-average wage ratio: The ratio of the price of an apartment to the sum of the annual average wage over the last four quarters. Higher values of this indicator usually mean that apartments are overpriced. The index is calculated from property transaction prices; the latest data are estimated from asking prices.

Price-to-disposable income ratio: The ratio of the price of an apartment to the sum of disposable income over the last four quarters. Higher values of this indicator usually mean that apartments are overpriced. The index is calculated from property transaction prices; the latest data are estimated from asking prices.

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. This indicator is calculated from asking rents and asking prices of apartments according to the Institute for Regional Information.

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

Property transaction prices: Prices based, on the one hand, 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. The second, alternative source of data on transaction prices is CZSO data from a survey in estate agencies, for which the time lag is considerably shorter.

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

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

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

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

KEY MACROECONOMIC INDICATORS

		years										
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p. of 2010, seas. adjusted	3,751.2	3,958.1	4,058.6	3,867.8	3,950.6	4,028.5	3,999.1	3,970.7	**4,060.9**	**4,164.9**	**4,291.2**
GDP	%, y-o-y, real terms, seas. adjusted	7.1	5.5	2.5	-4.7	2.1	2.0	-0.7	-0.7	**2.3**	**2.6**	**3.0**
Household consumption	%, y-o-y, real terms, seas. adjusted	3.8	4.1	2.8	-0.6	0.9	0.3	-1.8	0.4	**1.4**	**1.7**	**2.1**
Government consumption	%, y-o-y, real terms, seas. adjusted	0.4	0.4	1.1	3.0	0.4	-2.9	-1.0	2.3	**1.5**	**2.2**	**2.1**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	10.5	14.3	0.9	-17.8	4.2	1.9	-3.6	-5.2	**5.6**	**5.0**	**2.8**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	14.8	11.0	3.8	-9.5	14.4	9.3	4.3	0.3	**7.6**	**7.5**	**8.9**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	11.9	12.8	2.8	-10.7	14.5	6.7	2.6	0.3	**8.3**	**8.2**	**8.6**
Net exports	CZK bn, constant p. of 2010, seas. adjusted	88.5	60.3	86.9	108.1	121.8	198.4	251.1	252.0	**250.4**	**250.9**	**284.3**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	8.3	10.6	-1.8	-13.6	8.6	5.9	-0.8	-0.1	**-**	**-**	**-**
Construction output	%, y-o-y, real terms	6.0	7.1	0.0	-0.9	-7.4	-3.6	-7.6	-6.7	**-**	**-**	**-**
Receipts in retail sales	%, y-o-y, real terms	10.8	10.0	2.7	-4.7	1.5	1.7	-1.1	1.2	**-**	**-**	**-**
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	2.5	2.8	6.4	1.1	1.5	1.9	3.3	1.4	0.4	**-**	**-**
Consumer Price Index	%, y-o-y, average	2.6	2.5	6.4	1.1	1.5	1.9	3.3	1.4	0.4	**-0.1**	**1.8**
Regulated prices (18.70%)*	%, y-o-y, average	9.4	4.9	15.6	8.4	2.6	4.7	8.6	2.2	-3.0	**-2.5**	**1.4**
Net inflation (81.30%)*	%, y-o-y, average	0.5	1.5	2.4	-0.9	0.0	1.3	1.0	0.5	0.9	**0.2**	**1.8**
Food prices (including alcoholic beverages and tobacco) (24.58%)*	%, y-o-y, average	-0.1	3.8	3.0	-0.9	0.9	3.9	2.9	3.1	1.8	**1.1**	**2.4**
Adjusted inflation excluding fuels (53.32%)*	%, y-o-y, average	0.7	0.5	2.0	0.0	-1.2	-0.7	-0.3	-0.5	0.5	**0.8**	**1.4**
Fuel prices (3.39%)*	%, y-o-y, average	3.7	-0.1	4.3	-11.1	12.8	9.9	6.0	-2.1	0.2	**-18.3**	**3.7**
