INFLATION REPORT / II

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 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 14 May 2015 and contains the information available as of 24 April 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.

I. SUMMARY

The growth rate of the Czech economy slowed temporarily at the end of 2014. Both headline and monetary policy-relevant inflation were around zero at the start of this year, and were thus well below the lower boundary of the tolerance band around the CNB's target. This was due to a drop in global oil prices, deflation in the euro area and a decline in food prices. The pass-through of the weakened exchange rate of the koruna to inflation via import prices is fading, but the easy monetary conditions are still contributing to growth in the domestic economy, which is fostering higher prices. A recovery in external demand, low oil prices and rising government investment are also having a favourable effect on economic growth. GDP will thus grow by 2.6% this year. In 2016, the growth will pick up further to 3.2%. The growing economic activity and accelerating wage growth will foster higher inflation, whereas import prices will slow inflation significantly this year. Both headline and monetary policy-relevant inflation will thus be close to zero 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 assumes 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 Czech economy expanded by 1.4% year on year **in 2014 Q4**, with most 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 higher annual GDP growth rate in 2015 Q1 owing to faster growth in household consumption and a smaller decline in inventories.

Both **headline and monetary policy-relevant inflation** were close to zero in 2015 Q1, thus remaining well below the lower boundary of the tolerance band around the CNB's target (see Chart I.1). Adjusted inflation excluding fuels rose slightly, reflecting the fading direct effect of the weakened koruna, the growth in the domestic economy and wage growth. Administered prices returned to slight annual growth, while fuel and food prices fell.

According to the assumptions of the forecast, growth in economic activity in the **effective euro area** should accelerate to 1.7% in 2015 and 2.1% in 2016. Inflation in the euro area remains very subdued owing mainly to falling energy commodity prices in an environment of a previous long-running decline in economic activity and only slowly recovering demand. Industrial producer prices are falling sharply year on year and consumer price inflation is also negative in most euro area countries. Prices are expected to change trend by the end of this year thanks to the ECB's easy monetary policy, a weakened exchange rate of the euro and an increase in the growth rate of the euro area economy. The ECB commenced purchases of government bonds. This is reflected in the outlook for 3M EURIBOR rates, which is close to zero. The price of Brent crude oil partly reversed its previous decline and the outlook is for a further slow increase.

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 start of 2015
(year on year in %)

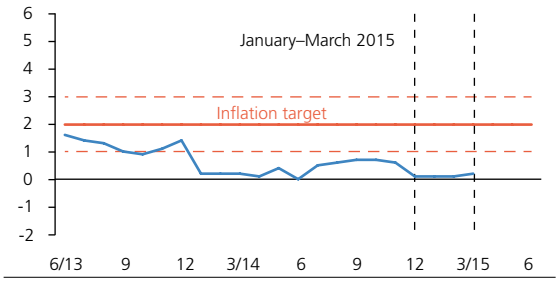
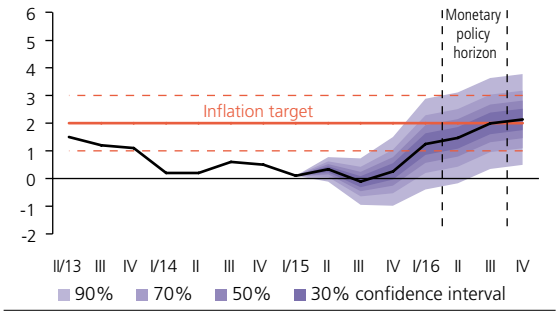


CHART I.2

HEADLINE INFLATION FORECAST

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



The **forecast** expects both **headline and monetary policy-relevant inflation** to be close to zero 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 increase gradually. A decline in euro area producer prices coupled with the recent fall in global prices of energy commodities will substantially reduce the costs stemming from import prices again this year. The anti-inflationary effect of import prices will subside in 2016 in connection with the expected return of energy commodity prices and euro area industrial producer prices to annual growth. Costs in the domestic economy will continue to increase due to accelerating wage growth and continued growth in economic activity. This will result in a renewed increase in adjusted inflation excluding fuels as from 2015 H2. Administered prices will continue to decline in the second half of this year and return to modest growth in 2016. The same applies to fuel prices. Annual food price growth will be renewed in the near future owing to agricultural producer price developments.

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 **koruna-euro exchange rate** in 2015 Q2 takes into account its slightly stronger levels in April. The forecast expects that it will be stable in the following quarters at a level that is slightly weaker than the announced asymmetric exchange rate commitment (i.e. CZK 27 to the euro). The forecast assumes 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 higher government investment will lead to GDP growth of 2.6% this year. Economic growth will accelerate further to 3.2% 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 continuing growth in the number of employees converted into full-time equivalents. The unemployment rate will continue to decrease gradually. Wage growth in the business sector will increase and wages in the non-business sector will rise rapidly, especially this year.

At its monetary policy meeting on 7 May 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**

CHART I.3

MONETARY POLICY-RELEVANT INFLATION FORECAST

Monetary policy-relevant inflation will fluctuate around zero this year and then start to rise, converging to the target at the end of the monetary policy horizon
(year on year in %)

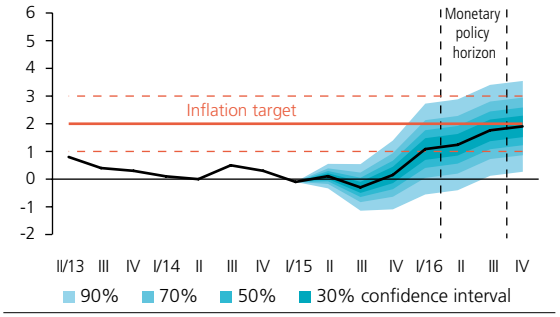


CHART I.4

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 %)

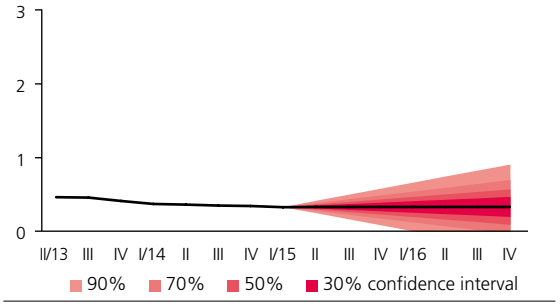
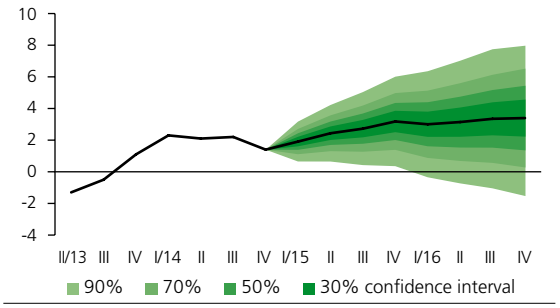


CHART I.5

GDP GROWTH FORECAST

GDP growth will gradually accelerate
(annual percentage changes; seasonally adjusted)



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. In line with this, the Czech National Bank still stands ready to intervene automatically, i.e. without the need for an additional decision of the Bank Board, and without any time or volume limits. The asymmetric nature of this exchange rate commitment is unchanged. The Bank Board assessed the risks to the new forecast at the monetary policy horizon as being anti-inflationary; domestic wages and the koruna-euro exchange rate have been moving in this direction. In this situation, the Bank Board stated again 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 remains ready to move the exchange rate commitment if there were to be a long-term increase in deflation pressures capable, among other things, of causing a slump in domestic demand or 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 decline in producer prices, reflecting the recent fall in prices of oil and other energy commodities, should fade out at the end of this year. Producer prices will then rise slightly. Consumer price inflation will also rise only gradually from very low levels owing to recovering demand. The ECB responded to the subdued inflation by further easing monetary policy by commencing purchases of government bonds and other securities. This is reflected in the outlook for 3M EURIBOR rates, which is at zero until the end of 2016. The euro-dollar exchange rate is expected to depreciate until the end of this year and then stabilise just above parity. The outlook for the Brent crude oil price foresees a very slow increase from a low initial level.

The outlook for the **effective indicator of euro area GDP** foresees a pick-up in annual economic growth to 1.7% this year. This is 0.7 percentage point higher than in 2014 (see Chart II.1.1).[1] Next year, economic growth in the effective euro area should rise to 2.1%. The higher growth rate of economic activity abroad is due chiefly to the positive effects of low oil prices and also to the weakened exchange rate of the euro. These two factors enhance the price competitiveness of export-oriented euro area economies. Compared to the previous forecast, this represents a slight shift towards faster external demand growth over the entire forecast horizon. The unresolved debt problems of some euro area countries, Greece in particular, remain a risk to growth.

The outlook for the **effective indicator of industrial producer prices in the euro area** reflects the gradual fading of the effect of the recent marked decline in prices of oil and other energy commodities. Following a 1.9% decrease in 2014, producer prices are expected to drop by 1.1% on average this year. Their growth will turn positive again at the end of this year. In 2016, they are expected to increase by 1.6% on average on the back of an accelerating economic recovery and gradually rising oil prices (see Chart II.1.2). Compared to the previous forecast, the outlook is substantially lower for this year and almost unchanged for 2016.

Low energy and food prices coupled with only slowly recovering demand are reflected in the outlook for the **effective indicator of consumer prices in the euro area**. Most euro area countries were in deflation at the start of this year. For the year as a whole, however, consumer

1 The outlooks for euro area GDP, PPI and CPI and the dollar-euro exchange rate are based on the April Consensus Forecasts (CF). The outlooks for the 3M EURIBOR and Brent crude oil are derived from prices of market contracts as of 13 April 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 and new seasonal adjustment.

CHART II.1.1

EFFECTIVE GDP IN THE EURO AREA

External demand growth is expected to pick up to 2%
(annual percentage changes; differences in percentage points – right-hand scale; seasonally adjusted)

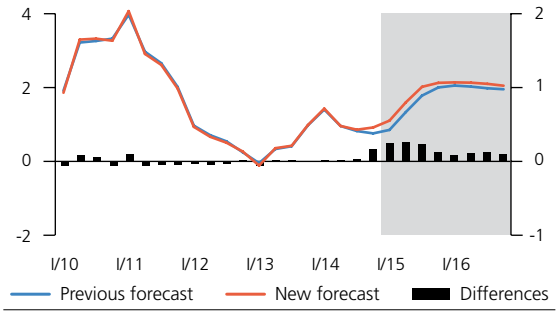


CHART II.1.2

EFFECTIVE PPI IN THE EURO AREA

The decline in industrial producer prices is expected to fade out at the end of this year and their growth should then accelerate
(year on year in %; differences in percentage points – right-hand scale; seasonally adjusted)

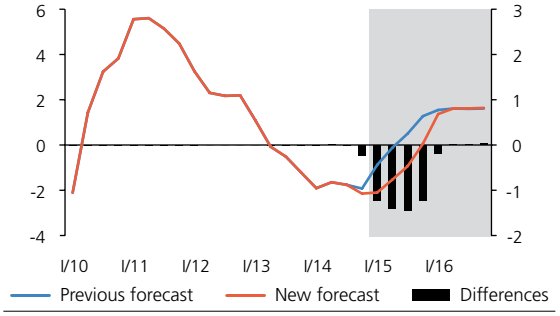


CHART II.1.3

EFFECTIVE CPI IN THE EURO AREA

Inflation is expected to be below 2% over the entire forecast horizon, but should gradually converge to this level
(year on year in %; differences in percentage points – right-hand scale; seasonally adjusted)

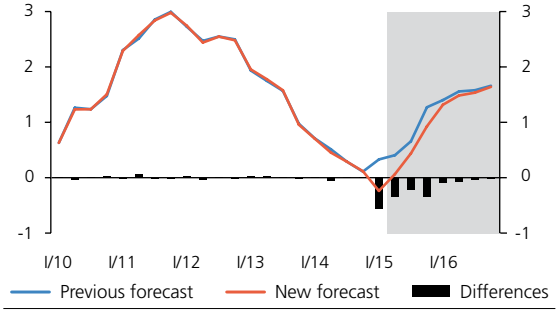


CHART II.1.4

3M EURIBOR

The outlook for 3M EURIBOR market interest rates is close to zero for this year and the next
(in %; differences in percentage points – right-hand scale)

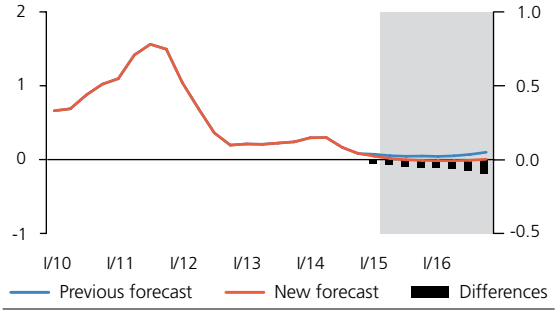


CHART II.1.5

EURO-DOLLAR EXCHANGE RATE

The euro is expected to weaken against the dollar until the end of 2015
(USD/EUR; differences in % – right-hand scale)

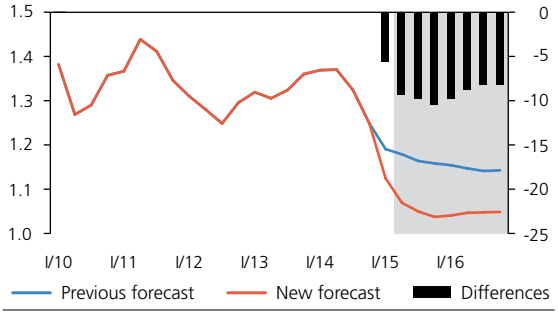
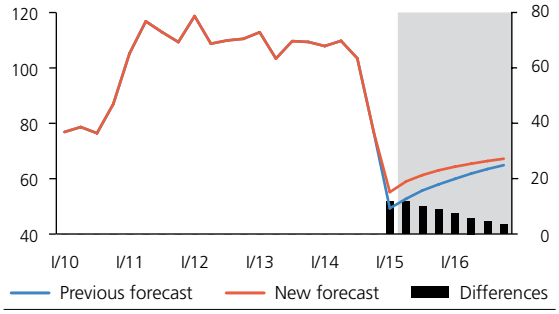


CHART II.1.6

PRICE OF BRENT CRUDE OIL

The market outlook for the crude oil price foresees a very slow rise following the sharp fall in late 2014 and early 2015
(USD/barrel; differences in % – right-hand scale)



prices are expected to rise by 0.3% on average (see Chart II.1.3), i.e. roughly the same as in 2014. Next year, inflation is expected to rise to 1.5% on average owing to the unwinding of the effect of the slump in oil prices, the ECB's easy monetary policy, a weak euro exchange rate and a pick-up in economic activity. Compared to the previous forecast, this means a modest downward shift in the outlook.

The outlook for **3M EURIBOR interest rates** suggests zero levels over the entire forecast horizon (see Chart II.1.4). It thus reflects the continuing easy monetary policy of the ECB, which on 9 March commenced quantitative easing in the form of purchases of government bonds and other securities. The market outlook for foreign interest rates is in line with the expectations of the analysts surveyed in the April CF, who also expect the 3M EURIBOR to be flat at the current zero level 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 March next year.

The **euro-dollar exchange rate** should continue to weaken until the end of this year (see Chart II.1.5). CF analysts expect the euro to depreciate faster than in the previous forecast, mainly because of ECB measures to further ease monetary policy in the euro area using unconventional instruments. By contrast, the Fed has terminated quantitative easing and is considering the timing of an interest rate increase, which, however, has been moved to a later date than originally expected, mainly because of low inflationary pressures and slackening growth of the US economy. The average rate is expected to be USD 1.07 to the euro this year. In 2016, the euro should stabilise close to USD 1.05.

The market outlook for the **Brent crude oil price** based on market futures contracts foresees only a slow rise over the forecast horizon (see Chart II.1.6). From the whole-year perspective, the price of oil is expected to be USD 60 a barrel this year (i.e. 40% lower than in 2014) and USD 66 a barrel in 2016. This represents a modest upward revision over the entire outlook horizon compared to the previous forecast. This is a result of the recent increase in oil prices combined with news of cuts in investment in new wells and slower growth in oil stocks in the USA (see section III.7 for details). The analysts surveyed in the April CF expect the Brent crude oil price to be approximately USD 67 a barrel at the 12-month horizon, i.e. only slightly higher than the market outlooks.

II.2 THE FORECAST

Both headline and monetary policy-relevant inflation were around zero in 2015 Q1 and will stay close to zero for the rest of this year. Inflation should return to the 2% inflation target during 2016. Import prices will remain anti-inflationary in the near future owing to falling producer prices in the euro area and the recent decline in energy commodity prices. This effect will gradually dissipate, however, and import prices will be slightly inflationary next year. 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, GDP growth will start rising again this year thanks to domestic and external demand developments. This will be fostered by still easy monetary conditions, the positive supply-side effect of low oil prices and this year also by an increase in government investment. 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 assumes 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.

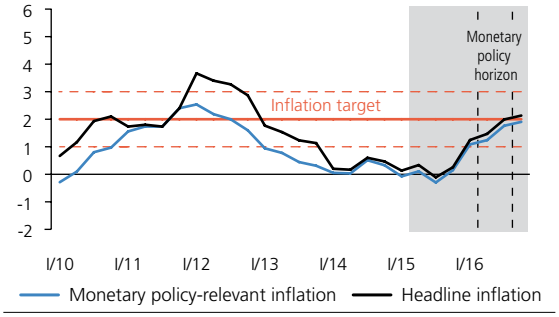
Annual **headline inflation** averaged 0.1% in 2015 Q1. In 2015 Q2, it will rise temporarily to 0.3% thanks to modestly rising food prices. In 2015 H2, it will again be close to zero because of an expected marked decline in administered prices, which will gradually reflect the fall in energy commodity prices on global markets. This represents a favourable supply-side shock from the point of view of the Czech economy and will reduce headline inflation by about 1 percentage point this year (and, conversely, accelerate economic growth to the same extent).[2] 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 upward effect of the domestic economy on costs, will increase headline 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 in 2015 Q1. It averaged -0.1%, 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 it will be slightly lower until the end of the forecast horizon owing to positive first-round effects of changes to indirect taxes (see Chart II.2.1). At the end of 2016, it will be slightly below the 2% inflation target.

CHART II.2.1

HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

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



2 For details see *Scenario assessing the impacts of continuing low oil prices* in Inflation Report I/2015.

CHART II.2.2

ADMINISTERED PRICES AND FUEL PRICES

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

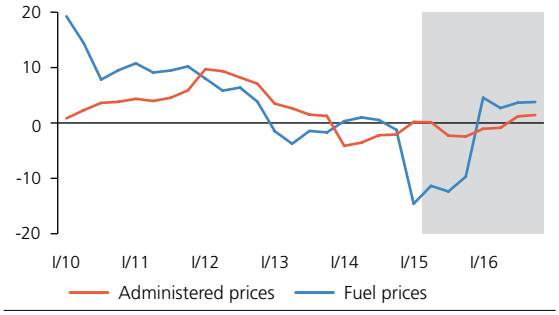


TABLE II.2.1

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)

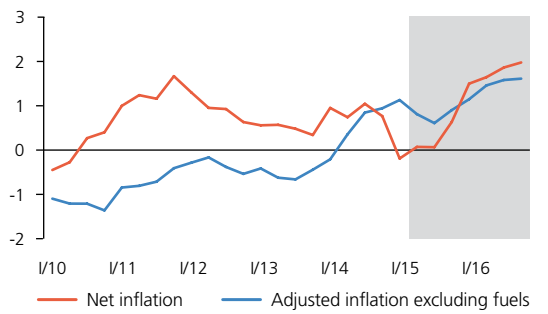
	2014		2015		2016	
	actual		forecast		forecast	
Administered prices – total[a)]	-3.0	-0.51	-1.1	-0.19	0.2	0.03
of which (main changes):						
electricity	-10.3	-0.49	-0.4	-0.02	-0.5	-0.02
natural gas	-2.4	-0.07	-2.2	-0.06	-3.4	-0.10
heat	0.5	0.01	1.2	0.02	0.5	0.01
water	3.4	0.03	3.4	0.03	3.0	0.03
health care	-5.6	-0.07	-17.6	-0.20	2.6	0.03
First-round impacts of indirect tax changes in non-administered prices		0.13		0.21		0.21

a) Including effects of indirect tax changes

CHART II.2.3

NET INFLATION AND ADJUSTED INFLATION EXCLUDING FUELS

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



The contribution of changes to **indirect taxes** to annual headline inflation averaged 0.2 percentage point in 2015 Q1. This reflected two harmonisation increases in excise duties on cigarettes in January and December 2014. This was partially offset by the introduction of a second reduced VAT rate of 10% on medicines, books and irreplaceable infant food with effect from 1 January 2015. The forecast assumes a further increase in excise duty on tobacco products as of 1 January 2016 with an estimated impact on headline inflation of 0.2 percentage point.

Administered prices rose slightly year on year in 2015 Q1 (see Chart II.2.2). This was due to a rise in retail prices of natural gas, as gas suppliers fully reflected the increase in regulated fees implemented by the Energy Regulatory Office. On the other hand, the ongoing fall in the commodity component of gas market prices has not yet passed through to end prices for households. Prices of heat and water supply and sewerage collection charges also increased at the start of this year. By contrast, a significant decline was recorded for administered prices in health care due to the abolition of the remaining regulatory fees except for the emergency fee. Retail electricity prices fell slightly as well. The forecast still expects administered prices to rise insignificantly in 2015 Q2 and decrease in the second half of this year, primarily owing to an expected fall in retail gas prices. Market prices of natural gas on commodity exchanges started to go down following the fall in oil prices. In an environment of competition between suppliers of gas to households, this should result in a reduction in end prices. Announced cuts in Prague public transport fares will also contribute slightly to the decline in administered prices this year. Administered prices will rise slightly in 2016 (by 0.2% on average), despite a continuing decline in retail energy prices, as the other components will record modest increases (see Table II.2.1). The following text describes the forecast excluding the first-round effects of changes to indirect taxes.

For the first time in almost five years, annual **net inflation** turned negative in 2015 Q1 (-0.2%; see Chart II.2.3). A marked decline was recorded in the fuel and food price segment, whereas adjusted inflation excluding fuels continued to edge up as a result of a slightly inflationary effect of the domestic real economy and the labour market. The forecast expects net inflation to turn slightly positive again in the following quarters of 2015 as a result of a recovery in domestic wage growth and a slowing decline in prices abroad. Net inflation will rise in 2016 as the effect of low energy and food prices subsides and wage growth rises, reaching 2% at the end of 2016.

Annual **adjusted inflation excluding fuels** increased slightly in 2015 Q1, averaging 1.1%. An upswing in growth in prices of tradable commodities reflected the fading direct effect of the weakened exchange rate of the koruna against the euro. Very subdued inflation abroad acted in the opposite direction. Growth in prices of non-tradable commodities increased as well. Adjusted inflation excluding fuels continues to reflect domestic economic growth and

a continuing recovery on the labour market, although still relatively subdued wage growth in the business sector is acting against a more marked increase. The forecast assumes a modest slowdown in this indicator of core inflation in the period ahead as the direct effect of the weakened exchange rate abates. Continued domestic economic growth, strengthening inflationary pressures from the labour market and the fading of deflationary pressures from the euro area will then foster renewed growth in adjusted inflation excluding fuels, which will reach 1.6% in 2016 H2 (see Chart II.2.3).

Food prices decreased by 0.9% on average in 2015 Q1, reflecting the long-running fall in agricultural producer prices due to the above-average harvest in 2014 and the effect of a higher supply of some products on the EU market owing to the embargo on exports to Russia. The forecast expects annual food price inflation to turn positive again in 2015 Q2. The increase will be very subdued, however, because of a continuing decline in agricultural producer prices reflecting an improved outlook for this year's harvest and the lifting of EU milk quotas. Food price inflation will then strengthen in 2016, reaching 2.5% at the year-end (see Chart II.2.4).

The decline in **fuel prices** deepened on average in 2015 Q1 (to -14.6%) owing to the fall in global oil prices. However, the year-on-year decline slowed noticeably in March thanks to a partial correction of oil prices accompanied by strong depreciation of the euro and also of the koruna against the dollar. The forecast foresees a further moderation of the annual decline in fuel prices in the remainder of this year, to -10% in Q4 (see Chart II.2.5). Fuel prices will return to annual growth in 2016 as the annual decline in oil prices subsides and fuel prices return to a slightly rising path.

Domestic money market **interest rates** remained at historical lows at all maturities in 2015 Q1. 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 on average in 2015 Q1. The short-term exchange rate forecast for 2015 Q2 takes into account its slightly stronger levels in April. The forecast predicts that it will be stable in the following quarters at a level that is slightly weaker than the announced asymmetric exchange rate commitment (i.e. CZK 27 to the euro). The forecast assumes 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

CHART II.2.4

FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

Food prices will start rising again in line with agricultural producer prices
(annual percentage changes)

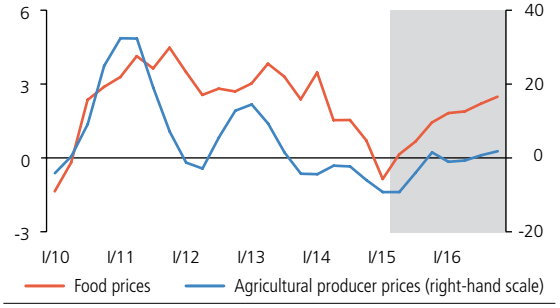


CHART II.2.5

FUEL PRICES AND OIL PRICES

Fuel prices will fall year on year until the end of 2015 due to world oil prices
(annual percentage changes)

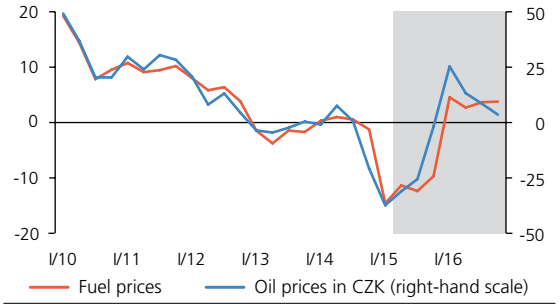


CHART II.2.6

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)

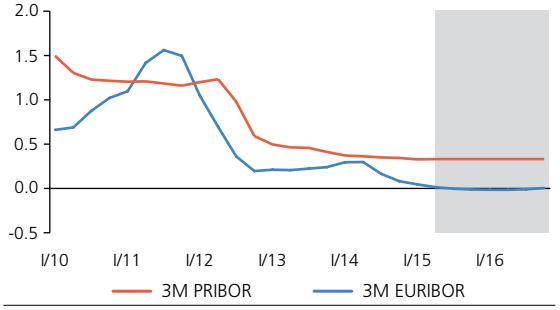


CHART II.2.7

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 until the start of 2016
(quarterly percentage changes; contributions in percentage points; annualised)

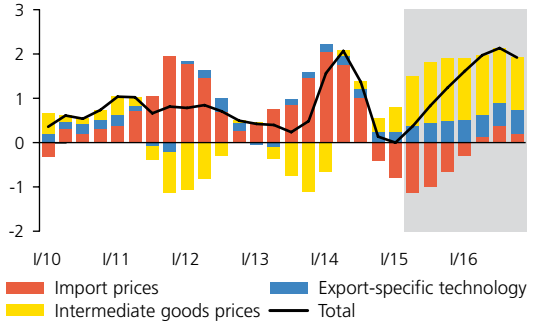


CHART II.2.8

COSTS IN THE INTERMEDIATE GOODS SECTOR

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

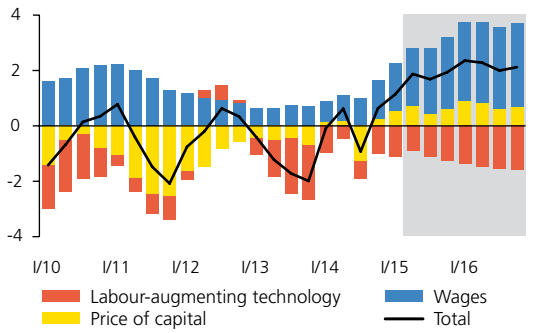
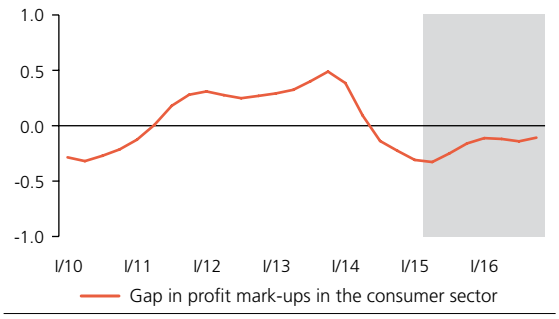


CHART II.2.9

GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

The negative gap in profit mark-ups will close slightly this year
(percentages)



passing through to the price level and other nominal variables. Given the CF outlook for a gradually depreciating euro against the dollar this year (see section II.1), this implies gradual depreciation of the koruna-dollar rate until the end of 2015.

Quarterly growth in **nominal marginal costs in the consumer goods sector** halted in 2015 Q1 (see Chart II.2.7). This was due above all to falling import prices (for the second quarter in a row), associated with deflation in euro area industrial producer prices and the recent decline in energy commodity prices. Intermediate goods prices, reflecting the growing domestic economic activity and gradual nominal wage growth, are continuing to foster higher costs. 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 increase gradually in the rest of this year. Very low foreign producer price inflation coupled with a fall in global prices of energy commodities, however, will result in a continued substantial decrease in costs stemming from import prices. Faster growth in costs from the domestic economy will act in the opposite direction. The anti-inflationary effect of import prices will subside in 2016 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. Costs in the domestic economy will continue to increase via rising intermediate goods prices, reflecting 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.

Nominal marginal costs in the intermediate goods sector rose slightly in 2015 Q1. This was mainly due to forecasted nominal wage growth in the business sector outpacing labour productivity growth. The price of capital also made a positive contribution to 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 strengthening 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 2015 Q1 – despite a halt in growth in nominal costs in this sector – due to a drop in prices (most notably of fuels and food). In 2015, the gap in mark-ups will close slightly as rising costs (especially from the domestic economy) pass through to end prices. The recent fall in energy commodity prices will have a positive effect on the cost side. Next year, a rise in inflation to the 2% target and faster growth in costs, especially wages, will roughly offset each other and the gap in profit mark-ups will remain slightly negative (see Chart II.2.9).

Whole-economy **labour productivity** rose by 1.6% in 2014, despite a marked slowdown in 2014 Q4 due to slower GDP growth amid faster growth in employment. The forecast expects labour productivity to increase gradually this year, due to faster GDP growth amid an unchanged rate of growth of employment. Labour productivity should thus rise at roughly the same pace as in 2014. It will pick up further to 2.6% next year, due among other things to the previous recovery in investment. A further intensification of growth in economic activity will be accompanied by slightly lower growth in total employment.

The average nominal **wage in the business sector** rose by 1.5% year on year (seasonally adjusted and adjusted for the effect of tax optimisation) in 2014 Q4. The forecast expects wage growth to pick up only slightly in 2015 Q1. This prediction takes into account both the wage growth recorded in industry in January and February and growing demand for agency workers and stronger recruitment in the labour market. The last two factors foster subdued average wage growth in the business sector (see Box 2 in section III.4). Average wage growth should gradually increase over the forecast horizon (see Chart II.2.10) on the back of accelerating growth in domestic economic activity, a continuing decline in the unemployment rate and a return of inflation to the target in 2016. The forecast expects wage growth in the business sector to reach 2.3% for 2015 as a whole and rise to 4.2% in 2016.

Average nominal **wage growth in the non-business sector** was 3.8% in 2014 Q4. This growth was a result of a rise in public sector wages in November. Owing to this and a further increase in wages in January 2015, the forecast assumes that wages will grow more strongly in the non-business sector than in the business sector in the first three quarters of 2015 (see Chart II.2.10). Wage growth in the non-business sector is expected to stand at 3.4% in 2015 as a whole. In 2016, it will slow to 2.5%.

Real GDP recorded a year-on-year increase of 1.4% and a quarter-on-quarter rise of 0.4% **in 2014 Q4** (see Chart II.2.11). The year-on-year growth was fostered by all components of domestic demand except for change in inventories, with fixed investment and, to a similar extent, household consumption being the main drivers. Conversely, the contribution of net exports was slightly negative. GDP showed 2% growth **in 2014** as a whole (see Chart II.2.12). According to the forecast, economic activity rose by 1.9% year on year and 0.8% quarter on quarter **in 2015 Q1**. The structure of the individual components remained similar as at the end of 2014. The biggest positive contributions probably came from household consumption and fixed investment. The negative contribution of net exports increased, while that of inventories shrank significantly.

CHART II.2.10

AVERAGE NOMINAL WAGE

Wage growth in the business sector will pick up, but will lag behind wage growth in the non-business sector this year
(annual percentage changes; business sector – seasonally adjusted; non-business sector – seasonally unadjusted)

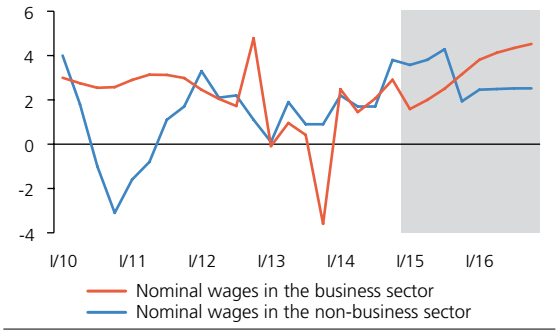


CHART II.2.11

GDP GROWTH FORECAST

After temporarily slowing in late 2014 and early 2015, annual GDP growth will gradually pick up above 3% at the end of 2016
(percentage changes; seasonally adjusted)

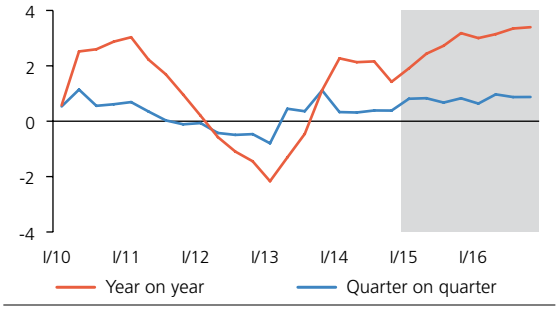
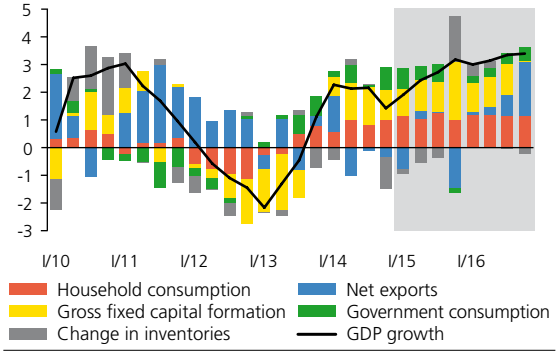


CHART II.2.12

ANNUAL GDP GROWTH STRUCTURE

GDP growth will remain balanced, with almost all components of demand making positive contributions
(annual percentage changes; contributions in percentage points; 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[3] and expansionary fiscal policy. Underlying this will be an expected further pick-up in government investment financed from domestic and especially European sources. Household consumption and gross fixed capital formation will make positive contributions. The contribution of net exports will be negative on average despite growing external demand, due to continued growth in imports of consumer goods and machinery.[4]

GDP growth will reach 3.2% **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. Household consumption will continue to contribute significantly to GDP growth, as will the other components of domestic demand and net exports. Fiscal policy will have a slightly restrictive effect due to the end of possible drawdown of EU funds from the previous programme period and the only gradual start of the new programme period.

The continuing growth in economic activity is leading to a marked improvement in the labour market situation. Growth in the **number of employees converted into full-time equivalents** rose further to 1% in 2014 Q4. This was due to faster growth in the number of employees amid slightly shorter average hours worked per employee. The forecast expects a similar growth rate of the converted number of employees in 2015. The converted number of employees will continue to be increased through a rise in the number of employees, while average hours worked are expected to be broadly flat over the entire forecast horizon (see Chart II.2.13). According to the forecast, growth in the converted number of employees will slow slightly in 2016. Owing to a further gradual pick-up in growth in economic activity, the forecast predicts continued fast growth in **total employment** this year (1%). However, the growth should gradually slow in 2016, averaging 0.6% (see Chart II.2.14).

The rapid decline in the seasonally adjusted **general unemployment rate** observed last year continued into 2015 Q1. The forecast expects that the seasonally adjusted general unemployment rate averaged 5.6%. It will continue to decline this year and the next, due mainly to expected growth in employment associated with the pick-up in economic activity. The forecast expects the labour force to rise slightly at first and be broadly flat later. The general unemployment rate is expected to decline to 4.8% 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 6.9% over the entire forecast horizon. Owing to cyclicality, the supply of

CHART II.2.13

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

The converted number of employees will rise at a rate of around 1% due to economic growth

(annual percentage changes; contributions in percentage points)

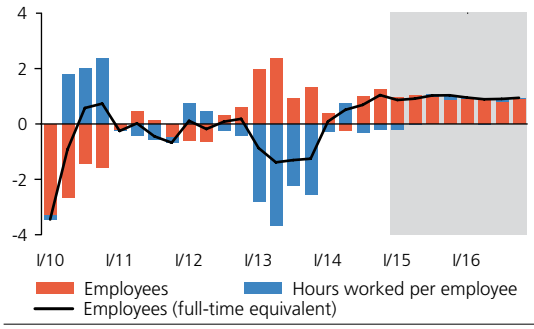
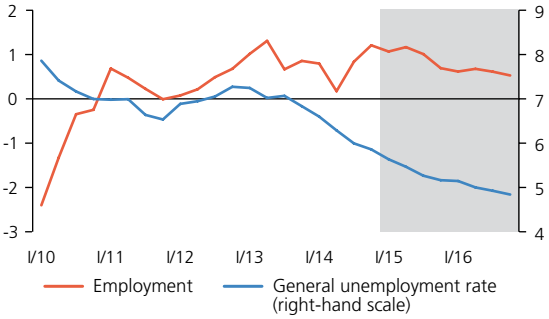


CHART II.2.14

LABOUR MARKET FORECAST

Total employment will continue to rise slowly, albeit at a lower pace than at present, while the unemployment rate will keep going down

(annual percentage changes in employment; general unemployment rate in percentages; seasonally adjusted)



3 For details on the favourable impacts of low oil prices on GDP see *Scenario assessing the impacts of continuing low oil prices* in Inflation Report I/2015.

4 In 2015 Q4, the accounting effect of an extension of the lease of JAS-39 Gripen supersonic fighter aircraft will result in a strongly negative contribution of net exports. From the perspective of GDP, however, this will be fully offset by an increase in fixed investment.

vacancies should edge up further. The seasonally adjusted share of unemployed persons should drop to 6% at the end of 2016, assuming a slight decline in the population aged 15–64.

Year-on-year growth in real **household consumption** accelerated slightly to 2% in 2014 Q4 (see Chart II.2.15). This was again attributable to all components of consumption broken down by kind. In 2014 as a whole, household consumption increased by 1.7%. The forecast predicts that the year-on-year growth rate accelerated slightly further to 2.3% at the start of this year, consistent with the faster growth in retail sales and still strong consumer confidence (see section III.3). Growth in household consumption will remain at similar levels over the entire forecast horizon due to continued growth in real disposable income coupled with only negligible changes in the saving rate. Overall, household consumption will grow by 2.3% and 2.4% in 2015 and 2016 respectively.

Growth in **gross nominal disposable income** edged up at the end of last year, due mainly to faster growth in wages and salaries (see Chart II.2.16). Conversely, current taxes and social benefits fostered lower annual growth in disposable income. Its annual growth will intensify further over the forecast horizon (from 2% at the end of 2014 to 4.7% in 2016 Q4). This will be due mainly to wages and salaries owing to a continued recovery in the labour market, and also to business income. Social benefits will grow at a broadly stable rate.

The seasonally adjusted **household saving rate** rose slightly at the end of 2014. This trend should continue into the start of this year, with household income growth slightly outpacing nominal household consumption. The seasonally adjusted saving rate will average 10.5% in 2015 as a whole. In 2016, slightly faster annual growth in household nominal consumption than in gross nominal disposable income will result in a slight decline in the saving rate (see Chart II.2.17).

Annual growth in real **government consumption** rose noticeably in 2014 Q4, reaching 4.2%.[5] The forecast expects a somewhat lower, albeit still positive, annual growth rate in the first three quarters of this year. The annual growth rate of government consumption will turn negative temporarily towards the year-end due to base effects. In 2015 as a whole, government consumption will rise by 2.2% (see Chart II.2.15). The growth rate of government consumption will slow slightly below 2% in 2016.

Annual growth in **gross capital formation** turned slightly negative in 2014 Q4 due to a pronounced decline in stocks of goods in the wholesale and retail trade sector. Nevertheless, fixed investment maintained the positive growth rate observed in the previous period.

5 However, the evolution of government consumption in 2014 according to the national accounts does not fully correspond with the figures from the spring government deficit and debt notifications.

CHART II.2.15

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption and government consumption will rise mostly at a rate of slightly above 2%
(annual percentage changes; seasonally adjusted)

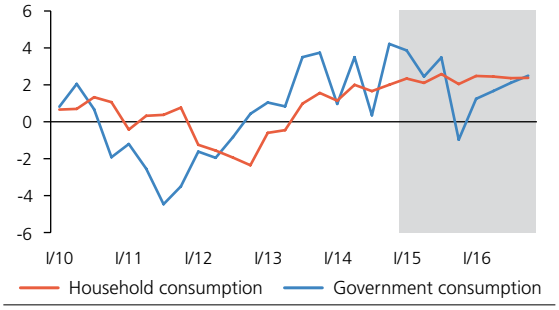


CHART II.2.16

NOMINAL DISPOSABLE INCOME

Disposable income growth will gradually accelerate thanks mainly to rising growth in wages and salaries
(annual percentage changes; contributions in percentage points)

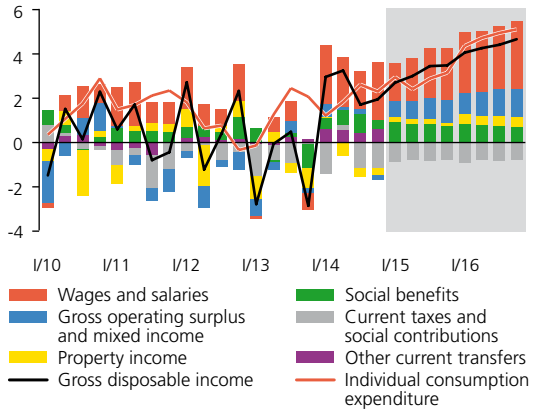


CHART II.2.17

HOUSEHOLD SAVING RATE

The saving rate will fluctuate just above 10% over the entire forecast horizon
(percentages)

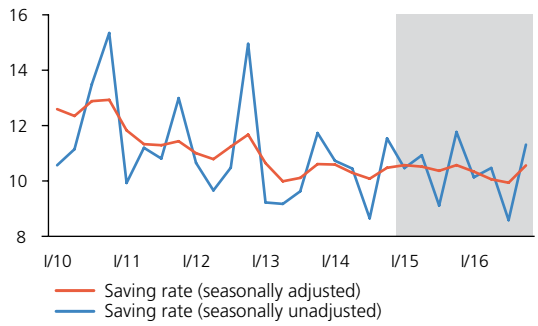


CHART II.2.18

GROSS CAPITAL FORMATION

Gross capital formation will rise, boosted this year by the drawdown of EU funds
(annual percentage changes; seasonally adjusted)

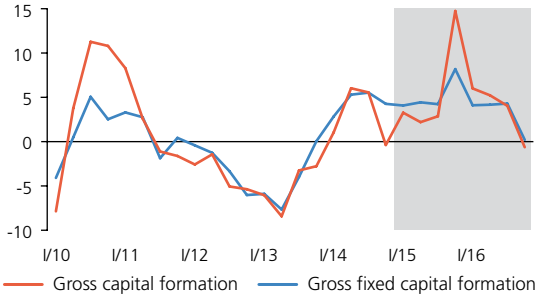


CHART II.2.19

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)

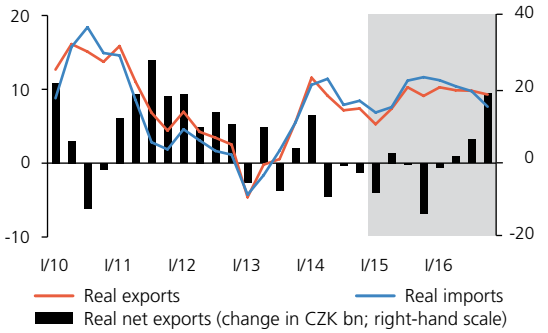


TABLE II.2.2

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)

	2014 actual	2015 forecast	2016 forecast
Real gross disposable income of households	2.1	2.8	2.0
Total employment	0.8	1.0	0.6
Unemployment rate (in per cent)[a)]	6.2	5.4	5.0
Labour productivity	1.6	1.5	2.6
Average nominal wage	2.4	2.5	3.9
Average nominal wage in business sector	2.4	2.3	4.2
Current account balance (ratio to GDP in per cent)	0.6	1.1	1.5
M2	4.2	5.6	6.3

a) ILO methodology, 15–64 years

Gross capital formation should return to growth in 2015 Q1 following an expected recovery in inventories. Growth in fixed investment will continue to stand at around 4%. According to the assumptions of the forecast, gross capital formation will thus increase by 5.7% in 2015 as a whole, driven largely by government investment due to the drawdown of EU funds from the 2007–2013 programme period. It will maintain positive, albeit slightly lower (due to a decline in government investment) growth in 2016 (see Chart II.2.18).

Annual growth in real **exports of goods and services** picked up to 7.4% year on year in 2014 Q4. The forecast expects the growth rate to be slightly lower in the first half of 2015 but to accelerate significantly again in late 2015 and early 2016 due to growth in external demand (see Chart II.2.19). The growth rate of exports of goods and services will average 8% in 2015. In 2016, export growth will increase to almost 10% on average, with external demand rising faster and the exchange rate of the koruna remaining stable.

The real annual growth rate of **imports of goods and services** also increased in 2014 Q4 owing to faster growth in both exports and household consumption. Annual growth in imports of goods and services will also slow due to lower export growth expected in the first half of this year, and will then accelerate again. It will average 9.3% in 2015 and rise to 9.7% in 2016. In addition to exports, the strong growth in imports will be due to rising household consumption and fixed investment over the entire forecast horizon.

The contribution of **net exports** at constant prices to annual GDP growth was negative again in 2014 Q4 (several times in a row). The forecast expects a slightly more negative contribution as a result of a rebound in import-intensive inventories at the start of this year. With annual growth in household consumption and fixed investment continuing to rise, imports will maintain their lead over exports in the period ahead. Net exports will thus make a negative contribution to annual GDP growth in 2015 as a whole (-0.5 percentage point). In 2016, the contribution of net exports will be positive (0.8 percentage point) owing to a more pronounced upswing in external demand and slower growth in domestic investment (due to base effects linked with the extension of the lease of supersonic fighter aircraft at the end of this year).

The balance of payments forecast expects the **current account** surplus to grow to 1.1% of GDP in 2015 (in 2014 the surplus was 0.6% of GDP) and to increase further to around 1.5% of GDP a year later (see Table II.2.3). 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 of around CZK 50 billion).[6] The increase in the current account surplus will also be due, albeit to a much lesser extent, to the elimination of the **secondary income** deficit as a result of higher drawdown of EU funds. A slightly decreasing **services** surplus (due mainly to an expected deterioration in travel) and 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 and secondary income balance.

The further improvement in the current account expected **in 2016** is linked mainly 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), faster expected growth in external demand and, to a small extent, also to an improved services balance (exclusively an improvement in production and repair services). Secondary income should remain balanced given an assumed inflow of EU funds at the 2015 level. Continued growth in the primary income deficit, linked with a further deepening of the investment income deficit (expected growth in dividends and reinvested earnings of non-residents on direct investment), will foster a lower current account surplus.

The forecasted sharp increase in the **capital account** surplus compared to the 2014 level is associated in both years exclusively 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. This change will be linked with a turnaround 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 direct investment abroad this year.[7] The total inflow of direct investment into the Czech Republic will be approximately flat at last year's level. In 2016, the major factors of the expected increase in the net inflow of direct investment will include the unwinding of this year's one-off effects on the asset side and an already approved sizeable new investment in the automotive industry in the Czech Republic. However, the forecast predicts that direct investment in the Czech Republic will still primarily take the form of reinvested earnings.