Monetary policy inflation (excluding tax changes)	%, y-o-y, average	2.3	1.9	4.3	0.9	0.4	1.9	2.1	0.6	0.2	**-0.2**	**1.8**
GDP deflator	%, y-o-y, seas. adjusted	0.7	3.5	2.0	2.6	-1.4	-0.2	1.4	1.7	**1.9**	**1.3**	**1.6**
Partial price indicators												
Industrial producer prices	%, y-o-y, average	1.5	4.1	4.5	-3.1	1.2	5.6	2.1	0.8	-0.8	**-3.1**	**1.7**
Agricultural prices	%, y-o-y, average	1.3	16.4	10.8	-24.3	7.7	22.7	3.6	5.2	-3.7	**-2.2**	**1.7**
Construction work prices	%, y-o-y, average	2.9	3.9	4.5	1.2	-0.2	-0.5	-0.7	-1.1	0.4	**-**	**-**
Brent crude oil	%, y-o-y, average	20.0	9.9	35.4	-36.5	28.4	38.2	0.7	-2.6	-8.5	**-45.8**	**15.9**
LABOUR MARKET												
Average monthly wage	%, y-o-y, nominal terms	6.6	7.2	7.8	3.3	2.2	2.5	2.5	0.0	**2.7**	**2.8**	**3.6**
Average monthly wage	%, y-o-y, real terms	4.0	4.3	1.4	2.3	0.7	0.6	-0.8	-1.4	**2.4**	**2.7**	**1.9**
Number of employees	%, y-o-y	1.1	1.8	1.6	-2.2	-2.2	0.0	-0.1	1.6	**0.5**	**0.5**	**0.7**
Unit labour costs	%, y-o-y	0.2	2.6	4.8	3.0	-1.7	0.3	2.9	0.4	**0.9**	**0.9**	**1.1**
Unit labour costs in industry	%, y-o-y	-7.2	2.4	-3.3	5.4	-6.3	0.8	4.2	2.8	**-**	**-**	**-**
Aggregate labour productivity	%, y-o-y	5.5	3.3	0.4	-3.1	3.3	2.0	-1.2	-1.1	**1.9**	**2.2**	**2.7**
ILO general unemployment rate	%, average, age 15–64	7.2	5.4	4.5	6.7	7.3	6.8	7.0	7.0	**6.2**	**5.7**	**5.5**
Share of unemployed	%, average	6.1	4.9	4.1	6.2	7.0	6.7	6.8	7.7	**7.7**	**7.1**	**6.9**
PUBLIC FINANCE												
Public finance deficit (ESA 2010)	CZK bn, current p.	-79.1	-26.6	-84.6	-216.2	-174.5	-115.0	-161.5	-53.2	**-50.0**	**-86.2**	**-65.0**
Public finance deficit / GDP**	%, nominal terms	-2.3	-0.7	-2.1	-5.5	-4.4	-2.9	-4.0	-1.3	**-1.2**	**-1.9**	**-1.4**
Public debt (ESA 2010)	CZK bn, current p.	978.9	1,065.5	1,150.7	1,335.7	1,508.5	1,647.8	1,841.9	1,869.2	**1,868.9**	**1,942.0**	**2,005.7**
Public debt / GDP**	%, nominal terms	27.9	27.8	28.7	34.1	38.2	41.0	45.5	45.7	**43.9**	**43.9**	**43.3**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current p.	24.4	10.4	-4.4	65.0	40.4	75.5	123.8	163.6	**240.0**	**305.0**	**350.0**
Trade balance / GDP	%, nominal terms	0.7	0.3	-0.1	1.7	1.0	1.9	3.1	4.0	**5.6**	**6.9**	**7.6**
Balance of services	CZK bn, current p.	76.8	88.1	89.3	81.9	78.5	81.3	77.6	68.6	**55.0**	**55.0**	**55.0**
Current account	CZK bn, current p.	-74.3	-164.5	-75.3	-89.2	-141.8	-84.8	-63.3	-56.8	**10.0**	**60.0**	**75.0**
Current account / GDP	%, nominal terms	-2.1	-4.3	-1.9	-2.3	-3.6	-2.1	-1.6	-1.4	**0.2**	**1.4**	**1.6**
Foreign direct investment												
Direct investment	CZK bn, current p.	-90.3	-179.1	-36.3	-37.7	-95.0	-46.8	-121.3	-57.4	**-135.0**	**-30.0**	**-75.0**
Exchange rates												
CZK/USD	average	22.6	20.3	17.1	19.1	19.1	17.7	19.6	19.6	20.8	**-**	**-**
CZK/EUR	average	28.3	27.8	25.0	26.5	25.3	24.6	25.1	26.0	27.5	**-**	**-**
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-5.1	-2.2	-12.6	5.3	-4.6	-2.1	1.5	3.5	6.0	**-**	**-**
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-1.3	-3.7	-8.6	4.6	-4.1	-3.1	2.6	2.3	4.8	**-**	**-**
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	-1.2	1.3	-4.6	0.2	-1.0	1.7	2.9	1.2	**3.6**	**0.0**	**1.5**
Prices of imports of goods	%, y-o-y, average	0.2	-1.0	-3.3	-3.5	2.0	4.3	4.2	-0.2	**1.9**	**-3.8**	**2.0**
MONEY AND INTEREST RATES												
M2	%, y-o-y, average	9.5	11.6	9.5	5.7	4.3	3.6	5.6	4.4	4.2	**4.4**	**6.2**
2W repo rate	%, end-of-period, CNB forec. = avg.	2.50	3.50	2.25	1.00	0.75	0.75	0.05	0.05	0.05	**0.05**	**0.05**
3M PRIBOR	%, average	2.3	3.1	4.0	2.2	1.3	1.2	1.0	0.5	0.4	**0.3**	**0.3**