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)

	2014 actual	2015 forecast	2016 forecast
A. CURRENT ACCOUNT	26.1	50.0	70.0
Goods	238.9	280.0	320.0
Services	55.9	45.0	50.0
Primary income	-259.0	-275.0	-300.0
Secondary income	-9.7	0.0	0.0
B. CAPITAL ACCOUNT	32.2	60.0	60.0
C. FINANCIAL ACCOUNT[a)]	48.0	202.0	127.0
Direct investment	-133.6	-30.0	-75.0
Portfolio investment	90.3	50.0	40.0
Financial derivatives	-6.0		
Other investment	24.2	50.0	30.0
Reserve assets	73.1	132.0	132.0

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

6 A fall in exports to former Soviet Union countries linked with the sharp fall in their effective demand may represent a risk to the forecast. Exports to these countries totalled more than CZK 180 billion in 2014, i.e. around 6% of total exports. Exports to Russia accounted for about CZK 113 billion, i.e. about 3.7% of total exports. This risk has already been partially incorporated into the forecast (an annual decline of CZK 20 billion). However, were the annual decline in exports observed in January and February (of 38% and 50% to Russia and Ukraine respectively) to continue or deepen further, it would have a negative effect on the forecast of up to CZK 50 billion, i.e. more than 1% of GDP.

7 Among other things, 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.

Following an extraordinary change in capital flows in 2014 of almost CZK 200 billion, linked with the repayment of euro-denominated government bonds and residents' renewed interest in investing abroad, a moderation of the capital outflow can be expected in the area of **portfolio investment** this year and the next. This will be due to renewed investment by non-residents in Czech government bonds. In an environment of low to zero interest rates, residents' interest in investing abroad is likely to increase, especially as regards foreign shares and the bonds of some non-European countries.

With regard to **other investment** (excluding banking sector operations), the forecast predicts a high – albeit falling – net outflow of capital from the corporate sector in the form of growth in residents' deposits abroad, growth in loans 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.

Sizeable growth in **reserve assets** reflects an expected increase in the surplus on relations with the EU and still positive 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).

According to the **spring notifications** of the government deficit and debt, the general government deficit amounted to 2% of GDP in **2014**. The government finance results in 2014 were significantly affected by several extraordinary and one-off factors. New institutions were included in general government as part of a methodological change. This was reflected last year in a rise in capital expenditure to include payments from the Deposit Insurance Fund to the clients of bankrupt credit unions (amounting to 0.3% of GDP). In addition, collection of excise duty on tobacco products saw a marked year-on-year decline (of 0.5% of GDP) connected with legislative restrictions on the frontloading of tobacco products (effective from 1 December 2014). These two effects contributed to a year-on-year widening of the general government deficit in 2014. They were partly offset by CZK 8.5 billion (0.2% of GDP) in extraordinary revenues from an auction of frequency bands to mobile operators. The overall effect of fiscal policy on economic activity in 2014 was slightly expansionary (estimated at 0.3 percentage point), mainly because of a sizeable increase in government investment and faster wage growth in the government sector.

As the above-mentioned extraordinary effects unwind and economic growth continues, the general government deficit will fall to 1.6% of GDP **in 2015**. However, the overall effect of fiscal policy will again be expansionary this year, making a positive contribution of around 0.5 percentage point to economic growth (see Table II.2.5). This will be due chiefly to stronger growth in government investment in an effort

Table II.2.4

FISCAL FORECAST

Fiscal policy will be markedly expansionary in 2015
(% of nominal GDP)

	2014 actual	2015 forecast	2016 forecast
Government revenue	40.1	40.6	39.9
Government expenditure	42.0	42.2	40.9
of which: interest payments	1.3	1.2	1.2
GOVERNMENT BUDGET BALANCE	-2.0	-1.6	-1.0
of which:			
primary balance[a)]	-0.7	-0.4	0.2
one-off measures[b)]	-0.6	-0.2	0.1
ADJUSTED BUDGET BALANCE[c)]	-1.4	-1.4	-1.1
Cyclical component (ESCB method)[d)]	-0.5	-0.1	0.3
Structural balance (ESCB method)[d)]	-0.9	-1.4	-1.4
Fiscal stance in pp (ESCB method)[e)]	-0.9	-0.5	0.0
Cyclical component (EC method)[d)]	-0.9	-0.7	-0.2
Structural balance (EC method)[d)]	-0.5	-0.8	-0.9
Fiscal stance in pp (EC method)[e)]	-0.4	-0.3	-0.1
Government debt	42.6	40.6	40.0

a) government budget balance minus interest payments
b) 2014–2016: sales of emission permits
2014: impact of auction of mobile frequencies, compensation payments to clients of bankrupt credit unions, shortfall in excise duties due to restriction of stockpilling
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)

	2014 actual	2015 forecast	2016 forecast
Fiscal impulse	0.3	0.5	-0.2
of which impact through:			
private consumption	0.0	0.1	0.0
private investment	0.0	0.0	0.0
government investment, domestic	0.1	0.1	0.0
government investment, EU funded	0.2	0.3	-0.2

to draw as much EU money as possible from the previous programme period, which will be supported by increased use of domestic funds. In addition, investment expenditure will rise due to the accounting effect of an extension of the lease of JAS-39 Gripen aircraft of 0.2% of GDP, which can be regarded as an extraordinary or one-off measure with no impact on the fiscal impulse. Government spending will also accelerate as a result of a further increase in wage growth in the government sector and a rise in pensions owing not only to the restoration of the policy to increase pensions fully in line with inflation and one-third of real wage growth, but also to a one-off increase in pensions. The general government revenue side will be adversely affected by the introduction of a second reduced VAT rate of 10% and an increase in the tax discount for dependent children. Counteracting this will be the impact of higher excise duty on tobacco products.

In **2016** the general government deficit can be expected to fall to 1% 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 only gradual start of the new one. Fiscal policy will therefore be slightly restrictive in 2016, making a contribution to economic growth of around -0.2 percentage point.

The general government **structural deficit** will widen further (to around 1% of GDP) in 2015 and stay at this level in 2016.

Owing to the use of excess Treasury liquidity as a source of funding, the **ratio of government debt to GDP** will decrease significantly amid stability of the debt in absolute terms. The forecast expects a further moderate decrease in government debt relative to GDP (to around 40%). Amid relatively low general government deficits, this will be aided by accelerating nominal GDP growth and an expected further lowering of the effective interest rate on government debt owing to financial market developments and positive perceptions of the Czech Republic.

The **risks** to the fiscal forecast are tilted towards a lower general government deficit, especially in 2016. The forecast does not take into account any positive impacts of the proposed measures to reduce tax evasion, as their quantification and effectiveness are currently subject to a high degree of uncertainty.[8] In addition, the decline in government investment in 2016 might be rather larger than expected owing to a delayed start to the drawdown of EU funds in the new programme period. The final significant risk is linked with a potentially more favourable effective interest rate on government debt and corresponding lower government debt servicing costs.

8 This year's update of the Convergence Programme (April 2015) estimates the positive year-on-year impact of these measures in 2016 at 0.4% of GDP.

II.3 COMPARISON WITH THE PREVIOUS FORECAST

Compared to the previous forecast, the prediction for both headline and monetary policy-relevant inflation is slightly higher in 2015 and slightly lower in 2016, owing to lower volatility in administered prices amid a slightly lower outlook for net inflation. Slightly stronger external demand has led to an upward revision of GDP growth next year. The prediction for nominal wage growth in the business sector has shifted lower this year as a result of slower observed wage growth, but the forecast expects a more sizeable wage recovery next year. The assumption of flat market interest rates at their current very low level and the use of the exchange rate as a monetary policy instrument until the end of 2016 is unchanged.

The forecast for annual **headline inflation** in 2015 is slightly higher than the previous one (see Chart II.3.1). This is due to a higher outlook for administered price inflation, the effect of which is only partly offset by lower net inflation. By contrast, the prediction for annual headline inflation in 2016 has been lowered marginally, with both these components of price developments contributing. Net inflation is affected by the state of the domestic economy, which is generating slightly weaker cost pressures this year compared to the previous forecast as a result of lower wage growth (no significant revision has been made to the upward pressures on costs next year). Conversely, the decrease in the headline inflation forecast in 2016 is dampened by a newly incorporated harmonisation increase in excise duty on tobacco products with an impact of 0.2 percentage point.

The outlook for **monetary policy-relevant inflation** in 2015 has been revised similarly as that for headline inflation, as the assessment of the impacts of indirect tax changes remains in line with the previous forecast. Owing to the above-mentioned tax change, the downward shift in monetary policy-relevant inflation in 2016 is more pronounced than that for headline inflation.

The outlook for **administered prices** in 2015 takes into account the so far higher-than-expected gas prices and their more moderate decline expected for the rest of this year. The administered price outlook has therefore risen slightly. In 2016, by contrast, the expected growth in administered prices is slightly lower owing to a continuing decrease in electricity prices and coal prices and an expected decline in gas prices amid moderate developments in other administered price categories.

Compared to the previous forecast, annual **net inflation** is marginally lower (see Chart II.3.2). Its only slightly lower path is a result of the contrary effects of stronger growth in fuel prices and weaker growth in food prices. At the same time, a more pronounced decrease in foreign producer prices, more subdued wage growth in 2015 and lower inflation expectations will foster lower net inflation.

Turning to the **assumptions regarding the external environment** (see the charts in section II.1), the outlook for producer prices in the effective euro area has been lowered significantly for this year

CHART II.3.1

CHANGE IN THE HEADLINE INFLATION FORECAST

The forecast for headline inflation is slightly higher this year and slightly lower next year

(year on year in %; differences in pp – right-hand scale)

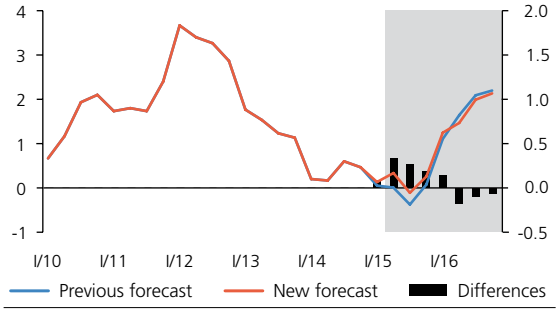
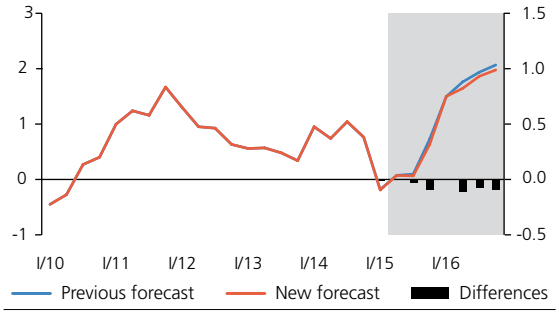


CHART II.3.2

CHANGE IN THE NET INFLATION FORECAST

The forecast for net inflation has been revised to a marginally lower level

(year on year in %; differences in pp – right-hand scale)



compared to the previous forecast. It more strongly reflects the long-running downturn in economic activity coupled with falling energy commodity prices on foreign markets. The prediction for external demand growth has been increased slightly for both 2015 and 2016. The 3M EURIBOR market outlook is slightly lower, reflecting continued monetary policy easing by the ECB using unconventional instruments.

As a result of the need for a sustained easing of the monetary conditions, the assumption of the use of the exchange rate as an additional monetary policy instrument is maintained over the entire forecast horizon as in the previous forecast. The expected **koruna-euro exchange rate** is at the same level as in the previous forecast. This level is slightly weaker than the announced level of the CNB's exchange rate commitment. The path of domestic market **interest rates** is also unchanged (see Chart II.3.3).

GDP growth was lower at the close of last year, so the yearly GDP growth figure recorded for 2014 as a whole was 0.3 percentage point weaker compared to the forecast. Changes in assumptions notwithstanding, the GDP forecast for 2015 as a whole is unchanged from the previous forecast (see Chart II.3.4). However, the contributions of the components of GDP differ. The contribution of household consumption has been revised upwards, which implies a lower saving rate than in the previous forecast amid slower growth in disposable income (and wages in particular) in 2015. The contribution of government consumption will also be higher than assumed in the previous forecast. By contrast, change in inventories and net exports will be lower. The GDP forecast for 2016 has shifted higher, with slightly stronger external demand leading to a larger contribution of gross capital formation in early 2016 and a bigger contribution of net exports in late 2016. The contribution of household consumption growth has also been increased slightly in 2016 as a whole, in line with stronger wage growth.

The contribution of **net exports** to GDP growth in 2014 Q4 was less negative than in the previous forecast. In 2015 and 2016, by contrast, it will be lower because of slightly stronger growth in domestic demand. The outlook for higher growth in external demand in 2015 is reflected in a sharp acceleration of export growth. Faster import growth reflects a stronger recovery in domestic demand and exports in the next few quarters. Despite a subsequent decrease in the dynamics of exports and imports in 2016, their growth rates are higher than in the previous forecast.

Growth in the average **nominal wage** in the business sector in 2015 has been lowered compared to the previous forecast (see Chart II.3.5). This revision primarily reflects the lower growth in wages and economic activity observed last year. Nominal wage growth will conversely be higher in 2016, reflecting a more pronounced recovery in domestic economic activity and a faster fall in unemployment.

CHART II.3.3

CHANGE IN THE INTEREST RATE PATH

The interest rate path remains unchanged with an assumed stay in the regime of using the exchange rate as a monetary policy instrument until the end of 2016

(3M PRIBOR in %; differences in pp – right-hand scale)

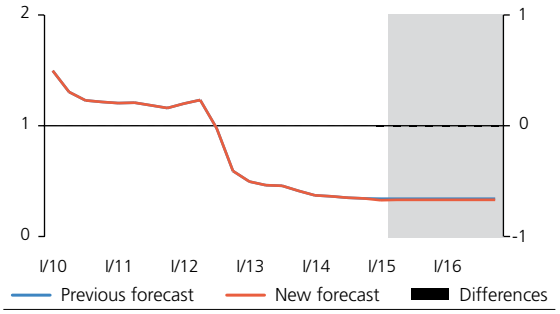


CHART II.3.4

CHANGE IN THE GDP FORECAST

The GDP growth forecast is unchanged for this year and slightly higher for next year

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

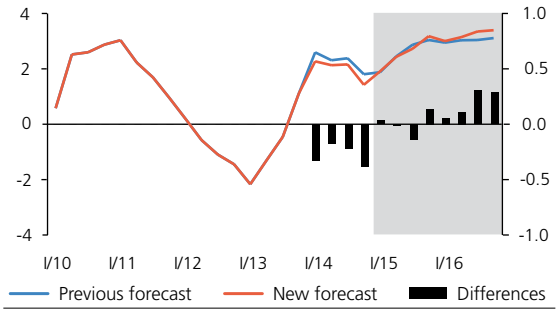
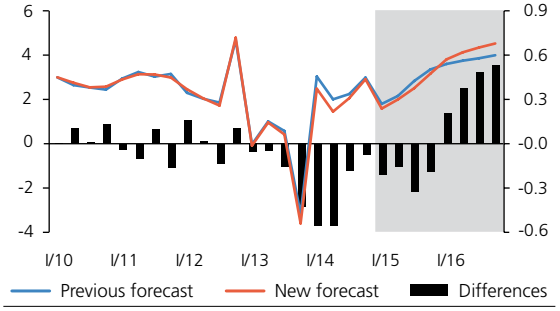


CHART II.3.5

CHANGE IN THE FORECAST FOR NOMINAL WAGES IN THE BUSINESS SECTOR

The nominal wage forecast is slightly lower for this year and higher for next year

(annual percentage changes; differences in pp – right-hand scale; seasonally adjusted[a])



a) The differences between the previous and new forecast for already known facts are due to new seasonal adjustment by the CNB.

Table II.4.1

EXPECTED INDICATORS OF FMIE AND CORPORATIONS

The analysts' inflation expectations are below the CNB's target of 2% at the one-year horizon, but close to it at the three-year horizon

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

	12/14	1/15	2/15	3/15	4/15
FMIE:					
CPI	1.5	1.5	1.4	1.4	1.4
CPI, 3Y horizon	2.0	2.0	2.0	1.9	1.9
Real GDP in 2015	2.3	2.3	2.3	2.4	2.5
Real GDP in 2016		2.6	2.6	2.6	2.6
Nominal wages in 2015	3.3	3.1	2.9	3.0	3.0
Nominal wages in 2016		3.2	3.2	3.1	3.1
CZK/EUR exchange rate (level)	27.3	27.8	27.7	27.4	27.4
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	0.5	0.6	0.5
Corporations:					
CPI	1.7			1.5	

Chart II.4.1

PERCEIVED AND EXPECTED INFLATION

Perceived inflation turned negative at the start of this year, while expected inflation remained low

(source: European Commission Business and Consumer Survey)

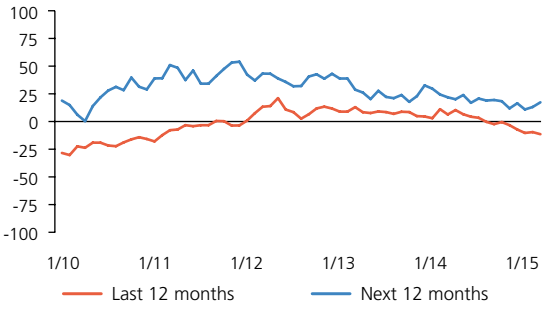


Table II.4.2

CF EXPECTED INDICATORS

The CF analysts expect the economy to grow at a rate of 2.5% this year and to accelerate slightly next year

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

	12/14	1/15	2/15	3/15	4/15
Real GDP in 2015	2.4	2.5	2.5	2.5	2.5
Real GDP in 2016		2.8	2.8	2.7	2.7
Nominal wages in 2015	3.5	3.2	3.1	3.0	2.8
Nominal wages in 2016		3.6	3.5	3.4	3.4
CZK/EUR exchange rate (level)	27.4	27.5	27.5	27.4	27.5
3M PRIBOR (in per cent)	0.4	0.4	0.3	0.3	0.3

II.4 FORECASTS BY OTHER ENTITIES

In recent months, analysts' inflation expectations have been below the CNB's target at the one-year horizon and close to it at the three-year horizon. The indicator of inflation perceived by households is slightly negative, while the indicator of expected inflation is at its lowest level in five years. On average, the analysts expect the economy to grow by 2.5% this year and accelerate slightly further next year. According to the analysts, the exchange rate of the koruna will be broadly stable at its current level at the one-year horizon. All the analysts expect that the exchange rate commitment will not be discontinued before 2016 H2. At the same time, they were all expecting key interest rates to be left unchanged both at the CNB Bank Board's May 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 slightly below 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 below the CNB's target of 2% in late 2014 and has remained at this level so far in 2015. Inflation expected at the three-year horizon is currently close to the target. The inflation expectations of business managers at the one-year horizon have also declined below the target (see Table II.4.1).

The indicator of **inflation perceived by households**[9] was slightly negative in early 2015 (see Chart II.4.1). This means that households on average felt that prices did not increase over the last 12 months. However, a relatively large group perceived a price decline. The indicator of **expected inflation** has long been positive. However, it fell to its lowest level in five years at the start of 2015. 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 2.5% this year (see Tables II.4.1 and II.4.2). Next year, economic growth is expected to accelerate slightly further. This also applies to wages, with a more pronounced increase being expected by CF analysts than by FMIE analysts. At the one-year horizon, the analysts expect the exchange rate of the koruna to be broadly stable at its current level. In line with previous communications of the Bank Board, all the analysts also expect that the exchange rate commitment will not be discontinued before 2016 H2. The new CNB forecast expects the exchange rate to

9 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.

be used as a monetary policy instrument until the end of 2016, i.e. over the entire forecast horizon. Before the CNB Bank Board meeting in May, all thirteen 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.

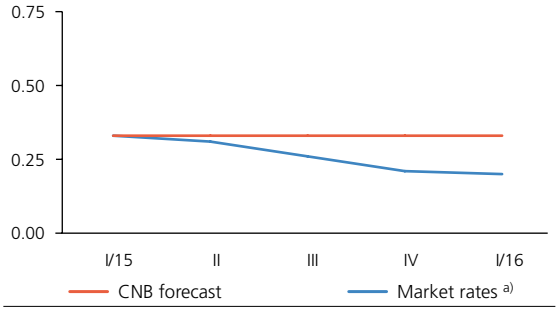
Overall, the analysts expect almost the same real GDP growth in 2015 and lower growth in 2016 **compared with the CNB's new forecast**. Inflation expected by the analysts at the one-year horizon is only slightly below the CNB forecast. The analysts' expectations regarding the 2W repo rate and market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

Chart II.4.2 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 slight 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. Over the entire horizon, the expected market rates are thus slightly below the interest rate path consistent with the new CNB forecast, which assumes stability of the money market premium.

CHART II.4.2

FRA RATES VERSUS THE CNB FORECAST

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



a) for 2015 Q1 and 2015 Q2 the 3M PRIBOR and for 2015 Q3–2016 Q1 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 24 April 2015

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 INFLATION

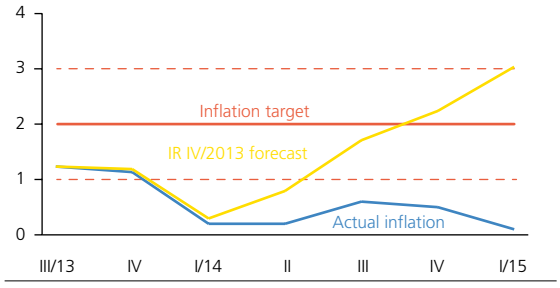
Annual headline inflation was very low in 2015 Q1, averaging 0.1%. The price level adjusted for changes to indirect taxes dropped slightly year on year in Q1. Inflation was thus still well below the lower boundary of the tolerance band around the CNB's target. The very low inflation is being fostered by falling fuel and food prices, reflecting a drop in global oil prices and a persisting fall in agricultural commodity prices respectively. The pass-through of the weakened exchange rate of the koruna to inflation via import prices is fading, but the easy monetary conditions are still contributing to growth in economic activity and a recovery in the labour market. Rising domestic demand is fostering higher inflation. This is most visible in adjusted inflation excluding fuels, which remains noticeably positive. Administered prices also returned to slight growth at the start of this year.

III.1.1 Fulfilment of the inflation target

CHART III.1.1

FORECAST VERSUS ACTUAL INFLATION

Inflation was well below the alternative scenario of the IR IV/2013 forecast in 2015 Q1
(year on year in %)



In 2015 Q1, both **headline and monetary policy-relevant inflation** were well 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 2015 Q1, we have to examine the period roughly from July 2013 to December 2014, which takes into account the different lengths of transmission of interest rates and the exchange rate. This is because monetary policy starts to pass 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 alternative scenario[10] described in Inflation Report IV/2013 with subsequent developments.

This **alternative scenario** assumed that the weaker exchange rate would be reflected in an increase in import prices. This would be followed by resurgence of inflationary pressures from the domestic economy, which would gradually take over the main role in price developments. Inflation was thus expected to return to the CNB's 2% target in 2014 H2, then reach the upper boundary of the tolerance

10 In November 2013, the CNB Bank Board decided to use the exchange rate as an additional monetary policy instrument. The alternative scenario, which assumed that market interest rates would remain at a level equal to the sum of the technically zero repo rate and the money market risk premium and that the monetary conditions would be eased through a sustained weakening of the exchange rate of the koruna against the euro by the central bank, thus became the most likely description of expected future economic developments.

band around the inflation target and then approach the target from above during 2015 (see Chart III.1.1). Monetary policy-relevant inflation was expected to fall close to zero initially and then rise gradually toward the target. The subsequent temporary overshooting of the inflation target was expected to foster an easing of the real monetary conditions through higher inflation expectations and at the same time facilitate a safe exit from the zero lower bound on interest rates and a return to conventional monetary policy.

Headline **inflation in reality** was below the alternative scenario forecast over the entire period and the deviation increased gradually. The 2.9 percentage point deviation of actual headline inflation from the forecast in 2015 Q1 was due to all inflation components except the first-round effects of changes to indirect taxes. Adjusted inflation excluding fuels picked up gradually thanks to the weaker exchange rate and renewed economic growth, but the acceleration was much slower than forecasted owing to deflation in the euro area and – in 2014 H2 – also due to a slower recovery in domestic wage growth. Food and fuel prices were also lower than forecasted as a result of a stronger-than-expected decline in global agricultural commodity prices over the entire period under review and the recent fall in energy commodity prices. The forecast also did not expect the fall in administered prices recorded in 2014 H1 and the only slight rise seen in early 2015 (see Table III.1.1).