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

2012				2013				2014				2015				2016			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
1,006.6	1,002.3	997.4	992.7	984.8	989.2	992.8	1,003.9	1,010.4	1,012.1	1,016.5	**1,022.0**	**1,029.3**	**1,036.9**	**1,045.6**	**1,053.1**	**1,059.7**	**1,068.4**	**1,077.4**	**1,085.8**
0.2	-0.6	-1.1	-1.4	-2.2	-1.3	-0.5	1.1	2.6	2.3	2.4	**1.8**	**1.9**	**2.5**	**2.9**	**3.0**	**2.9**	**3.0**	**3.0**	**3.1**
-1.2	-1.6	-1.9	-2.4	-0.6	-0.5	1.0	1.6	0.9	1.7	1.5	**1.2**	**1.8**	**1.5**	**1.7**	**1.7**	**2.0**	**2.1**	**2.1**	**2.2**
-1.6	-2.0	-0.8	0.4	1.0	0.8	3.5	3.7	1.5	3.3	0.6	**0.5**	**2.1**	**1.8**	**2.6**	**2.3**	**2.1**	**2.0**	**2.1**	**2.1**
-2.6	-1.4	-5.1	-5.4	-6.0	-8.4	-3.3	-2.8	2.0	6.9	6.8	**6.8**	**5.0**	**3.6**	**3.1**	**8.0**	**4.0**	**3.8**	**3.6**	**-0.1**
7.0	4.2	3.4	2.5	-4.6	-0.2	0.6	5.6	11.3	8.6	6.1	**4.5**	**3.7**	**5.9**	**9.9**	**10.6**	**10.1**	**9.3**	**8.6**	**7.9**
4.6	3.1	1.7	1.1	-4.3	-1.6	1.7	5.5	10.2	10.7	6.9	**5.7**	**5.0**	**5.8**	**9.8**	**11.9**	**10.3**	**9.4**	**8.5**	**6.4**
61.3	58.4	68.7	62.7	56.0	68.1	61.2	66.6	69.6	60.3	59.5	**60.9**	**63.0**	**64.3**	**66.1**	**57.5**	**67.7**	**70.1**	**72.6**	**74.0**
2.6	-0.8	-0.9	-4.1	-5.9	-2.8	3.7	5.0	6.7	5.7	3.9	-	-	-	-	-	-	-	-	-
-10.0	-6.0	-6.2	-9.0	-11.2	-11.7	-3.9	-3.1	8.3	3.9	1.7	-	-	-	-	-	-	-	-	-
0.9	-2.2	-1.1	-1.7	-2.7	0.4	2.9	3.8	6.7	4.7	5.6	-	-	-	-	-	-	-	-	-
2.4	2.8	3.2	3.3	2.8	2.3	1.8	1.4	1.0	0.7	0.5	0.4	-	-	-	-	-	-	-	-
3.7	3.4	3.3	2.9	1.8	1.5	1.2	1.1	0.2	0.2	0.6	0.5	**0.1**	**0.0**	**-0.4**	**0.1**	**1.1**	**1.6**	**2.1**	**2.2**
9.7	9.4	8.2	7.1	3.5	2.6	1.5	1.3	-4.1	-3.5	-2.2	-2.1	**-0.2**	**-1.9**	**-4.0**	**-3.9**	**-1.0**	**1.0**	**2.9**	**2.8**
1.3	1.0	0.9	0.6	0.6	0.6	0.5	0.3	1.0	0.7	1.0	0.8	**-0.2**	**0.1**	**0.1**	**0.7**	**1.5**	**1.8**	**1.9**	**2.1**