External economic factors contributed significantly to domestic inflation. The biggest deviation was recorded by external production prices, which, instead of the expected rise of around 2%, recorded a decrease of similar magnitude. External demand did not differ much from the forecast assumptions initially. Later on, however, its growth started to slow unexpectedly. Foreign interest rates also started to decrease further in 2014 Q2. Oil prices also dropped unexpectedly at the end of 2014 (see Table III.1.2). Overall, then, external developments had an anti-inflationary effect on domestic inflation, i.e. they acted towards a need for a further easing of the monetary conditions. **Domestic market interest rates**, however, were broadly stable (see Table III.1.3), as in reality the zero lower bound meant they could not be lowered. The **exchange rate** meanwhile stayed at levels that were slightly weaker than the commitment announced by the CNB, but not weak enough to offset the deflationary pressures from abroad and deliver a rapid return of inflation to the target. In reality, the external anti-inflationary effects on domestic inflation were thus much stronger than in an environment where monetary policy is not constrained by the zero lower bound.

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. Actual domestic GDP growth was higher than forecasted until mid-2014 amid faster growth in real household consumption, investment and partly also government consumption. Actual export and import growth rose noticeably above the forecast in 2014 H1 thanks to the weakened exchange rate of the

Table III.1.1

FULFILMENT OF THE INFLATION FORECAST

The deviation of inflation from the forecast was due to all components of inflation except the first-round effects of changes to indirect taxes

(annual percentage changes; contributions in percentage points)

	IR IV/2013 forecast	2015 Q1 outturn	Contribution to total difference[c)]
CONSUMER PRICES	3.0	0.1	-2.9
Breakdown into contributions:			
administered prices	2.6	0.2	-0.4
first-round impacts of changes to indirect taxes[a)]	0.2	0.2	0.0
food prices[b)]	2.4	-0.9	-0.8
fuel prices[b)]	3.2	-14.6	-0.6
adjusted inflation excl. fuels[b)]	3.0	1.1	-1.0

a) impact in non-administered prices on total inflation
b) excluding the first-round effects of changes to indirect taxes
c) Owing to rounding, the total difference is not necessarily equal.

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)

		IV/13	I/14	II/14	III/14	IV/14	I/15
GDP in euro area[a), b), c)]	p	0.9	1.3	1.3	1.6	1.8	1.9
	o	1.0	1.4	1.0	0.9	0.9	-
PPI in euro area[b), c)]	p	-0.7	0.1	1.6	2.0	2.1	2.1
	o	-1.2	-1.9	-1.6	-1.8	-2.1	-
3M EURIBOR	p	0.2	0.3	0.4	0.4	0.5	0.6
(percentages)	o	0.2	0.3	0.3	0.2	0.1	0.0
USD/EUR exchange rate	p	1.34	1.31	1.30	1.29	1.28	1.27
(levels)	o	1.36	1.37	1.37	1.32	1.25	1.13
Brent crude oil price	p	110.0	108.2	106.5	104.9	103.3	101.8
(USD/barrel)	o	109.4	107.9	109.8	103.5	77.1	55.1

p – prediction, o – outturn
a) at constant prices
b) seasonally adjusted
c) IR IV/2013 alternative scenario 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

		IV/13	I/14	II/14	III/14	IV/14	I/15
3M PRIBOR	p	0.4	0.4	0.4	0.4	0.4	1.1
(percentages)	o	0.4	0.4	0.4	0.4	0.3	0.3
CZK/EUR exchange rate	p	Exchange rate commitment: close to CZK 27/EUR					
(levels)	o	26.7	27.4	27.4	27.6	27.6	27.6
Real GDP[a)]	p	1.0	1.5	2.0	3.0	2.0	3.3
(annual perc. changes)	o	1.1	2.3	2.1	2.2	1.5	-
Nominal wages[b)]	p	-1.1	3.1	1.7	2.3	3.1	3.7
(annual perc. changes)	o	-2.3	3.6	2.5	1.8	1.9	-

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

koruna. The annual export and import growth rates then converged back to the forecast. The slowdown reflected an unexpected decline in external demand growth. Nominal wage growth has been lagging behind the predicted figures since 2014 H2.

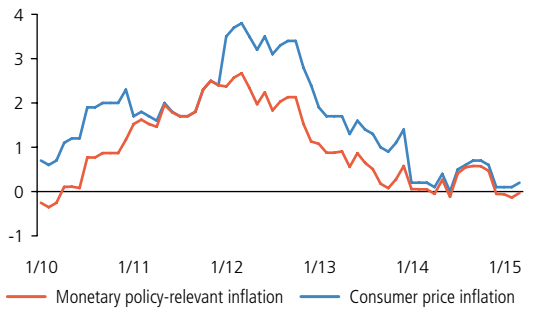
In addition to the forecast, an assessment of the risks associated with this forecast is important for the Bank Board's decisions on the **monetary policy settings**. The Bank Board assessed the risks of the forecasts as being either slightly on the downside or balanced over the entire key period. With 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 global energy 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 pass-through of the weakened exchange rate to inflation through import prices is fading, but the easy monetary conditions are still contributing to growth in the domestic economy, which is fostering higher prices. The inflation target is being significantly undershot at present. However, without the weakening of the koruna, headline inflation would have been strongly negative.

Overall, based on current knowledge, it seems that the monetary policy pursued between July 2013 and December 2014 should have been substantially easier. 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.

CHART III.1.2

INFLATION

Annual inflation went up slightly in 2015 Q1
(year on year in %)



III.1.2 Current inflation

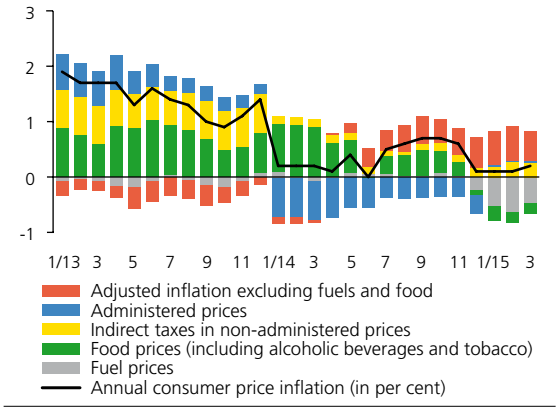
Annual inflation[11] was only 0.1% on average in 2015 Q1, but rose slightly at the end of the quarter, reaching 0.2% in March (see Chart III.1.2). These very low levels were due to a significant decrease in fuel prices as a result of the fall in global oil prices and to a continuing decline in food prices. At the same time, however, there was a marked increase in other market prices as measured by adjusted inflation excluding fuels, and administered prices also returned to modest growth at the start of this year.

Turning to the **structure of annual inflation**, the decline in fuel and food prices was offset in 2015 Q1 by positive adjusted inflation excluding fuels and a positive contribution of tax changes in non-administered prices (see Chart III.1.3). The contribution of administered prices to inflation was negligible.

CHART III.1.3

STRUCTURE OF INFLATION

The decline in fuel and food prices was offset by a rise in other market prices and tax changes
(annual percentage changes; contributions in percentage points)



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

The contribution of changes to **indirect taxes** to annual consumer price inflation was 0.2 percentage point in 2015 Q1. The higher inflation was due to two harmonisation adjustments made to excise duty on cigarettes and tobacco in 2014 with an overall impact on headline inflation of 0.3 percentage point. This was counteracted by the introduction of a second reduced VAT rate of 10% on medicines, books and irreplaceable infant food with an impact of almost -0.1 percentage point from January 2015.

Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, was slightly negative in 2015 Q1, averaging -0.1% (in March it was zero). Monetary policy-relevant inflation was thus well below the lower boundary of the tolerance band around the CNB's target.

Following a marked decline last year, **administered prices** switched to slight year-on-year growth at the start of 2015, averaging 0.2% in 2015 Q1 (see Chart III.1.4). This growth reflected an increase in prices of natural gas for households in January as a result of an increase in gas supply fees by the Energy Regulatory Office. The increase in administered prices was also due to rising prices of heat and water supply and sewerage collection charges. By contrast, the abolition of the remaining regulatory fees in health care except for emergency fees and, to a lesser extent, a slight decline in prices of electricity for households had an anti-inflationary effect.

By contrast, annual **market price inflation**, as measured by net inflation,[12] decreased and subsequently turned negative (-0.2% in March). This was due to falling fuel and food prices. Conversely, growth in other market prices[13] rose slightly compared to the previous quarter. Market prices thus reflected the fading effect of a weakened exchange rate. The continuing economic growth and the improving labour market situation had a slightly inflationary effect.

Food prices have been decreasing year on year since December 2014 and fell by 0.9% on average in 2015 Q1 (see Chart III.1.5). This trend was mainly a result of a persisting annual fall in agricultural producer prices and producer prices in the food industry, which – in addition to above-average harvests in 2014 in the Czech Republic and abroad – reflected the trade sanctions imposed on food exports to Russia. The decline in food prices was mostly due to fruit and vegetable prices, but prices of bread, pork, milk and dairy products decreased as well.

The annual decline in **fuel prices**, resulting mainly from the decrease in oil prices, reached double figures in 2015 Q1 (see Chart III.1.6), averaging -14.6%. However, the decline moderated in March

12 The following text describes the year-on-year evolution of the main components of market price inflation adjusted for tax changes.
13 Measured by adjusted inflation excluding fuels and food.

CHART III.1.4

INFLATION COMPONENTS

Adjusted inflation excluding fuels increased further and administered prices also rose weakly, while the other components of inflation were negative
(annual percentage changes; excluding indirect tax changes except for administered prices)

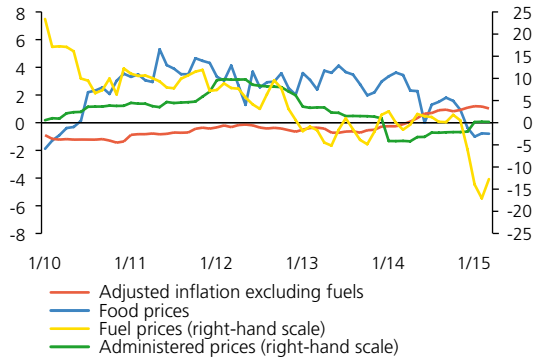


CHART III.1.5

FOOD PRICES

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

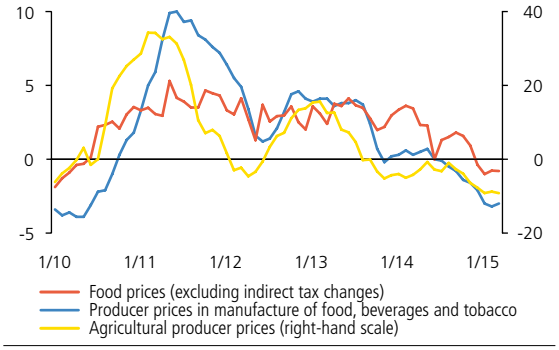


CHART III.1.6

FUEL PRICES

The decline in fuel prices moderated in March 2015 owing to a partial correction of global oil prices and a weakening of the koruna-dollar exchange rate
(annual percentage changes)

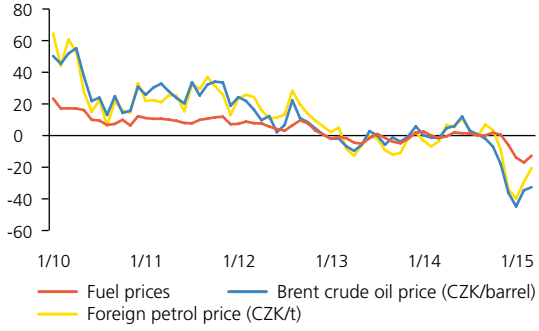
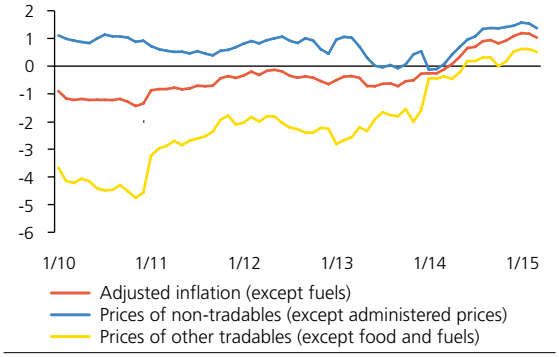


CHART III.1.7

ADJUSTED INFLATION EXCLUDING FUELS

Adjusted inflation excluding fuels rose slightly further on average in 2015 Q1, aided by both its components
(annual percentage changes)



compared to previous months owing to a rise in costs in the form of a weaker koruna-dollar exchange rate and an increase in global oil and petrol prices compared to the low levels recorded at the start of the year.

Turning to market prices, the slightly positive inflation in 2015 Q1 was due solely to **adjusted inflation excluding fuels**, which rose slightly further compared to the previous quarter, to 1.1% on average (see Chart III.1.7). This was due to **prices of other tradables**, whose annual growth picked up noticeably to 0.6% on average. This still reflected the effect of the weakened koruna-euro exchange rate and newly also the noticeable depreciation of the koruna against the dollar. The weaker exchange rate outweighed the decline in producer prices in the effective euro area. The increase in prices of other tradables was mainly due to prices of clothing and footwear. However, annual growth in domestic **prices of non-tradables**[14] also increased, averaging 1.5%. This primarily reflected the continuing growth in domestic economic activity and the gradually improving labour market situation. The increase in prices of non-tradable commodities was fostered by prices of insurance, financial services and foreign package holidays. This March, however, saw a modest slowdown in both components of adjusted inflation excluding fuels owing to the fading of the direct effects of the weakened exchange rate.

BOX 1
Median inflation

In addition to the official Czech inflation indicators published by the CZSO, **alternative measures of inflation** are constructed at the CNB for the purposes of assessing domestic price developments. These measures are aimed at filtering out one-off, temporary (and usually exogenous) effects and thereby obtaining indicators that only reflect fundamental domestic inflation factors. Such indicators gain in importance at times when headline inflation is affected by strong external shocks (such as the recent sharp fall in world crude oil prices). One such indicator is median inflation.

Classically calculated inflation indicators – both the official ones published by the CZSO and the alternative ones constructed at the CNB – use the weighted arithmetic mean to measure the average change in prices. However, the arithmetic mean is highly sensitive to extreme price movements. In the calculation of the various measures of **core inflation**, therefore, items that are most affected by transitory external shocks are usually omitted. These are typically food items, whose prices are subject to weather- and harvest-dependent volatility, and

14 This segment consists mainly of services.

energy and fuels, whose prices are derived from global oil prices. Administered price items are also excluded, and the remaining items are adjusted for changes to excise duties and VAT (e.g. adjusted inflation excluding fuels).

Median inflation uses the same weighting scheme and the same time series for the price indices of consumer basket items as the classically calculated inflation indicators. In this case, however, only administered price items are systematically excluded from the calculation. The remaining items are then adjusted for changes to VAT. The calculation is conducted on a month-on-month basis, so seasonal adjustment is also necessary. The weighted median is then used to estimate average inflation. The month-on-month price changes of the individual items in the given month are ordered from the largest to smallest and their weight is progressively summed. The inflation rate of the item located closest to the accumulated weight of 0.5 is denoted the median inflation rate. Annual inflation is then obtained by chaining the month-on-month figures.

Median-based core inflation is **significantly smoother** than classical core inflation aggregates based on the weighted arithmetic mean (see Chart 1). Median inflation thus provides a useful analytical picture of price developments in the core of the consumer basket, especially at times when headline inflation is being affected by strong exogenous shocks. In 2009–2011, for example, the classical core inflation indicators were pushed down to very low and later even negative values as a result of sharp declines in the prices of only a few consumer basket items, while the median inflation rate stayed positive in the same period. During the 2012–2013 recession, however, the median inflation rate fell to a **historical low in September 2013** (0.2%) and threatened to sink into the deflation band for the first time ever. After the CNB weakened the exchange rate in November 2013, however, the annual median inflation rate started to go up smoothly, reaching 1.3% at the end of 2014.

So far **this year**, the median inflation rate has decreased slightly as the direct effect of the weakening of the koruna has gradually dropped out of it. However, it remains noticeably positive (1.0% in March 2015), as – by construction – it has not been significantly affected by the drop in oil prices or by the fall in food prices, which are dragging headline inflation down to near-zero levels (and inflation net of tax changes temporarily into negative territory). It thus probably most strongly reflects the modest inflationary effect of the renewed growth in the domestic economy and the generally accommodative monetary conditions seen over the last few quarters.

CHART 1 (BOX)

COMPARISON OF MEDIAN INFLATION WITH CLASSICAL INFLATION INDICATORS

Median inflation is significantly smoother than classical indicators. It has increased since autumn 2013 and currently stands at 1%

(annual percentage changes; source: CZSO; CNB calculation)

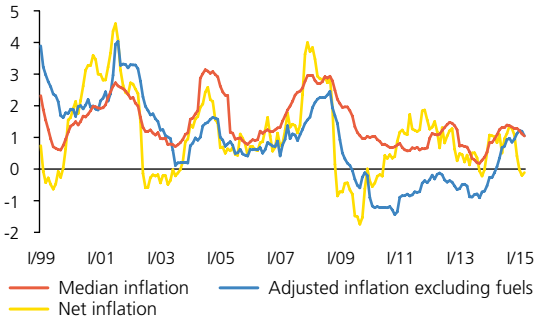


CHART III.2.1

IMPORT PRICES AND PRODUCER PRICES

Import prices and industrial and agricultural producer prices all fell in 2015 Q1, while growth in prices in construction remained low and growth in market services prices fell to zero
(annual percentage changes)

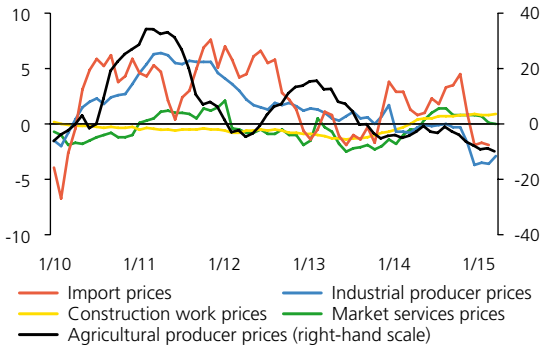


CHART III.2.2

IMPORT PRICES

Mineral fuels contributed the most to the decline in import prices at the start of 2015
(annual percentage changes; contributions in percentage points)

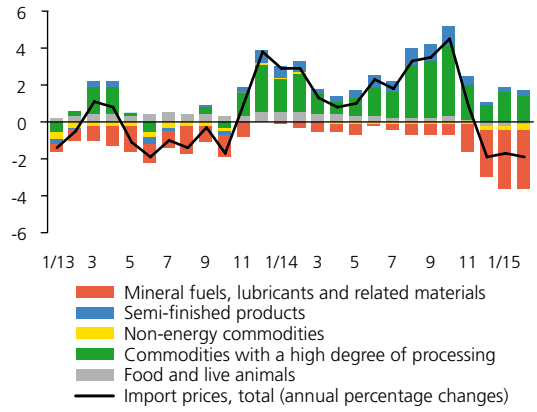
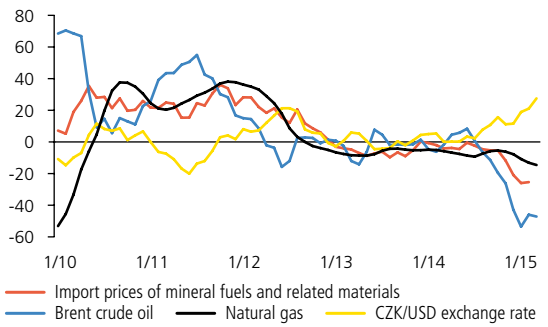


CHART III.2.3

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)



III.2 IMPORT PRICES AND PRODUCER PRICES

The decline in import prices observed since the end of 2014 continued into January and February 2015, mainly because of a sharp fall in energy commodity prices. Import prices of non-energy commodities and food also continued to fall year on year, while import prices of commodities with a high degree of processing kept rising. Industrial producer prices recorded a rapid year-on-year decline in 2015 Q1. This was mostly a result of a continued sharp decrease in producer prices in the primary oil-processing sector and, to a lesser extent, falling prices in the food industry and other branches of manufacturing, linked primarily with the evolution of prices of their main production inputs. Growth in construction work prices was flat at a relatively low level, while growth in prices of market services for the business sector slowed to zero.

III.2.1 Import prices

The year-on-year decline in **import prices** which started at the end of last year continued into the first two months of 2015 (-1.9% in February; see Chart III.2.1). This decline was mostly due to a decrease in import prices of commodities, most notably mineral fuels following the slump in oil prices on global markets.

The annual decline in import prices of energy and non-energy commodities deepened significantly between November 2014 and February 2015. This had a strong downward effect on overall import price inflation in this period. This is evidenced by the large negative contribution of these commodities to annual import price inflation (-3.5 percentage points in February; see Chart III.2.2). Import prices in the **mineral fuels** category fell particularly sharply (see Table III.2.1). This decline was closely linked with the decrease in global oil prices, which fell by almost 50% year on year in January and February (see Chart III.2.3). The decline in global natural gas prices was also in double figures at the start of this year (almost -15% in February). Although the impact of the sharply falling global prices of energy commodities on domestic prices was considerably dampened by year-on-year depreciation of the koruna-dollar exchange rate, the decline in import prices of mineral fuels deepened at the start of 2015 (to -25.4% in February).

The category of **non-energy commodities** also saw a deepening decline in import prices in 2015 Q1 (to -12.1% year on year in February). However, their negative contribution was much less significant than in the case of the energy commodity category due to their lower weight in the import price index.

A strengthening decline in import prices associated with falling oil prices was also observed for **chemicals and related products** from the end of last year onwards (-3.4% in February). Import prices of **food and live animals** also fell for the third consecutive month,

mainly because of lower import prices of meat, fruit and vegetables (see Table III.2.1). By contrast, import prices of **commodities with a high degree of processing** continued to rise at the start of 2015. Their rate of growth started to go up again in January and February following a modest decrease at the end of 2014 (see Chart III.2.2). This was due mostly to the highest-weight category of machinery and transport equipment, whose positive contribution to annual import price inflation was 1.4 percentage points in February.[15] Annual import price inflation in this category accelerated from 2.1% in December 2014 to 3.4% in February. The increase in import prices of miscellaneous manufactured articles was even stronger – their growth rate increased from 1.8% in December to 4.8% in February. Import prices of **semi-finished products** also kept rising at the start of this year, although more slowly than those of products with a high degree of processing (by 1.4% in February; see Table III.2.1).

III.2.2 Producer prices

Industrial producer prices

Industrial producer prices continued to fall sharply year on year in January and February at roughly the rate recorded in December 2014 (see Chart III.2.4). According to the latest figures for March, their decline moderated to 2.9%.

An analysis of the **structure of industrial producer price inflation** reveals that their sharp annual decline in 2015 Q1 was a result of a combination of declining producer prices in the manufacture of coke and refined petroleum products, food processing and other branches of manufacturing (see Chart III.2.4). Prices in the first of those categories, whose decline initially strengthened to almost -36% before slowing to -23% in March, were still strongly affected by commodity prices on the European and global market, where oil, coal and gas prices continued to fall at double-digit rates. A further deepening of the producer price decline in the food industry was chiefly due to falling agricultural producer prices and imported food prices. The decline in producer prices in the other branches of manufacturing deepened further as well in 2015 Q1.

Turning to the **individual branches of manufacturing**, annual producer price developments were still mixed in 2015 Q1, but in most branches the declines deepened or the growth rates slowed. Overall, producer prices in manufacturing decreased year on year in 2015 Q1 (by 3.5% in March). This was due, in addition to producer price developments in the euro area and the fall in oil prices, to the fading effect of the November 2013 weakening of the koruna-euro exchange rate in year-on-year comparison. Besides producer prices

15 In this category, import prices of office machines and data processing machines and electrical equipment showed fast year-on-year growth (7.4% and 5% respectively). By contrast, import prices of industrial machinery and equipment and road vehicles decreased in February.

Table III.2.1

STRUCTURE OF IMPORT PRICE INFLATION

Import prices went down for most commodities, but continued to rise for commodities with high value added
(annual percentage changes)

	11/14	12/14	1/15	2/15
IMPORTS, TOTAL	0.9	-1.9	-1.7	-1.9
of which:				
food and live animals	0.9	-3.3	-3.3	-1.1
beverages and tobacco	3.7	3.4	0.6	0.2
crude materials inedible, except fuels	-5.4	-8.1	-10.6	-12.1
mineral fuels and related products	-11.8	-20.9	-26.0	-25.4
animal and vegetable oils	-0.9	-1.5	-0.3	1.0
chemicals and related products	1.2	-1.1	-1.8	-3.4
manufactured goods classified chiefly by material	2.6	1.0	1.5	1.4
machinery and transport equipment	3.6	2.1	3.6	3.4
miscellaneous manufactured articles	3.0	1.8	4.4	4.8

Chart III.2.4

INDUSTRIAL PRODUCER PRICES

The decline in industrial producer prices was again mainly due to falling prices of refined petroleum products in 2015 Q1
(annual percentage changes; contributions in percentage points)

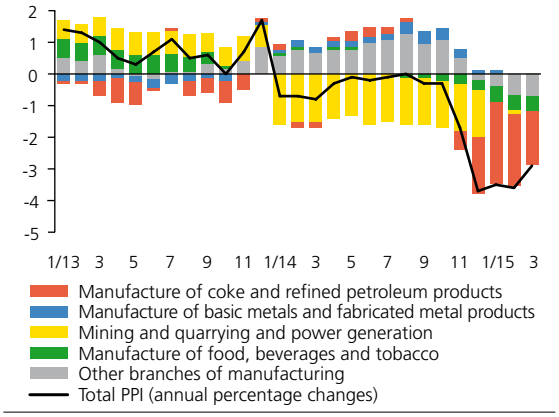
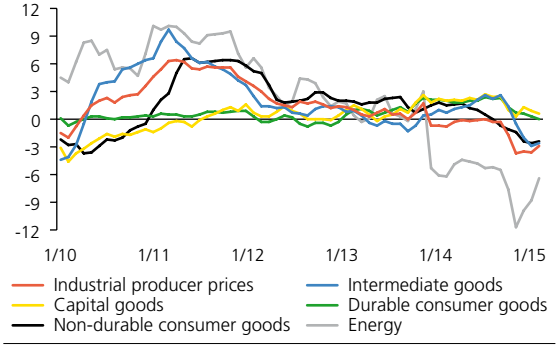


Chart III.2.5

PRODUCER PRICES BY MAIN INDUSTRIAL GROUPINGS

Energy prices decreased the most
(annual percentage changes)



in the manufacture of coke and refined petroleum products, the fall in oil prices also had a significant effect on producer prices in the manufacture of chemicals, whose decline deepened year on year to almost 15% in March. For the above reasons, the decline in producer prices in the food industry strengthened as well (to -3% in March). The increase in producer prices in the manufacture of basic metals and fabricated metal products gradually slowed in Q1, and in March these prices fell (by 0.3%). Prices in the manufacture of transport equipment and in the manufacture of machinery and equipment showed a similar trend, with their growth slowdown changing into stagnation in March. Producer prices in the remaining branches of manufacturing recorded modest annual growth not exceeding 2%.[16]

The annual decline in prices in **mining and quarrying** continued into 2015 Q1, but slowed noticeably to -0.9% in March (see Chart III.2.6). An even stronger slowdown was recorded for the annual decline in producer prices in the **electricity, gas, steam and air-conditioned air industries**. This decline was fluctuating at levels of almost -9% during 2014, but has been below -1% since January 2015.[17] The only prices which rose at the same pace as in 2014 in early 2015 were those in the water supply and sewerage-related services industry (3.4% year on year). Overall, the negative contribution of these industries to annual industrial producer price inflation in 2015 Q1 was negligible, unlike in the previous year (see Chart III.2.4).

Agricultural producer prices

The deepening annual decline in **agricultural producer prices** observed in 2014 H2 continued into early 2015 (see Chart III.2.7). According to the latest figures for March, these prices fell by almost 10% year on year. This was due to the higher-weight prices of livestock products, whose decline deepened considerably compared to December (by almost 5 percentage points to -9% in March). The deepening annual decline in livestock product prices was mostly a result of a strengthening decrease in prices of pigs and milk, whereas prices of eggs and poultry went up. The annual decline in crop product prices in the same period was close to the level reached at the end of 2014 (-11% in March). The persisting broad annual decline in crop product prices was again due mostly to prices of potatoes, fruit, vegetables, oil crops and cereals.

The gradually deepening decline in agricultural producer prices in the second half of 2014 and early 2015 was due to several **factors**. The first of these was an above-average harvest of cereals and oil crops in 2014 both in the Czech Republic and abroad. This factor was behind the gradual decline in crop commodity prices, which was not significantly reduced by the temporary effect of information on the weaker harvest expected in North America due to the severe winter there. Another important factor was the trade sanctions imposed on

CHART III.2.6

PRICES OF ENERGY AND WATER-RELATED SERVICES

The decline in electricity prices slowed sharply at the start of 2015
(annual percentage changes)

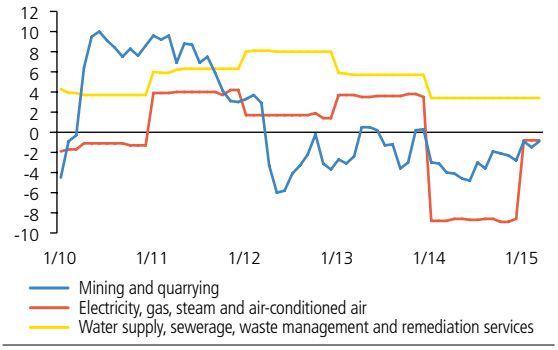
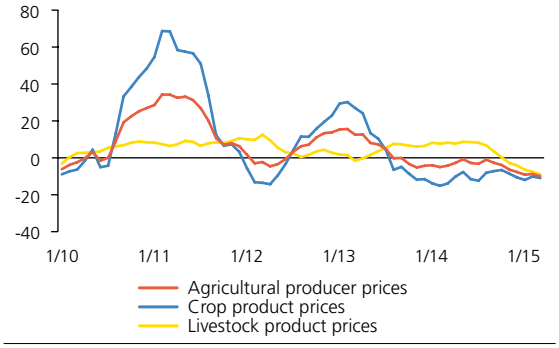


CHART III.2.7

AGRICULTURAL PRODUCER PRICES

The deepening decline in agricultural producer prices in 2015 Q1 was due to livestock prices
(annual percentage changes)



16 Except for electrical equipment, where industrial producer prices dropped slightly year on year.
17 Producer prices in this category are usually changed at the start of the year.

Russia by the EU in August 2014 in connection with the geopolitical situation in Ukraine and the subsequent retaliatory measures taken by Russia. These mainly affected livestock product prices, with pig and milk prices falling due to a decrease in exports to Russia. The reduction in exports to Russia also had an indirect downward effect on domestic fruit and vegetable prices. The year-on-year depreciation of the koruna against the euro moderated significantly in 2015 Q1 and thus ceased to offset the anti-inflationary effect of prices of imported commodities.

Other producer prices

The modest growth in **construction work prices** continued into 2015 Q1 amid a gradual recovery in construction output (see Chart III.2.8). Their annual growth was almost unchanged from the previous quarter, reaching 0.9% in March. By contrast, prices of materials and products consumed in construction started to fall (by 0.2% in March).

Annual growth in prices of **market services for the business sector** recorded a major change, slowing noticeably from 0.7% in January to zero in March. Most of the services under review contributed to this change. Whereas in January prices had risen in almost 80% of services, in March they went up only in half of them. The strongest price decline was recorded by information services, but prices of the high-weight categories of architectural, engineering and advertising services also fell by more than 1%. Only in postal and courier services and financial services did prices continue to rise rapidly (by 6.9% and 4.3% year on year respectively).

CHART III.2.8

OTHER PRICE CATEGORIES

Growth in prices of market services fell to zero in 2015 Q1, while growth in construction work prices was unchanged from the previous quarter

(annual percentage changes)

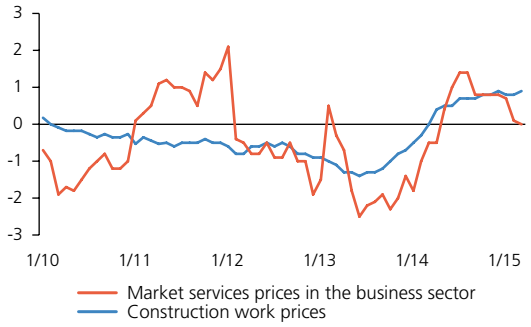


CHART III.3.1

GROSS DOMESTIC PRODUCT

Annual GDP growth slowed in 2014 Q4
(annual and quarterly percentage changes at constant prices; seasonally adjusted data)

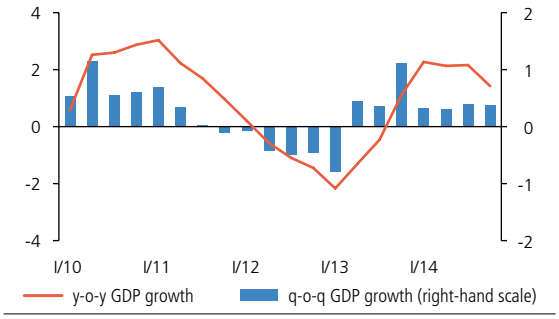


CHART III.3.2

STRUCTURE OF ANNUAL GDP GROWTH

Declines in inventories and net exports contributed the most to the weakening of GDP growth in 2014 Q4
(contributions in percentage points; seasonally adjusted data)

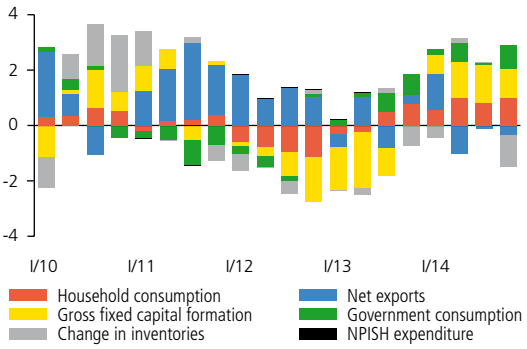
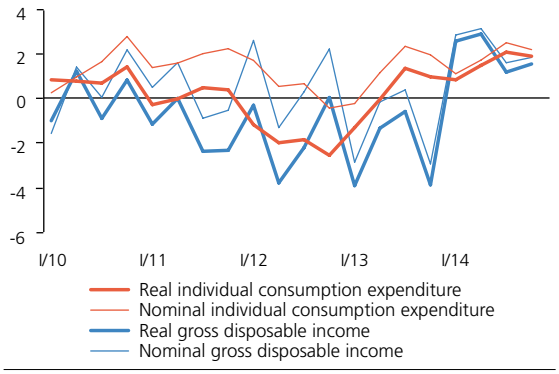


CHART III.3.3

HOUSEHOLD CONSUMPTION EXPENDITURE

Growth in gross disposable income rose modestly in 2014 Q4
(annual percentage changes; seasonally unadjusted data)



III.3 DEMAND AND OUTPUT

Annual real GDP growth slowed to 1.4% in 2014 Q4. In quarter-on-quarter terms, however, economic activity increased by 0.4%. The year-on-year GDP growth was due to all components of domestic demand except inventories, which showed a marked annual decline. The contribution of net exports was negative amid a persisting lead of import growth over export growth. On the supply side, gross value added growth accelerated thanks mostly to manufacturing, but gross value added also increased in most other sectors. The output gap is still negative, but the trend toward its closing will continue.

III.3.1 Domestic demand

Annual **domestic demand** growth slowed in 2014 Q4 (to 1.8%). This was primarily due to a substantial annual decline in inventories following a previous stagnation. To a lesser extent, weaker growth in fixed investment contributed to the slowdown in domestic demand growth. By contrast, growth in the other components of domestic demand – household consumption and government consumption – went up (see Chart III.3.2).

Final consumption

Real final consumption expenditure of households showed continued annual growth in 2014 Q4 (see Chart III.3.2), fluctuating around 2% for the third quarter in a row. In Q4 alone, its growth rate accelerated (by 0.3 percentage point year on year to 2%[18]), in line with rising real gross disposable income growth.

Nominal gross disposable income, which is the main source of financing of households' consumption expenditure, increased by 2% in 2014 Q4, up by 0.3 percentage point on the previous quarter (see Chart III.3.3). Its real purchasing power increased by 1.7% year on year amid low inflation. Overall, however, both nominal and real growth in households' gross disposable income was still modest, with quite mixed trends recorded across the components of disposable income in the period under review.

Annual growth in **wages and salaries** strengthened at the end of 2014 on the back of faster growth in employment and rising wages in the non-business sector. The positive contribution of wages and salaries to annual disposable income growth (2.6 percentage points) was still the highest and increased compared to the previous quarter (see Chart III.3.4). The positive contribution of social benefits decreased, whereas other transfers contributed to gross disposable income growth to a greater extent. The other components of disposable income fell year on year in 2014 Q4. Business income (gross operating

18 According to seasonally adjusted CZSO data.

surplus plus mixed income) decreased slightly at the end of 2014 (by 0.7%) following a period of modest growth. Property income also decreased, making no contribution to disposable income growth for the sixth quarter in a row. However, the slowdown in disposable income growth was mostly due to the negative contribution of taxes and social contributions (see Chart III.3.4).

According to seasonally unadjusted data, household consumption expenditure grew faster than gross nominal disposable income in 2014 Q4. The seasonally unadjusted **saving rate** thus decreased somewhat compared to 2013 Q4 (to 11.5%). A slowdown in the annual growth rate of consumer credit (from 2.3% in September to 1.7% in December) meanwhile still indicated weak household interest in credit financing of consumption (see section III.5).

The **structure of consumption expenditure**[19] at the same time shows that household consumption increased year on year for the third consecutive quarter in all the categories under review (see Chart III.3.5). Non-durable goods accounted for the largest share of the annual consumption expenditure growth (0.8 percentage point). However, expenditure on durable goods still rose the fastest (by 8.4% year on year), although its share in total consumption expenditure is relatively low.[20] By contrast, the contribution of household consumption expenditure on services decreased noticeably compared to the previous quarter, although it remained positive.

According to the latest available **leading indicators**, seasonally adjusted annual retail sales continued to rise in January and February 2015. The rate of growth accelerated further compared to the previous quarter. 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 slightly on average in 2015 Q1, mainly thanks to improved perceptions of the economic situation and the expected evolution of unemployment in the next twelve months (see Chart III.3.6).

Annual growth in real **government final consumption expenditure** picked up markedly to 4.2% in 2014 Q4 from 0.4% in the previous quarter. Its positive contribution to annual GDP growth thus increased to 0.8 percentage point in this period.

Investment

In 2014 Q4, the gradual acceleration of **fixed investment** growth observed since the start of 2014 halted and the annual growth moderated (see Chart III.3.7). According to seasonally adjusted data, it stood at 4.3%.

19 According to seasonally unadjusted data at constant prices.
20 In 2014 Q4 it accounted for 11%.

Chart III.3.4

DISPOSABLE INCOME

The pick-up in disposable income growth was due almost exclusively to wages and salaries
(annual percentage changes; contributions in percentage points; current prices)

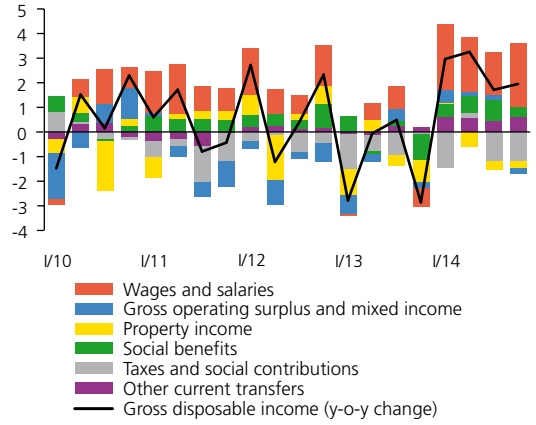


Chart III.3.5

STRUCTURE OF HOUSEHOLD CONSUMPTION

Household consumption expenditure increased in all categories again in 2014 Q4
(annual percentage changes; contributions in percentage points; constant prices)

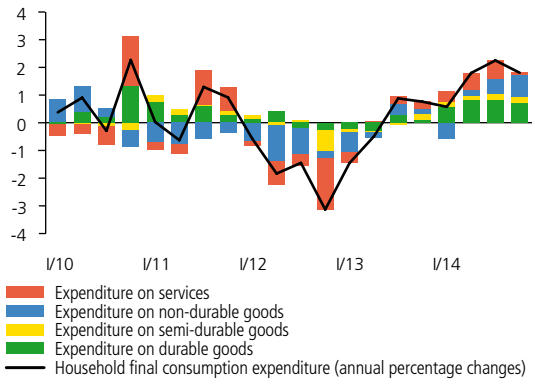


Chart III.3.6

CONFIDENCE INDICATORS

Consumer confidence continued to rise at the start of 2015
(2005 average = 100; source: CZSO)

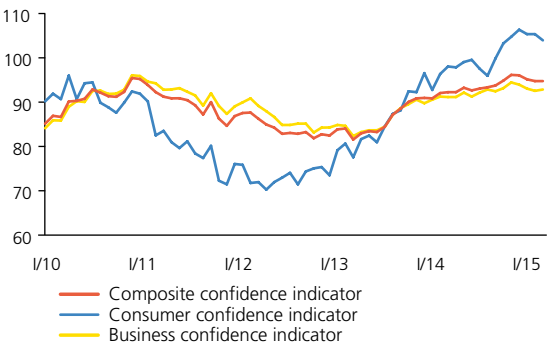


CHART III.3.7

INVESTMENT BY SECTOR

The growth in fixed investment in 2014 Q4 was supported most of all by government investment, as investment growth slowed significantly in the non-financial corporations sector
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)

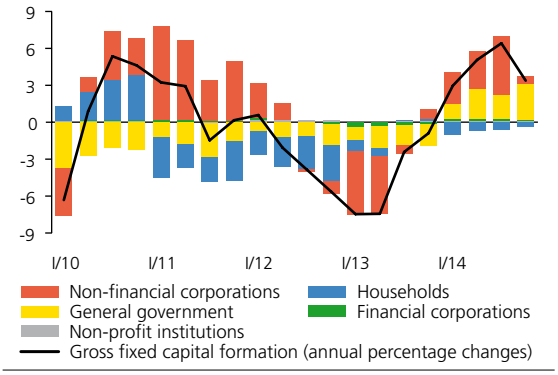


CHART III.3.8

FIXED CAPITAL FORMATION

Investment in machinery and equipment and other buildings and structures recorded the strongest growth
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)

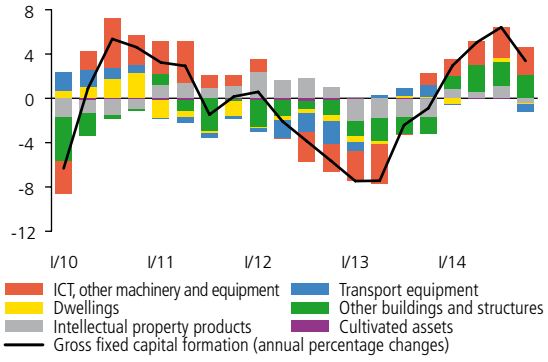
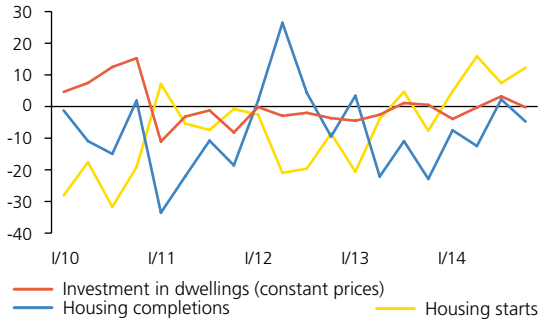


CHART III.3.9

INVESTMENT IN DWELLINGS

The number of housing starts continued to rise at a significant rate in 2014 Q4
(annual percentage changes)



The slowdown in investment activity in 2014 Q4 was due to changes in fixed investment in the **non-financial corporations** sector, whose growth rate slowed by more than 6 percentage points to 1.1 % (see Chart III.3.7). However, investment in machinery and equipment – the main component of investment by non-financial corporations[21] – maintained a buoyant annual rate of growth (see Chart III.3.8), only slightly lower than in the previous quarter (7.4% at constant prices). In addition, non-financial corporations' view of future demand remains positive according to the CZSO's business indicators. The same view is offered by the latest business survey conducted by the CNB and the Confederation of Industry in April, according to which non-financial corporations expect investment to increase at the six-month and twelve-month horizons.

Unlike in previous quarters, total investment at the end of 2014 was thus supported most of all by **government investment**, which surged year on year to 22.4% (from 14.3% in Q3; see Chart III.3.7). The sharp growth in government investment was due to a persisting increased effort to draw on EU funds. The implementation of this investment in 2014 was based on public contracts issued in 2013. An upward trend in procurement activity was also observed to an increased extent throughout 2014, laying the groundwork for strong growth in government investment this year as well.

Investment in the **household sector** continued to fall year on year in 2014 Q4 (by 1.9%; see Chart III.3.7). Investment in dwellings, which accounts for a very significant proportion of the total fixed investment of households, was broadly flat after rising moderately in Q3 (see Chart III.3.9). Some indicators, however, are signalling a gradual improvement in household investment in dwellings in the period ahead. Households' confidence in future growth of the economy and employment, which, despite some fluctuations, is improving gradually 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 12.2%) in the number of housing starts in 2014 Q4 indicates a positive view among developers of future household demand for investment in housing.

The slowdown in economic growth in 2014 Q4 was to a large extent due to a noticeable decline in **inventories**. This was reflected in their contribution to annual GDP growth turning negative (-1.2 percentage points; see Chart III.3.2). According to CZSO data, the annual decline in inventories happened mainly in the category of goods in the wholesale and retail trade sector. This decline was caused by faster sales of cigarettes before their excise duty stamps expire. According to the business survey conducted by the CNB and the Confederation of Industry, inventories in non-financial corporations can be expected to rise again in the next quarter.

21 Investment in machinery and equipment accounts for more than half of investment by non-financial corporations (55% in 2014 Q4).

III.3.2 Net external demand

Net exports of goods and services[22] continued to record high positive figures in 2014 Q4. However, they decreased in year-on-year terms for the third consecutive quarter (see Chart III.3.10) and the decline strengthened slightly in Q4 (to CZK -2.5 billion). In quarter-on-quarter comparison, however, net exports rose slightly (by CZK 3.6 billion). The year-on-year decline in net exports was due to the balance of services, whose surplus has been narrowing since the start of 2014. As in the previous quarter, about half of this decrease was offset by a year-on-year increase in the goods surplus. The contribution of net exports to annual GDP growth was thus slightly negative again in 2014 Q4 (-0.3 percentage point) and increased only marginally compared to Q3 (see Chart III.3.2).

The continuing year-on-year decline in net exports was a result of import growth outpacing export growth. This lead widened somewhat compared to 2014 Q3 (by 0.3 percentage point; see Chart III.3.11). **Total exports** rose by 7.4% year on year, up by only 0.2 percentage point on the previous quarter. This slight upswing was recorded amid flat external demand growth in the Czech Republic's major trading partner countries and was due solely to goods exports, which picked up to 7.3%. By contrast, services exports slowed by comparison with the previous quarter.

The pick-up in growth in **total imports** was more pronounced than that in total exports, with its annual growth rising by 0.6 percentage point to a sizeable 8.5% in 2014 Q4. This was mainly due to high growth in imports of services (almost 16%) and also to fast growth in imports of goods, reflecting the high import intensity of rising Czech exports. The growth rates of the components of goods imports as regards use were roughly balanced. Annual growth in total foreign trade turnover thus rose slightly overall in 2014 Q4, mainly because of buoyant growth in imports.

III.3.3 Output

Growth in **gross value added** at basic prices continued to strengthen gradually in 2014 Q4 (see Chart III.3.12). Its annual growth rate was 3%, up by 0.3 percentage points on the previous quarter. Gross value added growth also accelerated in quarter-on-quarter terms (to 1.2%). This was due to rising external and final domestic demand, whose growth accelerated.