3.5	2.6	2.8	2.7	3.0	3.8	3.3	2.4	3.5	1.5	1.5	0.7	**-0.4**	**0.5**	**1.8**	**2.7**	**2.5**	**2.2**	**2.4**	**2.6**
-0.3	-0.2	-0.4	-0.5	-0.4	-0.6	-0.7	-0.4	-0.2	0.4	0.8	0.9	**1.1**	**0.9**	**0.4**	**0.7**	**1.1**	**1.4**	**1.5**	**1.5**
8.0	5.8	6.4	3.8	-1.5	-3.8	-1.4	-1.7	0.3	1.0	0.5	-1.2	**-18.0**	**-18.3**	**-19.6**	**-17.4**	**-0.2**	**3.5**	**5.2**	**6.1**
2.5	2.2	2.0	1.6	0.9	0.8	0.4	0.3	0.1	0.0	0.5	0.3	**-0.2**	**-0.2**	**-0.6**	**0.0**	**1.1**	**1.6**	**2.1**	**2.2**
1.7	1.5	1.2	1.3	1.6	1.4	1.6	2.1	2.3	2.7	2.6	**0.1**	**1.3**	**0.5**	**0.7**	**2.7**	**1.1**	**2.2**	**2.3**	**0.9**
3.6	1.8	1.7	1.6	1.2	0.5	0.7	0.8	-0.7	-0.2	-0.1	-1.9	**-3.7**	**-3.7**	**-3.4**	**-1.5**	**1.4**	**2.0**	**1.8**	**1.5**
-1.2	-2.9	5.6	12.7	14.5	9.3	1.4	-4.3	-4.4	-2.1	-2.3	-6.0	**-8.0**	**-6.1**	**-0.1**	**5.5**	**2.1**	**0.6**	**1.4**	**2.6**
-0.7	-0.6	-0.6	-0.8	-1.0	-1.3	-1.3	-0.8	-0.3	0.5	0.7	0.8	-	-	-	-	-	-	-	-
12.7	-7.2	-2.2	1.0	-4.6	-4.3	0.3	-0.7	-4.2	6.2	-5.7	-29.5	**-54.3**	**-52.0**	**-46.0**	**-23.2**	**21.6**	**17.3**	**13.9**	**12.0**
3.2	2.1	1.4	3.2	-0.5	1.2	1.4	-1.7	3.3	2.3	1.8	**3.4**	**2.1**	**2.5**	**3.1**	**3.2**	**3.4**	**3.5**	**3.6**	**3.7**
-0.5	-1.3	-1.8	0.4	-2.3	-0.3	0.2	-2.8	3.1	2.1	1.2	**3.0**	**2.1**	**2.2**	**3.3**	**3.1**	**2.3**	**2.0**	**1.6**	**1.7**
-0.6	-0.6	0.3	0.6	2.0	2.4	0.9	1.3	0.4	-0.2	1.0	**0.7**	**0.4**	**0.7**	**0.4**	**0.6**	**0.7**	**0.7**	**0.6**	**0.7**
2.4	2.6	2.5	4.0	2.3	1.9	0.7	-3.1	0.8	0.6	-0.2	**2.3**	**0.8**	**0.8**	**1.0**	**0.9**	**1.0**	**1.0**	**1.1**	**1.3**
1.6	3.3	5.9	6.0	3.7	4.0	3.0	0.5	-0.4	-1.3	-2.2	-	-	-	-	-	-	-	-	-
0.5	-1.3	-2.0	-2.0	-3.3	-2.1	0.2	0.7	2.1	2.4	2.2	**1.1**	**1.4**	**1.9**	**2.6**	**2.8**	**2.7**	**2.7**	**2.7**	**2.8**
7.2	6.8	7.0	7.2	7.5	6.8	7.0	6.7	6.8	6.1	6.0	**5.8**	**6.2**	**5.5**	**5.7**	**5.6**	**5.9**	**5.3**	**5.4**	**5.3**