As in previous 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 (see Chart III.3.12), where gross value

22 At 2010 prices, seasonally adjusted.

CHART III.3.10

NET EXPORTS

The year-on-year decline in net exports strengthened slightly in 2014 Q4
(seasonally adjusted data; constant prices)

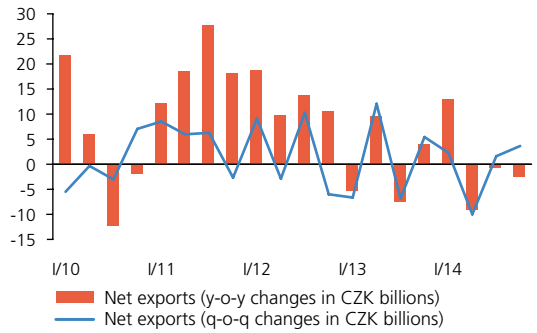


CHART III.3.11

EXPORTS AND IMPORTS

Growth in trade turnover rose slightly in 2014 Q4, with import growth continuing to outpace export growth
(annual percentage changes; percentage points; constant prices; seasonally adjusted data)

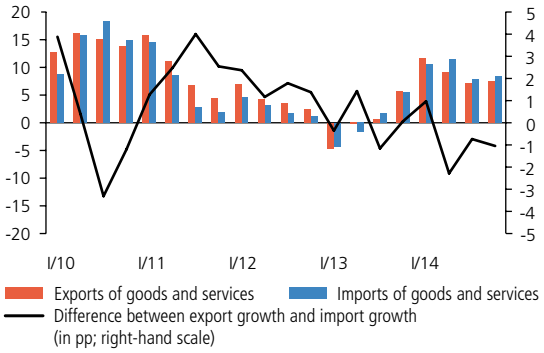


CHART III.3.12

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

Manufacturing, trade and services were again the biggest contributors to the growth in gross value added in 2014 Q4
(annual percentage changes; contributions in percentage points)

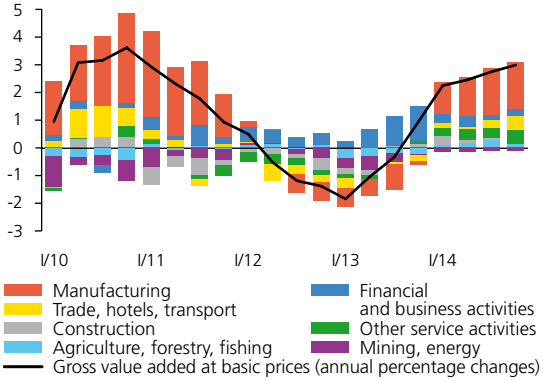


Chart III.3.13

INDUSTRIAL PRODUCTION

Industrial production grew in the first two months of 2015 Q1
(basic index; year 2010 = 100)

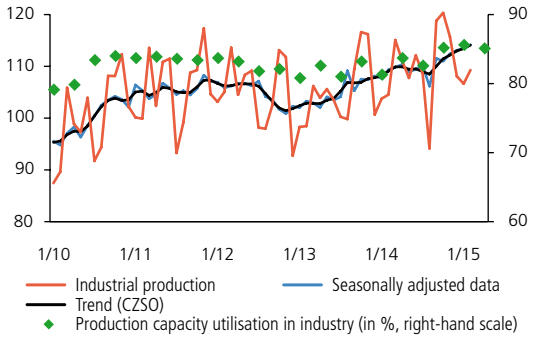


Chart III.3.14

NEW ORDERS IN INDUSTRY

Continued growth in new orders in industry indicates rising production in the period ahead
(annual percentage changes)

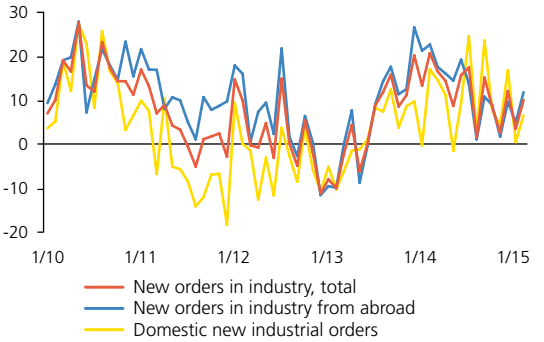
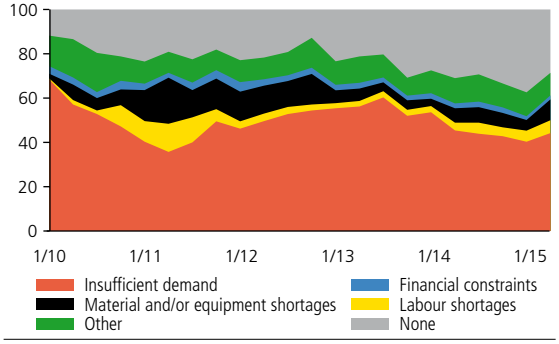


Chart III.3.15

BARRIERS TO GROWTH IN INDUSTRY

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



added growth rose further to almost 7% in 2014 Q4. The contribution of this industry to overall annual growth in gross value added in the economy (1.7 percentage points) was again the largest at the end of 2014.[23] By contrast, gross value added in mining and energy supply continued to fall year on year, but its negative contribution was insignificant.

The continuing gross value added growth in industry in 2014 Q4 was consistent with the data on **industrial production**, which grew by 4.2% year on year in real terms (according to seasonally adjusted data). This was mostly due to production in **manufacturing**, whose year-on-year growth reached 5.6%. In terms of use, production for investment continued to rise the fastest. Its annual growth rate was high (5.8%), although noticeably lower than in the previous quarter. Growth in production for long-term and intermediate consumption slowed as well (to 4.4% and 3.3% respectively). By contrast, annual growth in production for short-term consumption rose considerably, reaching 2.5% in 2014 Q4 (compared to 0.7% in Q3). The growth in manufacturing output was still quite broad-based, with most of the industries under review (around 90%) contributing to it. Production in other branches of industry continued to decline, however.[24]

According to the latest available **monthly indicators**, annual industrial production growth increased on average in January and February 2015 (see Chart III.3.13). However, total **sales from industrial activity** (at current prices) grew more slowly than industrial production. Annual growth in **industrial orders** remained highly volatile in early 2015 (with increases of 3.4% in January and 10% in February) but overall was signalling continued growth in production in the period ahead. The growth in industrial orders was driven primarily by foreign orders; growth in domestic orders was slower (see Chart III.3.14).

According to the April results of the CZSO's business survey, the number of businesses reporting **insufficient demand as a barrier to growth** increased (see Chart III.3.15). The previous several-quarter-long downward trend in the significance of this barrier was thus interrupted. Increases were also recorded for the other barriers to growth monitored in this survey. At the same time, capacity utilisation in manufacturing remained high in April. The stronger perceived barriers in the last survey probably reflected uncertainties generated by the volatility in industrial orders seen at the start of this year.

The overall contribution of **trade and services** to annual gross value added growth was also positive in 2014 Q4 and increased compared to the previous quarter (to 1.2 percentage points; see Chart III.3.12).

23 The share of industry in gross value added growth at basic prices was again the highest, but accounted for only one-third (31.8%) of total value added. The largest amount of value added was created in the trade and services sectors (60%). Construction accounted for slightly more than 5.5% and agriculture for less than 3%.

24 Production in mining and quarrying dropped by 4.2% year on year in 2014 Q4 and production in the gas, heat and air-conditioned air supply industry decreased by 1.8%.

As in the previous quarter, its growth was due to all service sectors except financial services.[25] The biggest contribution was made by trade, transport and hotels and restaurants, where annual value added growth rose to 2.8%. The latest February data on retail sales are still favourable, with the non-automotive segment making a bigger contribution to growth than the automotive segment.

The contribution of **construction** to gross value added growth was negligible in 2014 Q4, as its annual growth fell to a very low level (0.5%). The CZSO's latest available monthly data for January and February suggest a positive change in trend, fostered by both building construction and civil engineering. Construction output recorded year-on-year growth in both these categories at the start of 2015, with the growth in civil engineering being more pronounced (10.7% in February). The sharp fall in the approximate value of building notifications (of 14.7% in February), even though their number is rising, remains a risk to the recovery in construction output.

An **international comparison of economic sentiment**, based on the latest available data for March, shows a renewed upward tendency in these business indicators in Germany and the EU. In the Czech Republic, this indicator moved in the opposite direction, recording a halt in its upward trend and a gradual decrease in values in early 2015 (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 1.6% in 2014 Q4 (see Chart III.3.17). Relatively low quarterly growth in economic activity observed in 2014 Q4 resulted in stagnation of the output gap, which thus remained significantly negative (-2.7% of potential output; see Chart III.3.18). This method suggests a further slight pick-up in potential output growth this year and the next to 2%.

The contribution of productivity to potential output growth will increase **over the forecast horizon**, amid a broadly flat aggregate contribution of capital and employment (see Chart III.3.19). The output gap should close gradually, nearing zero at the end of 2016.

An alternative estimate using the **HP filter**[26] indicates a similar growth rate of the output gap (1.7% in 2014 Q4) as that calculated using the production function. Under this method, the output gap is currently less negative (by more than 1 percentage point) and, as a result, will close as early as 2016 H2. A calculation using the **Kalman filter** also

25 Their negative contribution to annual gross value added growth was -0.2 percentage point in 2014 Q4.
26 The estimate using the HP filter used coefficient λ = 1,600.

CHART III.3.16

ECONOMIC SENTIMENT

Economic sentiment fell slightly in the Czech Republic, but recorded renewed growth in Germany and the EU
(long-term average = 100; seasonally adjusted data; source: Eurostat)

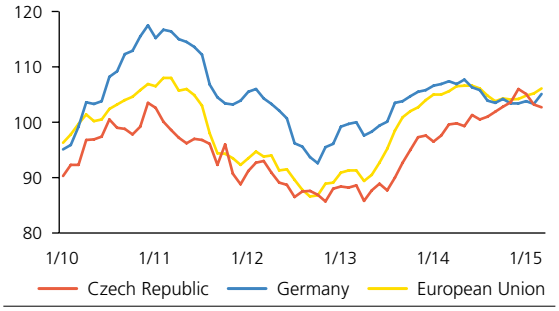


CHART III.3.17

POTENTIAL OUTPUT

The rate of growth of potential output was just above 1.5% in 2014 Q4 according to all the methods used
(annual percentage changes)

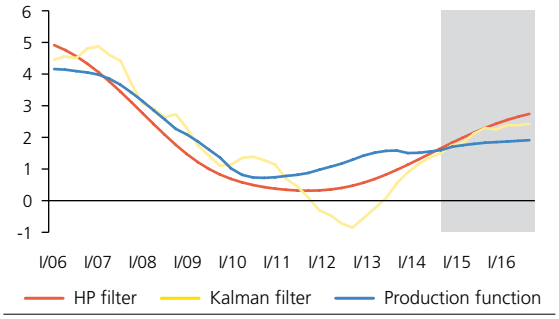


CHART III.3.18

OUTPUT GAP

The output gap will gradually close
(in % of potential output)

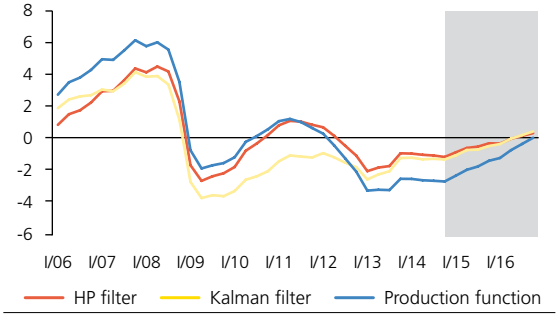
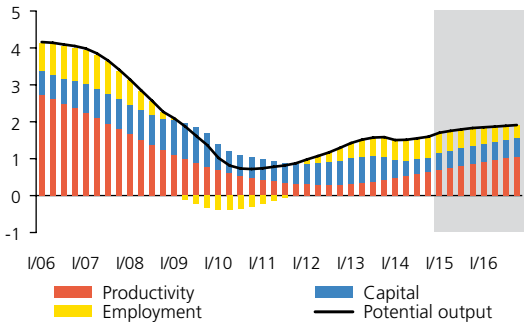


CHART III.3.19

CONTRIBUTIONS TO POTENTIAL OUTPUT GROWTH

The contribution of productivity will gradually increase over the forecast horizon

(production function; annual percentage changes)



shows a similar annual potential output growth rate in 2014 Q4 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.

III.4 THE LABOUR MARKET

The labour market continued to be positively affected by ongoing growth in economic activity in 2014 Q4. Growth in total employment and the number of employees converted into full-time equivalents picked up. Amid a pronounced annual rise in employment, accompanied by only a slight increase in the labour force, the general unemployment rate went down further. The share of unemployed persons decreased in both 2014 Q4 and 2015 Q1. Year-on-year average wage growth picked up due to wages in the non-business sector, but the growth in the business sector remained subdued. Whole-economy labour productivity growth moderated considerably. Unit labour costs recorded an increase, as slower GDP growth was accompanied by faster growth in the wage bill.

III.4.1 Employment and unemployment

Total employment[27] rose noticeably further in 2014 Q4 (see Chart III.4.1). This was suggested by a strengthening of its annual growth compared to the previous quarter (by 0.5 percentage point to 1.2%) as well as a sizeable increase in quarter-on-quarter comparison (of 0.6% when adjusted for seasonal effects). The pick-up in annual employment growth was fostered mainly by a sizeable increase in the number of employees. However, the number of entrepreneurs rose at only a slightly lower pace.

Employment continued to grow fastest in the secondary **sector** (see Chart III.4.2), most notably in industry owing to continued growth in its output. Employment in the tertiary sector also grew faster in 2014 Q4. In the **primary sector**, the rapid annual decline in employment observed in previous quarters almost halted.

Employment in the **secondary sector** continued to grow at a slightly lower rate (1.8% year on year) in 2014 Q4 than in previous quarters. Although the number of employed persons continued to increase most rapidly in manufacturing, employment also rose fast in the water supply and sewerage-related services industry. The annual decline in employment in construction and mining and quarrying deepened further. According to the latest data for January and February, the registered number of employees[28] rose further in industry (by 3.0% and 3.2% year on year respectively), while continuing to decrease in construction (by -3.1% and -1.7% respectively).

CHART III.4.1

LABOUR MARKET INDICATORS

Growth in total employment and in the number of employees converted into full-time equivalents picked up, but nominal unit labour costs also rose faster
(annual percentage changes)

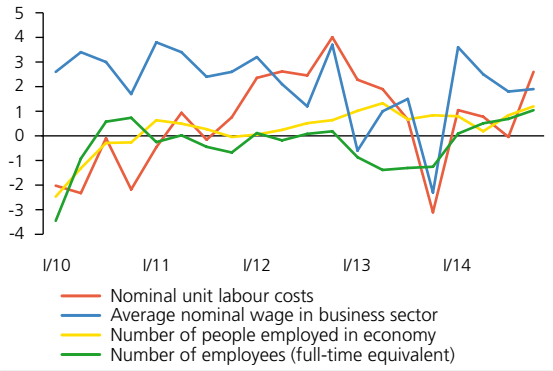
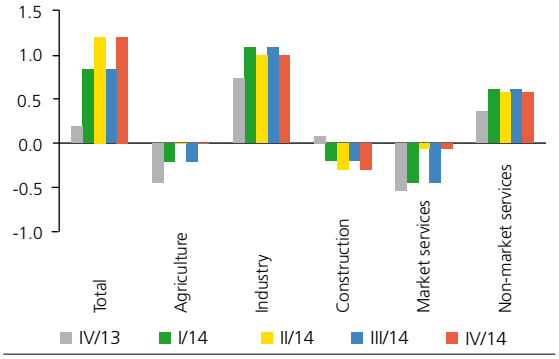


CHART III.4.2

EMPLOYMENT BREAKDOWN BY BRANCHES

The continuing growth in employment was due to industry and non-market services, as employment continued to fall in other branches
(contributions in percentage points to annual change; selected branches; source: LFS)



27 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.

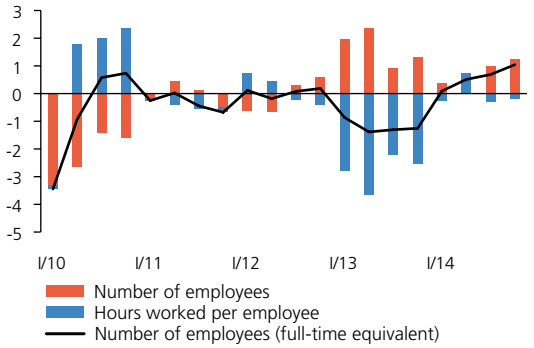
28 Corporations with 50 employees or more, excluding agency workers.

CHART III.4.3

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

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

(annual percentage changes; contributions in percentage points)



A further pick-up in annual employment growth in the **tertiary sector** (from 0.3% in 2014 Q3 to 0.9% in 2014 Q4) was mainly due to a pronounced slowdown in the decline in employment in market services, while employment in non-market services continued to grow at roughly the same pace as in the previous quarter. As regards non-market services, the number of employed persons increased most of all in public administration and defence and health and social care.[29] The slowdown in the year-on-year decline in employment in market services was mainly due to financial intermediation and insurance and wholesale and retail trade, where the decrease in the number of employees moderated to around one-half compared to the previous quarter. Also significant was renewed growth in employment in professional, scientific and technical activities after a previous decline. In addition, employment continued to rise in information and communication activities and hotels and restaurants, albeit at a slower pace than in the previous quarter.

With economic activity continuing to rise, year-on-year growth in the **number of employees converted into full-time equivalents** also went up in 2014 Q4 (to 1% year on year; see Chart III.4.3). This was due most of all to the business sector and, within it, manufacturing in particular, and, to a lesser extent, to administration and supporting service activities thanks to a continued increase in the number of agency workers.[30] As regards the non-business sector, the converted number of employees continued to grow mainly in public administration (especially at labour offices) and defence. In 2014 Q4, the increase in this employment indicator at the whole-economy level was again due exclusively to growth in the number of employees amid slightly shorter average hours worked per employee.

CHART III.4.4

UNEMPLOYMENT INDICATORS

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

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

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 again 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 four 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 persisting long-running decline in the converted indicator in **construction** was due mainly to a decline in the number of employees.

Amid a pronounced annual increase in employment, accompanied by only a slight increase in the labour force, the **general unemployment rate**[31] decreased further in 2014 Q4 (to 5.9%; see Chart III.4.4). The slight year-on-year rise in the labour force coupled with an even more

29 The number of employees rose by 7,500 year on year in public administration and defence and by 9,400 in health and social care.

30 The converted number of employees increased by 22,300 year on year in manufacturing and by 10,300 in administration and supporting service activities.

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

pronounced decline in the population resulted in a further increase in the **rate of economic activity**[32] to the highest level in the history of the Czech Republic (74.0% 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 February figures, the seasonally adjusted general unemployment rate was 5.6% and the rate of economic activity rose slightly further.

The **share of unemployed persons**[33] (MLSA) also continued to decrease in 2014 Q4. This decline has been observed since the start of 2014 (see Chart III.4.4). It deepened further to 6.9% (seasonally adjusted) in 2015 Q1 owing to a larger decrease in the number of available job applicants than in the population in the given age group.

A pronounced improvement of the labour market situation was also indicated by a continued shift along the **Beveridge curve**[34] 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 and a declining number of new job applicants) coupled with growth in the number of vacancies (see Chart III.4.5).

III.4.2 Wages and productivity

Average nominal wage growth remained subdued in 2014 Q4, despite accelerating. It was 0.5 percentage point higher than in the previous quarter, at 2.3% (see Chart III.4.6). The acceleration of annual growth in the average nominal wage was due mainly to the non-business sector, since wage growth in the business sector was only marginally faster. With annual inflation low, the **real average wage** increased by 1.8% (see Table III.4.1).

As in 2014 Q3, annual nominal wage growth in the **business sector** did not exceed 2% in the last quarter of 2014 (see Table III.4.1). 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.[35] When

32 The rate of economic activity is defined as the ratio of employed and unemployed persons to the population in each age category.
33 The share of persons unemployed is the ratio of available job applicants aged 15–64 to the population of the same age.
34 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.
35 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. For details see section III.4 of Inflation Report IV/2014.

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)

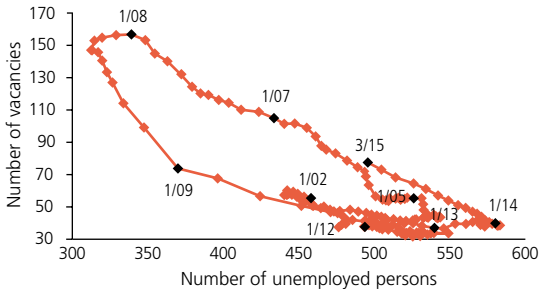


CHART III.4.6

AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Productivity growth slowed in 2014 Q4, while real and nominal wage growth accelerated slightly
(annual percentage changes)

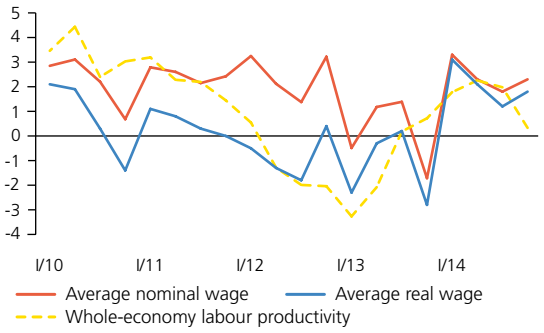


TABLE III.4.1

WAGES, PRODUCTIVITY, UNIT LABOUR COSTS

Growth in the average nominal wage rose noticeably only in the non-business sector, while remaining subdued in the business sector
(annual percentage changes)

	I/14	II/14	III/14	IV/14
Average wage in Czech Republic				
nominal	3.3	2.3	1.8	2.3
real	3.1	2.1	1.2	1.8
Average wage in business sector				
nominal	3.6	2.5	1.8	1.9
real	3.4	2.3	1.2	1.4
Average wage in non-business sector				
nominal	2.2	1.7	1.7	3.8
real	2.0	1.5	1.1	3.3
Whole-economy labour productivity	1.8	2.3	2.0	0.3
Nominal unit labour costs	1.0	0.8	0.0	2.6

CHART III.4.7

PRODUCTIVITY IN BRANCHES

Labour productivity growth slowed in industry in 2014 Q4, but accelerated slightly in other branches
(annual percentage changes)

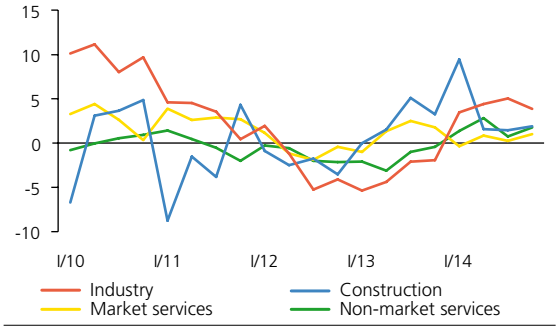
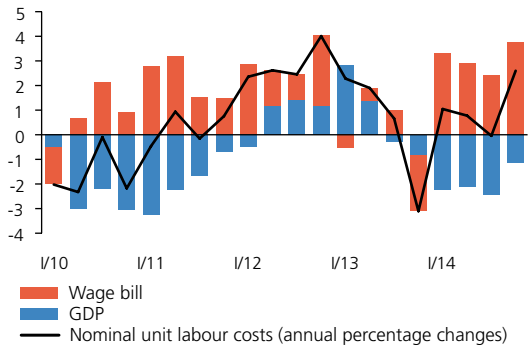


CHART III.4.8

UNIT LABOUR COSTS

Nominal unit labour costs increased noticeably in 2014 Q4 due to higher growth in the wage bill than in GDP
(contributions in percentage points; annual percentage changes)



adjusted for this extraordinary effect, annual growth in the average wage in the business sector was therefore even more subdued in 2014 Q4 (0.6%), in an environment of continued economic growth.

This generally low annual growth in the average nominal wage was a result of very mixed wage growth across the **branches of the business sector**. The fastest annual average wage growth was recorded in education (4.6%) and health and social care (3.9%), while manufacturing saw noticeably slower growth (3.2%). The latest January and February figures on wages in industry and construction suggest continued very subdued wage growth in 2015 Q1, too.[36]

By contrast, annual average wage growth in the **non-business sector** rose significantly in 2014 Q4 (to 3.8%), mainly due to growth in wages in central government (4.3%). Annual average wage growth was highest in public administration and defence and education (5% and 3.2% respectively). Owing to the above-mentioned pick-up in average wage growth and low inflation, annual growth in the real average wage in the non-business sector rose to 3.3% in 2014 Q4 (see Table III.4.1).

The marked moderation in annual growth in real GDP and faster growth in employment[37] were reflected in a significant slowdown in annual growth in **whole-economy labour productivity**[38] in 2014 Q4 (to 0.3%; see Chart III.4.1). Productivity grew fastest in industry (by 3.9%),[39] where an almost 5% increase in value added was accompanied by a rise in employment of just 1%; however, the growth slowed compared to the previous quarter. Productivity growth in the other monitored sectors was slower than in industry: below 2% in non-market services and construction and just 1% in market services. **Hourly labour productivity** grew faster than whole-economy productivity in 2014 Q4. It increased by 1.2% year on year at the end of the year after stagnating in the previous quarter of 2014.[40] It rose most of all in industry, but increases were also recorded for the other sectors, where it had declined in the previous quarter.

In 2014 Q4, a marked pick-up in the wage bill and slower growth in economic activity[41] resulted in a rise in annual growth in **nominal unit wage costs** (to 2.6%; see Chart III.4.8). However, nominal unit wage costs in industry and construction still declined year on year, albeit more modestly than in the previous quarter (by 0.3% in industry). The increase in unit labour costs was attributable to the services sector and, within it, non-market services, where nominal unit wage costs rose by 2.6% (mainly because of a pronounced rise in the average wage).

36 Annual growth in the average wage in industry amounted to just 2.0% in February.
37 According to the CZSO's national accounts.
38 Productivity is calculated on the basis of seasonally unadjusted data.
39 Annual productivity growth in manufacturing amounted to 5.0%.
40 Amid GDP growth of 1.2% and an unchanged number of hours worked.
41 The wage cost-output ratio as measured by nominal unit wage costs was calculated on the basis of seasonally unadjusted data.

BOX 2
Labour market developments from the perspective of the NAIRU and the cyclicality of the unemployment rate and wages

One of the concepts used to analyse inflation pressures stemming from the labour market is **comparison of the unemployment rate and the NAIRU**.[42] The NAIRU is an unobserved variable, so this box deals with its estimation using the Kalman filter. The current estimate suggests that the NAIRU declined during 2013 and 2014, so the current unemployment rate is still above the NAIRU despite having gone down significantly (see Chart 1). This estimate reflects the fact that the renewed economic growth has so far not been accompanied by significant inflation pressures, the output gap is still negative and nominal wage growth in the business sector remains subdued. The falling NAIRU meanwhile indicates greater flexibility of the domestic labour market, probably due among other things to growth in part-time employment and increased use of agency workers. However, the labour market recovery has caused the general unemployment rate and the NAIRU to converge significantly. This suggests that wage growth is likely to accelerate in the future.

The cyclicality of the real wage gap[43] **and the unemployment rate** displayed marked correlation in the past. However, the fall in economic activity during the economic crisis led to stronger adjustment of the labour market via falling employment (and hence also growth in the unemployment rate) than via real wages. Amid a marked slowdown in nominal wage growth, the real wage rigidity was also due to a sizeable temporary decline in net inflation in 2009. The subsequent renewed growth in employment and the related gradual closure of the unemployment gap was accompanied by only moderate growth in the average nominal wage amid renewed positive net inflation. This led to the real wage gap turning negative in 2012. The real wage gap did not start to narrow until the second half of 2014 (see Chart 2).

The renewed growth in average real wages during 2014 amid relatively low **nominal wage growth** raises the question of to what extent wage growth was affected by cyclical factors associated with the fast growing employment seen in past quarters. Granular data from the Average Earnings Information System (AEIS) for companies with 250 employees or more

CHART 1 (BOX)

GENERAL UNEMPLOYMENT RATE AND NAIRU

The gap between the NAIRU and the general unemployment rate has been narrowing in recent years
(annual percentage changes; source: CZSO; CNB calculation)

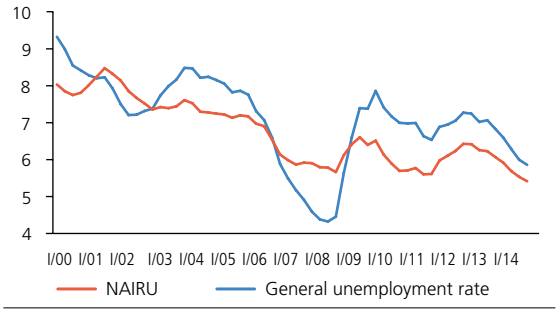
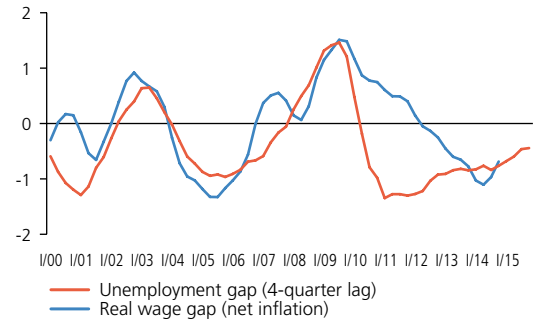


CHART 2 (BOX)

REAL WAGES AND EMPLOYMENT

The reaction of real wages to the economic crisis was much more rigid than that of the unemployment rate
(deviation from potential in per cent; source: CZSO; CNB calculation; real wages adjusted by net inflation)



42 The NAIRU (non-accelerating inflation rate of unemployment) is the unemployment rate at which the labour market begins to generate inflationary pressures stemming from a shortage of suitable labour. This leads to upward pressure on wages and, in turn, to accelerating inflation.

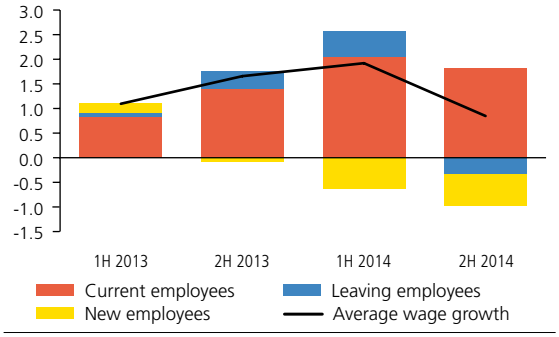
43 Net inflation is used to calculate real wages from nominal wages in the business sector adjusted for estimated tax optimisation effects.

CHART3 (BOX)

CONTRIBUTIONS TO WAGE GROWTH ACCORDING TO AEIS

Average wage growth in companies with 250 employees or more was noticeably depressed in 2014 by lower wages among new employees

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



indicate that wage growth was reduced quite significantly last year by the recruitment of new employees (see Chart 3). New recruits start work at lower wage levels than current employees (up to 30% lower) and thus reduce the reported average wage.[44] For compositional reasons, therefore, the marked labour market recovery is tending to reduce average wage growth at the moment, whereas in the medium run it should cause it to accelerate due to a shortage of labour.

44 Leaving employees also have significantly lower wages than current employees (around 10% lower). However, their average wage growth usually exceeds that for current employees. The number of leaving employees more than doubled compared to the previous period. This caused their contribution to average wage growth in 2014 H2 to turn negative.

III.5 FINANCIAL AND MONETARY DEVELOPMENTS

The annual growth rates of M2 and M3 increased slightly further during 2015 Q1. The growth in monetary aggregates was again due mainly to household deposits. This was reflected in continued growth in households' net financial assets. The growth rate of deposits of non-financial corporations increased. This was accompanied by an increase in their acid-test ratio. Growth in loans increased, while banks' net external assets decreased further. The growth rate of loans to non-financial corporations edged up and loans to households recorded stable growth. According to banks' perceptions, the volume of loans reflected growth in demand for loans in all segments of the credit market and a further easing of credit standards due to increased competition, and a decline in bank financing costs. Client interest rates on new loans mostly fell slightly. In 2015 Q1, the koruna was flat against the euro and depreciated against the dollar. Asking and transaction prices of residential property recorded further annual growth. Asking prices rose significantly faster in Prague than in the rest of the Czech Republic.

III.5.1 Money

M2 growth has been rising gradually in recent months. The annual growth rate of M2 increased further to 5.3% in February 2015 (see Chart III.5.1). On the bank asset side, the faster M2 growth mainly reflected higher growth in domestic loans, which more than offset a deepening decline in net external assets. Among other things, this reflected recent increased interest of domestic investors in foreign debt securities. In 2014 Q4, the money stock slightly outpaced nominal GDP for the first time in 2014. This was reflected in a renewed decline in the velocity of money. According to the currently known data, the annual growth rate of **M3** also continued to increase gradually during 2015 Q1, reaching 5.9% in February. M3 growth in the Czech Republic was about two percentage points above the euro area average.

As in the euro area, growth in broader money in the Czech Republic is being fostered by an increase in the **highly liquid overnight deposits** included in M1. In conditions of low interest rates, a growing economy and low inflation, the annual growth rate of M1 increased further at the start of this year, reaching a sizeable 11.8% in February (see Chart III.5.1). This reflected increased demand of households and non-financial corporations for overnight deposits and, to a lesser extent, for currency (see Chart III.5.2). By contrast, other short-term and long-term deposits continued to decline year on year despite continuing efforts by some banks to make them more attractive.

Turning to the **sector structure of deposits**, M2 growth was fostered mainly by household deposits (see Chart III.5.3). However, the growth rate of household deposits dropped to 5.1% in 2015 Q1, following

CHART III.5.1

MONETARY AGGREGATES

Money aggregate growth continued to rise gradually in 2015 Q1
(annual percentage rates of growth)

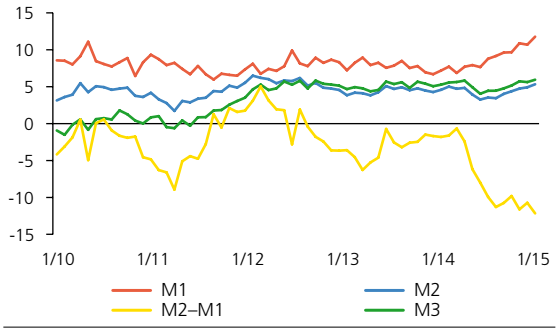


CHART III.5.2

MAIN COMPONENTS OF M2

Growth in overnight deposits strengthened further in conditions of low interest rates, a growing economy and low inflation
(annual flows in CZK billions)

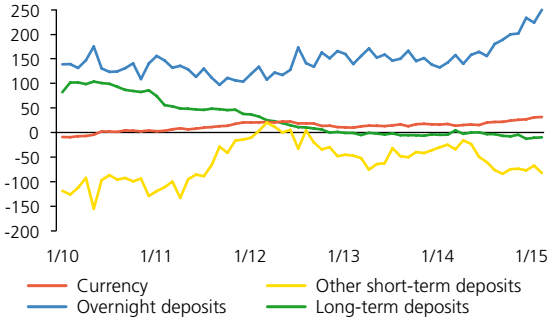


CHART III.5.3

DEPOSIT STRUCTURE OF M2

M2 growth was fostered most of all by household deposits, while the contribution of deposits of non-financial corporations increased
(contributions in percentage points; annual percentage rates of growth)

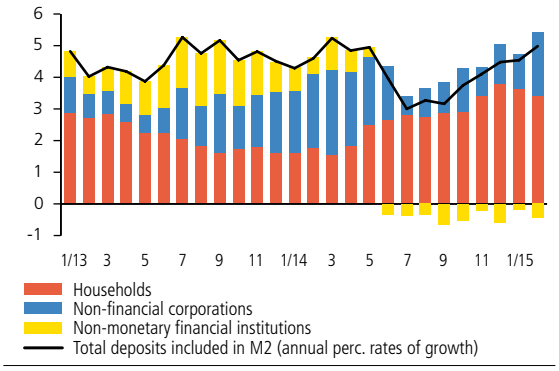


Table III.5.1

CHANGES IN BANKS' CREDIT CONDITIONS

Banks further relaxed their credit standards and perceived growth in loan demand in all segments of the credit market in 2015 Q1

(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	-44 (-61)	-46	-24	33 (1)
II/15	(-41)			(72)
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	-17 (-18)	-41	22	62 (0)
II/15	(-31)			(22)
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	-56 (-31)	-34	25	30 (20)
II/15	(-40)			(26)

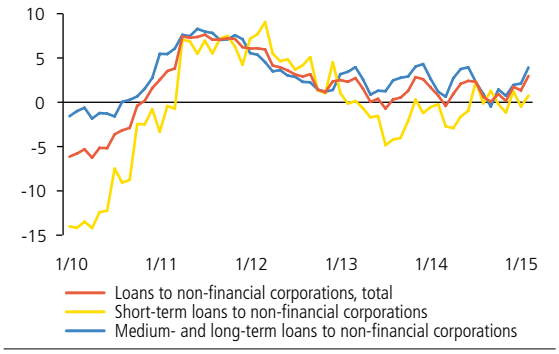
Note: Net percentages are calculated as the difference between the percentage share of loans provided by banks reporting that standards/conditions have been tightened (or demand increased) and the percentage share of loans provided by banks reporting that standards/conditions have been eased (or demand 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 are given in parentheses.

Chart III.5.4

LOANS TO NON-FINANCIAL CORPORATIONS

Growth in corporate loans increased

(annual percentage rates of growth)



a previous increase. On the other hand, growth in deposits of non-financial corporations rose to 7.4%. This was accompanied by an increase in the acid-test ratio of corporations. The share of foreign currency deposits in total resident deposits has recently been rising gradually in both sectors, although it is a still at a low level of around 10% (compared to around 8% at the end of 2013).

III.5.2 Credit

The annual growth rate of **loans to the private sector** increased slightly in 2015 Q1. In February, it stood at 5.1%, up by 2 percentage points on the same period a year earlier. The growth rate of corporate loans increased amid relatively stable growth in loans to households. According to the bank lending survey, demand for loans rose in all segments of the credit market in 2015 Q1, more so than banks had expected. This indicates continuing economic growth. At the same time, banks eased their credit standards due to increased competition, lower financing costs and more favourable risk perceptions. This was reflected in more favourable interest and non-interest conditions applied by banks to new loans, with average interest margins decreasing most across the board (see Table III.5.1).

Loans to the private sector in the **euro area** have been recovering since 2014 Q1. Their annual growth rate adjusted for securitisation was 0.6% in February 2015. This reflected a moderation of the decline in loans to non-financial corporations (to -0.4%) amid relatively stable growth in loans to households (1%). This was fostered by a gradual decrease in client interest rates and growing demand for and supply of loans. Similarly as in the Czech Republic, the results of the bank lending survey in the euro area suggest an overall easing of credit standards and growing demand in all credit market segments in 2014 Q4. Non-financial corporations' demand for loans grew as a result of fixed investment financing and other financing needs (e.g. mergers and acquisitions and debt restructuring). Increased competition between banks fostered an easing of credit standards. At the same time, lower bank financing costs associated with the ECB's monetary policy measures gradually passed through to a decline in client interest rates. Interest rates on loans to corporations and households (as expressed by the cost-of-borrowing indicator) have fallen by around 0.4 percentage point since mid-2014 (see section III.5.3 and Chart III.5.15).

Domestic annual growth in **loans to non-financial corporations** rose to 3% in February 2015 (see Chart III.5.4). However, the growth rate of corporate loans has been long volatile, due mainly to movements in long-term loans to developers and the energy sector. Growth in long-term loans accelerated in 2015 Q1 in the case of both koruna and foreign currency loans. The interest of Czech corporations in foreign currency loans thus persists. The share of foreign currency loans, used mainly by developers and exporters as a form of natural hedging

against exchange rate risk, has recently been fluctuating above its long-term average and currently stands at 22% of total corporate loans. The annual growth rate of these loans increased to around 7%, but it remains well below the peak of around 18% recorded at the end of 2013. Growth in new koruna loans to corporations has recently been rising (see Chart III.5.5).

Banks perceived an overall increase in **demand for loans by corporations** for the fourth consecutive quarter in 2015 Q1. This was due to financing of fixed investment, mergers and acquisitions, business and debt restructuring, and working capital and inventories. By contrast, corporate financing through bond issues and the use of internal resources of corporations had an adverse effect on demand for loans. Demand for loans grew most strongly among medium-sized and small corporations and in the case of long-term loans. Demand for short-term loans increased less broadly, partly due to higher borrowing from financial corporations engaged in lending (e.g. leasing and factoring). Banks expect demand to grow further in 2015 Q2 (see Table III.5.1).

Investment loans, which account for 56% of total corporate loans, edged up by 1.6% in February 2015 (see Chart III.5.6). This rise was fostered by growth in loans to industry (manufacturing and energy), while, unlike in the past, loans to developers recorded a decrease.

Banks' **credit standards** applied to corporate loans were eased further in 2015 Q1 due to competition from other banks and more favourable risk perceptions (regarding the overall future economic situation, the outlook for individual branches and companies and, for smaller companies, the risks associated with required collateral). A more favourable liquidity situation and lower financing costs of banks acted in the same direction (see Table III.5.1). The easing of standards was reflected in more favourable interest and non-interest terms and conditions applied by banks to new loans. The easing of standards and terms and conditions affected all company size categories and all types of loans. Banks expect their credit standards to ease further in 2015 Q2 (see Table III.5.2).

Czech corporations' interest in **loans from non-resident banks** has recently been low due to lower rates in the Czech Republic than in the euro area. Nevertheless, interest rates on corporate loans in the euro area have been gradually declining towards the level in the Czech Republic (see section III.5.3 and Chart III.5.15). Loans (net borrowing) from foreign banks decreased by about 12% year on year in 2014 Q4. On the other hand, the amount of loans within direct investment taken by corporations has recently increased (see Chart III.5.7).

A significantly elevated growth rate of koruna and foreign currency loans persisted in 2015 Q1 among **non-monetary financial institutions**, especially financial intermediaries (e.g. leasing and factoring corporations). The annual rate of growth of loans to these institutions was around 23% in February 2015.

CHART III.5.5

NEW KORUNA LOANS TO NON-FINANCIAL CORPORATIONS

Growth in new koruna loans to non-financial corporations has recently been rising

(including overdrafts; annual percentage changes; interest rate in %)

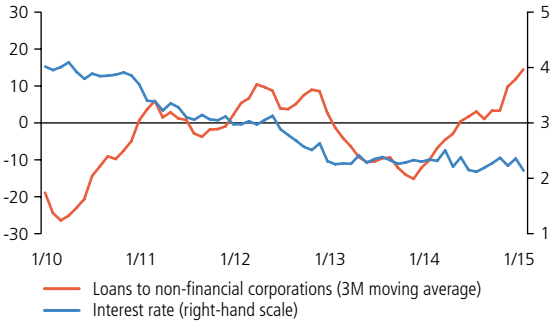


CHART III.5.6

LOANS TO CORPORATIONS FOR FUNDING FIXED INVESTMENT

Investment loans increased mainly in industry in 2015 Q1

(contributions in percentage points; annual percentage rates of growth; annual percentage changes)

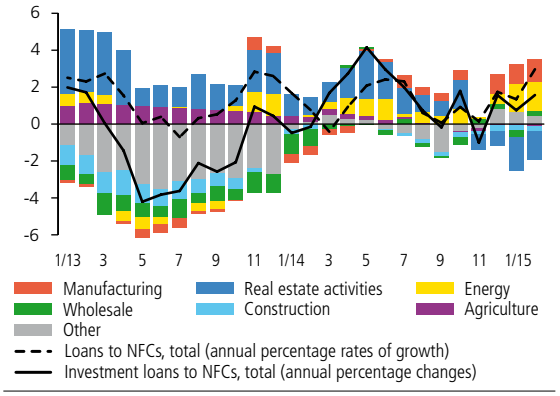


TABLE III.5.2

CREDIT STANDARDS AND SELECTED CREDIT CONDITIONS BY CORPORATION SIZE

Banks eased their interest and non-interest conditions similarly for both small and large enterprises

(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	II/15[a)]
Credit standards								
Small and medium-sized enterprises	13	4	0	-26	-4	-37	-44	(-44)
Large corporations	22	0	0	-46	-21	-44	-44	(-41)
Banks' average margin on loans								
Small and medium-sized enterprises	-1	-16	0	-27	-27	-29	-44	
Large corporations	18	-8	-18	-46	-46	-46	-46	
Size of loans								
Small and medium-sized enterprises	13	3	0	0	0	-27	-18	
Large corporations	29	10	-4	-4	-21	-44	-18	
Collateral requirements								
Small and medium-sized enterprises	26	9	9	0	-21	-37	-18	
Large corporations	25	1	-8	-35	-35	-35	-18	

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.

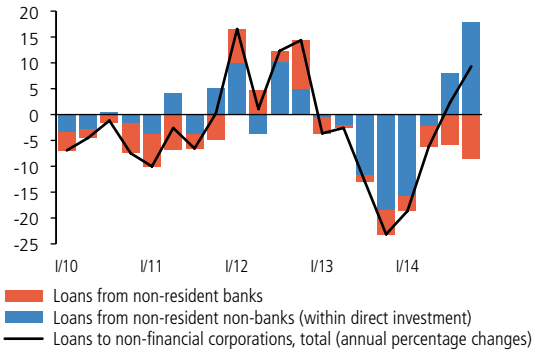
a) Banks' expectations for the current period reported in the I/15 survey are given in parentheses.

CHART III.5.7

LOANS TO NON-FINANCIAL CORPORATIONS FROM ABROAD

Loans provided to non-financial corporations by non-resident banks decreased, while loans within direct investment have recently increased

(annual percentage changes; contributions in percentage points)



Note: Loans (net borrowing) from non-resident banks are loans included in other investment in the balance of payments and loans from non-resident non-banks comprise loans and other capital within direct investment.

CHART III.5.8

LOANS TO HOUSEHOLDS

Growth in loans to households increased slightly

(annual percentage rates of growth; annual percentage changes)

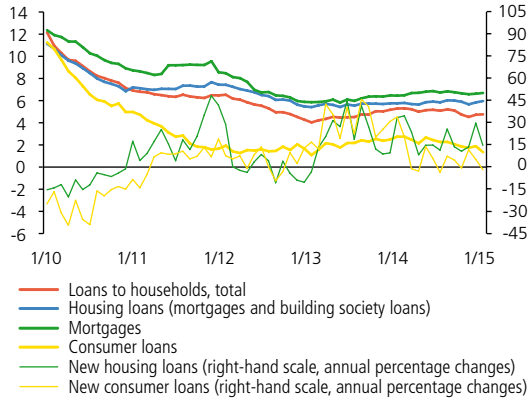
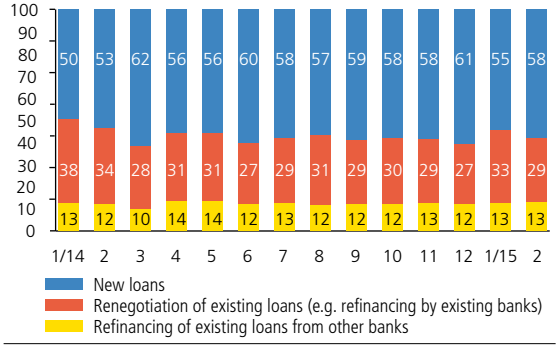


CHART III.5.9

STRUCTURE OF NEW LOANS FOR HOUSE PURCHASE

The share of new loans for house purchase net of refinancing and other renegotiation increased year on year

(new business; shares in %)



The annual growth rate of **loans to households** rose slightly in 2015 Q1, reaching 4.8% in February 2015 (see Chart III.5.8). This reflected higher growth in **loans for house purchase** amid a continuing decline in client interest rates. Mortgages are rising at a fairly steady pace close to 7% amid a slowing decline in building society loans. New loans for house purchase have recently been increasing at a double-digit rate (see Chart III.5.8). Households' interest remains concentrated in loans with a fixation of over one year and up to five years amid a gradual rise in the share of loans with a fixation of over five years and up to ten years. The share of refinancing of existing loans from other banks stabilised at around 13% and the share of renegotiated loans at about 29% (see Chart III.5.9).

According to the bank lending survey, **households' demand for loans for house purchase** rose in more than half of the banking market in 2015 Q1. Demand was positively affected by improved prospects for the residential property market and consumer confidence, in line with an increased number of housing starts. **Banks' credit standards** eased in a part of the market due mainly to lower bank financing costs and increased competition. Expectations regarding the overall economic situation and the prospects for the residential property market acted in the same direction. This was reflected in a further decline in average interest margins and banks' LTV requirements. Banks' expectations for 2015 Q2 indicate a further easing of standards and growth in demand. Increased demand for mortgages is confirmed by the March Hypoindex data, according to which the amount of mortgages continued to increase at a double-digit rate and interest rates decreased further.

Despite growth in household consumption, the annual growth rate of **consumer credit** slowed, reaching 1.3% in February 2015 (see Chart III.5.8). This reflected a decrease in credit card debt and non-specific-purpose credit. Specific-purpose consumer credit increased but its growth rate has recently slowed. According to banks' perceptions, household demand for consumer credit increased. Demand was positively affected by financing of durable goods, increased consumer confidence and consolidation of old consumer credit. 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 and more favourable risk perceptions regarding the expected future overall economic situation and the creditworthiness of some clients. This was reflected in a further decrease in average interest margins. Banks expect a further easing of standards in 2015 Q2, accompanied by expected growth in demand for consumer credit.