7.1	6.5	6.6	7.0	8.0	7.5	7.5	7.8	8.5	7.6	7.4	**7.2**	**7.8**	**7.0**	**6.8**	**6.9**	**7.6**	**6.8**	**6.6**	**6.7**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43.3	36.2	25.7	18.7	47.0	58.9	30.6	27.1	76.2	68.5	51.6	**43.7**	**86.0**	**87.0**	**70.0**	**62.0**	**102.0**	**99.0**	**78.0**	**71.0**
4.5	3.5	2.5	1.8	5.0	5.8	2.9	2.5	7.7	6.4	4.7	**3.9**	**8.4**	**7.9**	**6.2**	**5.3**	**9.6**	**8.5**	**6.6**	**5.8**
23.5	21.0	17.9	15.3	21.3	17.4	14.6	15.2	21.1	14.7	9.3	**9.8**	**20.0**	**15.0**	**10.0**	**10.0**	**20.0**	**15.0**	**10.0**	**10.0**
25.4	-5.2	-49.3	-34.2	11.8	-11.2	-39.7	-17.7	80.0	-26.8	-35.1	**-8.1**	**61.0**	**7.0**	**-25.0**	**17.0**	**67.0**	**14.0**	**-27.0**	**21.0**
2.7	-0.5	-4.8	-3.2	1.3	-1.1	-3.8	-1.6	8.1	-2.5	-3.2	**-0.7**	**6.0**	**0.6**	**-2.2**	**1.5**	**6.3**	**1.2**	**-2.3**	**1.7**
-16.3	-44.6	-26.3	-34.0	-28.3	-3.6	4.3	-29.8	-35.8	-59.0	-26.2	-	-	-	-	-	-	-	-	-
19.1	19.7	20.0	19.4	19.4	19.8	19.5	19.6	20.0	20.0	20.9	22.1	-	-	-	-	-	-	-	-
25.1	25.3	25.1	25.2	25.6	25.8	25.9	26.7	27.4	27.4	27.6	27.6	-	-	-	-	-	-	-	-
2.0	2.9	2.0	-0.7	2.1	2.5	3.4	5.9	7.9	6.7	6.6	3.2	-	-	-	-	-	-	-	-
2.5	4.4	3.3	0.2	1.8	1.7	1.9	4.0	6.1	4.7	5.1	3.5	-	-	-	-	-	-	-	-
4.0	3.9	3.3	0.3	0.9	0.6	0.4	2.9	4.1	3.4	4.7	**2.2**	**0.1**	**-0.1**	**-0.3**	**0.3**	**0.9**	**2.0**	**2.1**	**1.0**
5.7	5.7	4.7	1.0	-0.3	-0.7	-0.9	1.0	2.4	1.3	2.9	**1.1**	**-3.4**	**-3.8**	**-4.4**	**-3.7**	**0.1**	**2.4**	**3.2**	**2.5**
6.0	5.8	5.7	5.0	4.2	4.1	4.9	4.6	4.6	4.5	3.4	4.4	**4.1**	**4.3**	**4.5**	**4.5**	**5.6**	**6.1**	**6.6**	**6.7**
0.75	0.75	0.50	0.12	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**
1.2	1.2	1.0	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**

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