Total household debt stabilised last year, accounting for around 66% of total annual nominal disposable income in 2014 Q4. This reflected modest income growth accompanied by slower annual growth in the total financial liabilities of households (see Chart III.5.10). With client interest rates gradually declining, the net bank interest burden on

Czech households (including interest expenses and income on bank loans and deposits) has recently fallen to 1.6% of disposable income, below 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 2015 Q1 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 the end of 2016, i.e. over the entire forecast horizon. At its meeting in February, the Bank Board decided unanimously to leave **key interest rates** unchanged at their current level, i.e. at technical zero[45] (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 February, the risks of the previous forecast were assessed as being balanced, although the degree of uncertainty had 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 and that it stood 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. At its meeting in March, the Bank Board also decided unanimously to leave key interest rates unchanged. At the same time, it confirmed the above foreign exchange commitment. At the March meeting, the balance of risks to the previous forecast was assessed as being anti-inflationary. The Board stated again that the CNB would not discontinue the use of the exchange rate before the second half of 2016. In addition, the Board emphasised again that it was ready to move the level of the exchange rate commitment if needed. Given the aforementioned anti-inflationary balance of risks to the forecast, the probability of such a step had increased compared to the February Bank Board meeting.

At its monetary policy meeting on 7 May 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.

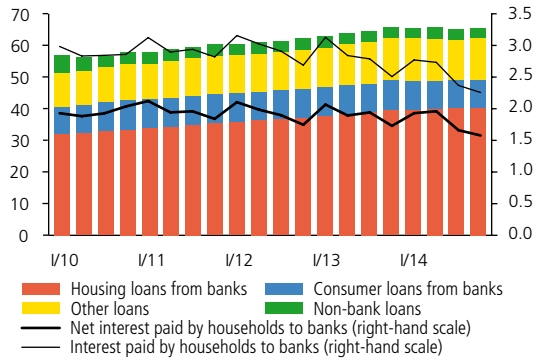
45 The two-week repo rate and the discount rate were set at 0.05% and the Lombard rate at 0.25% with effect from 2 November 2012.

CHART III.5.10

HOUSEHOLD DEBT

Households' debt-to-income ratio stabilised and their interest burden fell further

(quarterly data; percentage ratios to gross disposable income)



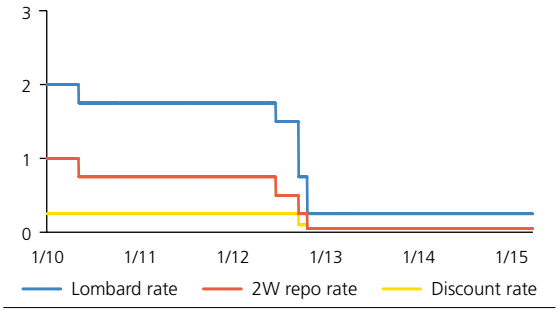
Note: Net interest paid represents the difference between households' loan interest expenses and bank deposit interest income. Interest paid consists of households' borrowing-related interest expenses.

CHART III.5.11

CNB KEY RATES

The CNB left its key interest rates at "technical zero" in 2015 Q1

(percentages)



In line with this, the Czech National Bank still stands ready to intervene automatically, i.e. without the need for an additional decision of the Bank Board, and without any time or volume limits. The asymmetric nature of this exchange rate commitment is unchanged. The Bank Board assessed the risks to the new forecast at the monetary policy horizon as being anti-inflationary; domestic wages and the koruna-euro exchange rate have been moving in this direction. In this situation, the Bank Board stated again 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 remains ready to move the exchange rate commitment if there were to be a long-term increase in deflation pressures capable, among other things, of causing a slump in domestic demand or a systematic decrease in inflation expectations.

Financial market interest rates

PRIBOR rates remained at historical lows at all maturities in 2015 Q1. 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** decreased by around 0.1 percentage point at all maturities. The market outlook for 3M rates according to end-April FRA quotations thus implies a slight decrease in the 3M PRIBOR at the one-year horizon. This is broadly in line with 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 slightly below the interest rate path consistent with the new CNB forecast over the entire horizon (see section II).

Domestic **interest rates with longer maturities** edged up in February, correcting the sizeable decline recorded in late 2014 and early 2015. This meant that they partially diverged from euro area rates, which remained at low – and even negative at some maturities – levels owing to the expected launch of purchases of government bonds and other securities by the ECB. Long-term rates in the USA also moved slightly higher in February as expectations of an earlier increase in the Fed's key interest rates intensified temporarily after favourable labour market data were published and the situation in the oil market stabilised. This trend reversed at the start of March, when rates in both the USA and the euro area fell again. Domestic rates with longer maturities also started to decline, probably due to increased interest among foreign investors in better remunerated (relative to the euro area) domestic assets. This is also evidenced by the significant excess demand (including from abroad) recorded in primary auctions of government bonds held in March. Overall, domestic rates with longer maturities have dropped by 0.1–0.5 percentage point to new historical lows since the start of this year. At the end of April, government bond yields along the entire length of the curve (i.e. with maturities of up to 15 years) and IRS rates (with maturities of up to 20 years) were below 0.9%.

The average **3M PRIBOR** in 2015 Q1 was just above 0.3%, 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, was just below 0.3 percentage point.

CHART III.5.12

MARKET INTEREST RATES

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

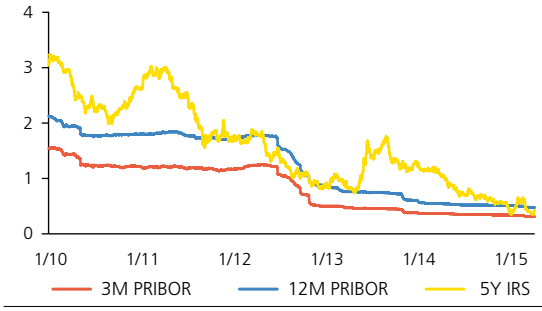
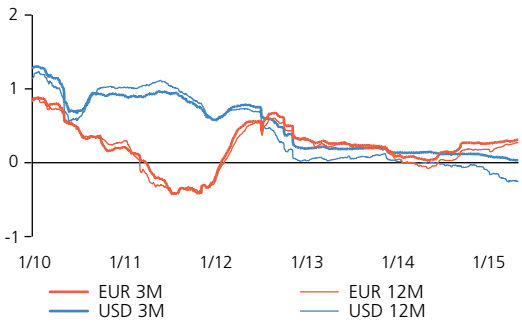


CHART III.5.13

INTEREST RATE DIFFERENTIALS

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



The shape and slope of the **PRIBOR yield curve** were unchanged in 2015 Q1. The spread between the 1Y PRIBOR and the 2W PRIBOR was 0.3 percentage point on average in March 2015. The **IRS yield curve** shifted to a lower level in 2015 Q1, although mainly at its medium and longer ends, so its positive slope decreased slightly at the same time. In March, the average 5Y–1Y spread was 0.2 percentage point and the 10Y–1Y spread 0.5 percentage point.

Short-term **interest rate differentials** vis-à-vis both major world currencies (PRIBOR/CZK-EURIBOR/EUR and LIBOR/USD) reflected opposite movements in money markets in the euro area and the USA amid broad interest rate stability in the Czech Republic. However, the changes were not big: the differentials vis-à-vis euro rates increased slightly, while those vis-à-vis the dollar decreased slightly (see Chart III.5.13). The 3M PRIBOR–3M EURIBOR differential was 0.3 percentage point on average in 2015 Q1 and recorded the same figure at the end of April 2015.

Seven auctions of fixed coupon bonds and three auctions of variable coupon bonds were held on the primary **government bond market** in 2015 Q1 and in April. The total volume of bonds issued was CZK 56.2 billion.[46] Demand exceeded supply in all the auctions – strongly so in most cases, as evidenced by an average bid-to-cover ratio of 2.4. None of the average bond yields achieved in the auctions (with one exception) exceeded 1%,[47] not even those on bonds with maturities of over 10 years. The government bond yield curve – like the IRS curve – moved downwards and its positive slope decreased further. In mid-April, the yield curve even turned slightly negative at its shorter end (see Chart III.5.14).

Client interest rates

Client interest rates on new loans mostly fell slightly in nominal terms in 2015 Q1. In a situation of a previous sharp decline in the ten-year government bond yield (to 0.4% in March) and a stable 3M PRIBOR, this primarily reflected lower bank financing costs and increased competition.

Following a previous slight increase, the **interest rate on loans to non-financial corporations** decreased slightly in nominal terms in 2015 Q1, remaining close to 2% for koruna loans (see Chart III.5.16). The slight increase in this rate in recent months reflected a rise in the share of renegotiated loans, which usually have a higher rate. Rates with short-term fixations went down mainly in the case of large loans in 2015 Q1. The interest rates on small loans and large loans were 2.8% and 1.8% respectively. The spread between these rates is at the average level recorded since 2007. The spread between the short-term rate on corporate loans and the 3M PRIBOR narrowed somewhat (see

46 The Czech Republic's Funding and Debt Management Strategy for 2015 assumes issues of medium- and long-term government bonds amounting to CZK 130–180 billion.
47 The average yield on the three-year bond was 0.01% at the end of March.

CHART III.5.14

GOVERNMENT BOND YIELD CURVE

The government bond yield curve moved downwards and turned slightly negative at its shorter end
(percentages)

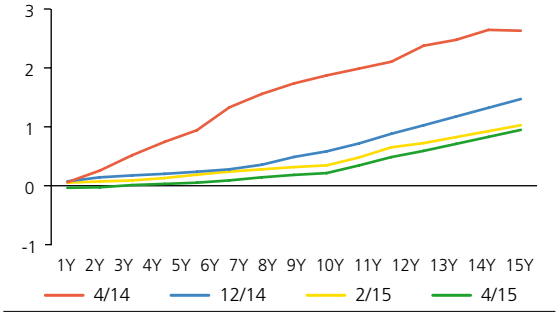


CHART III.5.15

CLIENT INTEREST RATES IN THE CZECH REPUBLIC AND THE EURO AREA

The interest rate on loans to non-financial corporations in the euro area has recently been falling and is now only just above the level in the Czech Republic
(cost of borrowing indicators; new business; percentages)

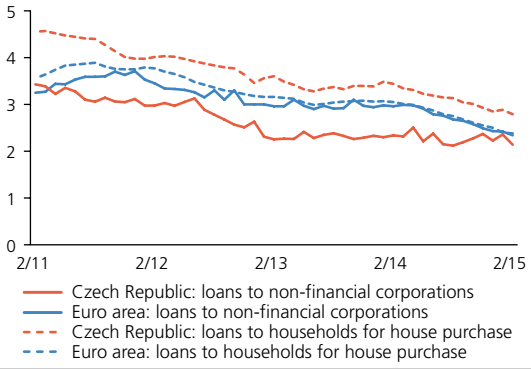


CHART III.5.16

INTEREST RATES ON LOANS TO CORPORATIONS

The interest rate on domestic koruna and euro loans to non-financial corporations is close to 2%
(new business; percentages)

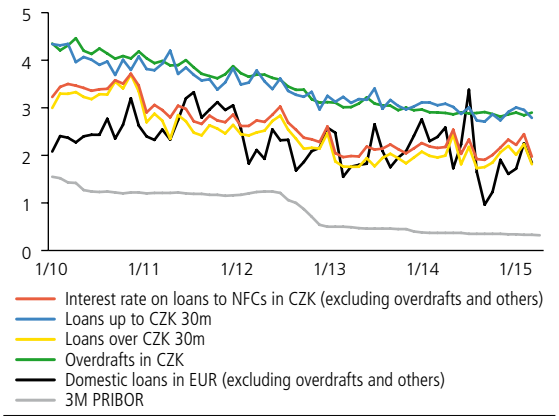


CHART III.5.17

INTEREST RATES ON LOANS TO HOUSEHOLDS

The interest rate on loans to households for house purchase and for consumption edged down further
(new business; percentages)

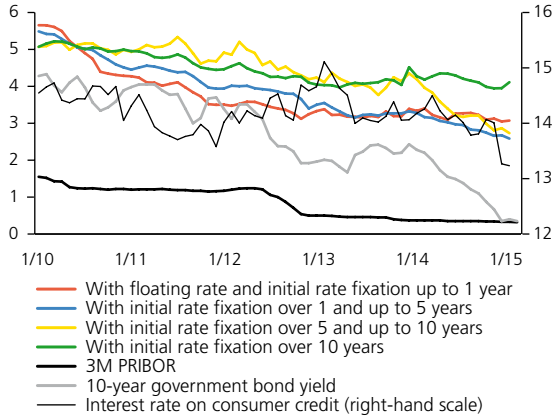


CHART III.5.18

CLIENT AND MARKET INTEREST RATE SPREADS

The spread between short-term client and market rates was stable in the case of loans to households for house purchase but stayed at a significantly elevated level for long-term rates
(percentage points)

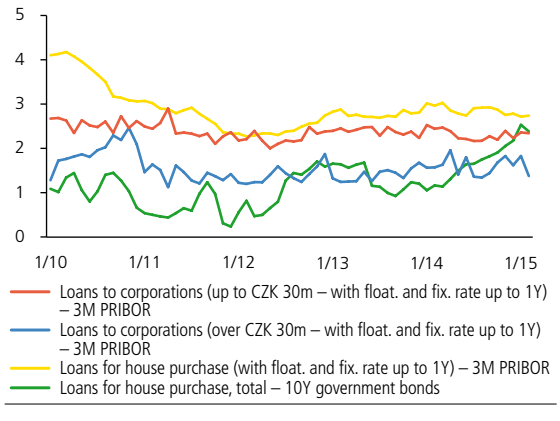


CHART III.5.19

EX ANTE REAL RATES

Ex ante real interest rates on new loans increased above 4%
(percentages)

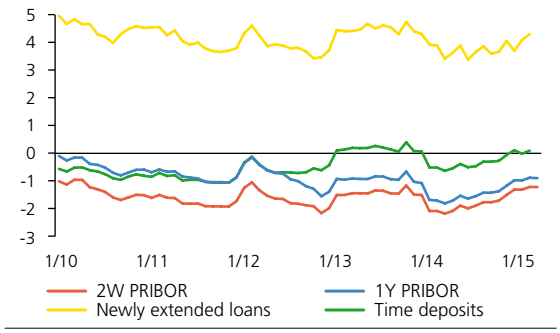


Chart III.5.18). The interest rate on new domestic euro-denominated corporate loans showed similar developments and was slightly lower than that on koruna loans (1.8%). Rates on corporate loans in the euro area continued to go down (averaging 2.3%) and are now only just above those in the Czech Republic (see Chart II.5.15).

The **interest rate on loans for house purchase** for households edged down further to 2.8% (reaching a new historical low of 2.5% for mortgages). The rate on loans fixed for over one year and up to five years, which account for 67% of all house purchase loans, fell slightly to 2.6%. The rate fixed for over five years and up to ten years followed a similar trend. The share of these loans has recently increased to 17% (see Chart III.5.17). According to Hypoindex, mortgage rates also declined in March 2015. The spread between short-term client and market rates was little changed. The spread between the average rate on loans for house purchase and the long-term financial market rate remained elevated on account of a previous pronounced decline in long-term government bond yields (see Chart III.5.18). The interest rate on house purchase loans in the euro area also fell further to 2.4% (see Chart III.5.15). This rate is persistently rather lower than that in the Czech Republic.

The **interest rate on consumer credit** dropped sharply to around 13% in Q1 (see Chart III.5.17). This was fostered by increased competition among banks and non-bank financial intermediaries and by more favourable perceptions of the risks to the overall economic situation and the creditworthiness of some clients. Due probably to higher credit risk, however, the rate on consumer credit remains well above that in the euro area, where it is close to 6% on average.

Interest rates on client deposits were unchanged, but some banks persisted with their efforts to make rates on household deposits with agreed maturity more attractive. Rates on overnight deposits remained at 0.3% for households and 0.1% for non-financial corporations. The rate on deposits redeemable at notice of up to three months, comprising building society deposits, stood at 1.7%. The rates on short-term and long-term household deposits with agreed maturity rose to 1.5% and 2.3% respectively. The equivalent rates in the euro area were mostly flat and currently remain generally lower than those in the Czech Republic.

Real client interest rates[48] have recently increased slightly owing to a modest decrease in expected inflation. Real rates on new loans averaged 4.3% in February (see Chart III.5.19). The real interest rate on corporate loans was 0.6%, that on house purchase loans for households was 1.4% and that on consumer credit was 11.7%. Real rates on time deposits returned to positive levels (0.1%). The decline in inflation expectations is also reflected in the real monetary conditions index. The pronounced easing of its interest rate component observed in late 2013 and early 2014 has recently moderated somewhat (see Box 3 *The monetary conditions index for the Czech Republic*).

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

BOX 3
The monetary conditions index for the Czech Republic

This box describes the monetary conditions in the Czech Republic using the **real monetary conditions index (RMCI)**. The basic version of the RMCI is calculated as the weighted average of the deviations of domestic ex ante real interest rates and the real exchange rate from their equilibrium levels (see Chart 1). The components of the RMCI are weighted 3:1 in favour of interest rates.[49] In this sense, the RMCI describes the aggregate monetary policy stance. The interest rate component of the RMCI consists of the 3M PRIBOR market rate adjusted for financial market inflation expectations one year ahead. The exchange rate component is expressed as the deviation of the effective real exchange rate from the midpoint of the range of estimates of its equilibrium levels.

A key question is how the monetary conditions effect the demand side of the economy. An **alternative monetary conditions index** has been constructed for this purpose. This describes the broader monetary conditions and was inspired by the literature on the construction of financial conditions indices using FAVAR models. In this case, the monetary conditions are seen not merely as a combination of settings of monetary policy instruments, as their effect on each sector of the real economy is also taken into account. The alternative index thus reflects the monetary conditions in terms of their effect on the end of the transition mechanism, i.e. via the interest rates relevant to each sector in the economy and via the real exchange rate of the koruna. The disadvantage of this index is that the source of its movements cannot be identified. This stems from the fact that the index is not a mere linear combination of input series, as in the basic version, because the weights change in every time period.

Both indices (see Chart 2) indicate an easing of the monetary conditions in 2005–2007 and a subsequent tightening due to a sharp appreciation of the koruna and an increase in interest rates in response to an overheating economy and rising inflation. This was followed by a rapid easing of the monetary conditions (according to the basic version of the index mainly in the interest rate component and temporarily also in the exchange rate component) in reaction to the global financial and economic crisis. A further easing of the monetary conditions is apparent in late 2013 and early 2014 both through the direct effect of

CHART 1 (BOX)

BASIC VERSION OF RMCI

The monetary conditions have been very accommodative since the end of 2013, albeit rather less so recently as a result of a fall in inflation expectations
(positive values refer to easy monetary conditions and negative values to tight monetary conditions; source: CNB, CNB calculation)

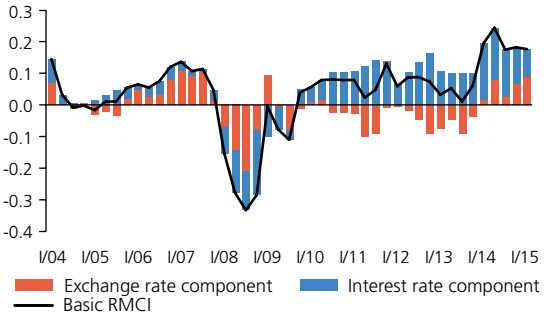
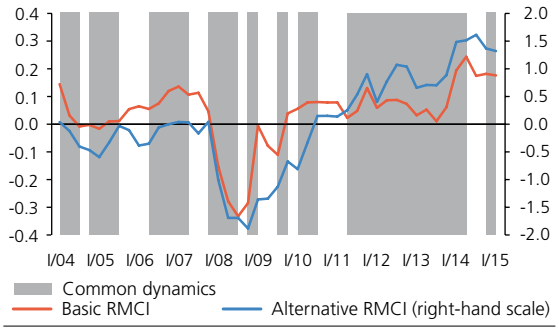


CHART 2 (BOX)

COMPARISON OF BASIC AND ALTERNATIVE VERSIONS OF RMCI

The two indices offer a very similar picture of the real monetary conditions in recent years
(for the basic RMCI positive values refer to easy monetary conditions and for the alternative RMCI a rise in value refers to an easing of the monetary conditions; source: CNB, CNB calculation)



49 The index weights correspond to the accumulated strength of the impulse responses of the output gap to an interest rate shock (the weight for the interest rate component) and an exchange rate shock (the weight for the exchange rate component). A horizon of 1–8 quarters was chosen for robustness. This encompasses the standard monetary policy horizon. In addition, according to impulse responses, the strongest effect of interest rate and exchange rate shocks on the output gap and inflation rates fades away within this time scale.

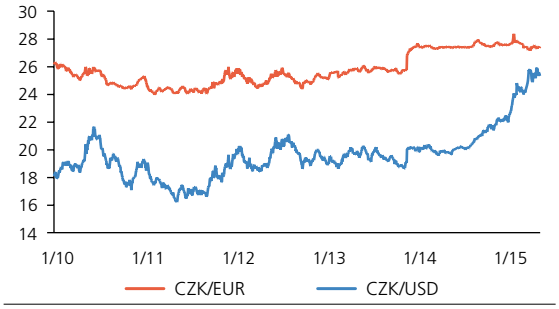
the weakening of the koruna on the real exchange rate (the adoption of the exchange rate commitment by the CNB) and due to an increase in inflation expectations. Since then, the domestic real monetary conditions have been very accommodative, albeit rather less so recently as a result of a fall in financial market analysts' inflation expectations one year ahead.

III.5.4 The exchange rate

Chart III.5.20

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna was stable against the euro and weakened against the dollar on average in 2015 Q1



The average **exchange rate of the koruna against the euro** was CZK 27.6 in 2015 Q1. This represents a year-on-year depreciation of 0.7% and a quarter-on-quarter stagnation (see Chart III.5.20). The koruna initially weakened sharply at the start of the quarter, from CZK 27.7 to CZK 28.3 to the euro shortly before mid-January, and then gradually returned to CZK 27.6, i.e. the average level for the second half of 2014, by mid-February. Since then the exchange rate has been at slightly stronger levels of between CZK 27.2 and CZK 27.6 to the euro without showing any signs of a clear trend. Shortly after mid-January the exchange rate was around CZK 27.4 to the euro.

In 2015 Q1, **world financial markets** experienced a sharp weakening of the euro and currencies linked to the euro. This weakening exceeded 10% against the US dollar, the yen, the renminbi and the Swiss franc and was roughly one-half of that amount against the British pound, the Australian dollar and the New Zealand dollar.

The relatively **sharp depreciation of the koruna** at the start of 2015 Q1 was due to market expectations that the CNB would increase the level of its exchange rate commitment given information that the economy was on the verge of deflation. Comments made by Bank Board members emphasising the differences between the economic situation in early 2015 and that in autumn 2013 (inflation caused by a supply shock versus a drop in demand, and relatively strong economic growth versus an economic contraction) and a willingness to temporarily tolerate even a large deviation of inflation from the inflation target in this situation, led the koruna to return to levels of around CZK 27.6 to the euro. A further slight appreciation of the koruna was triggered by comments made by the president of the Czech Republic, the Swiss central bank's unexpected exit from its exchange rate commitment (after which the Swiss franc appreciated sharply) and the ECB's decision to launch quantitative easing. As in the whole of 2014, no de facto foreign exchange interventions affecting the koruna exchange rate have been made by the CNB so far in 2015.

The average **exchange rate of the koruna against the dollar** was CZK 24.6 in 2015 Q1. This represents a year-on-year depreciation of 22.5% and a quarter-on-quarter depreciation of 11.1%. During the quarter, the koruna depreciated against the dollar from around CZK 22.9 to around CZK 26.0 in mid-March. After that it stabilised at slightly stronger levels. Shortly after mid-April it stood around

CZK 25.6 to the dollar. The marked depreciation was connected with a sharp weakening of the euro and currencies linked to it against most other convertible currencies due to the ECB's quantitative easing.

III.5.5 Economic results of non-financial corporations

The **financial results** of non-financial corporations with 50 employees or more[50] in 2014 Q4 reflected a weakening of the annual growth rate of both output and profits (see Chart III.5.21). This was probably related mainly to the fading effect of the year-on-year weakening of the koruna in November 2013. The very strong growth in output recorded in the previous three quarters moderated in 2014 Q4. Unlike in the previous quarter, intermediate consumption rose slightly faster than output. This was reflected in slower annual growth in book value added. The growth rate of gross operating surplus (operating profit) slowed even more markedly,[51] with the previous double-digit growth falling by about two-thirds. However, it still attained relatively high levels exceeding 5%.

A slowdown in sales of own products, which are the main component of output, was the biggest overall contributor to the weaker operating profit generation in monitored corporations at the close of 2014. A slight annual increase (of 0.1 percentage point) in the **material cost-output ratio**[52] in Q4 following a previous decrease partly contributed to the slower growth in operating profit in the period under review (see Table III.5.3). The **personnel cost-output ratio**[53] continued to decrease slightly year on year, although personnel costs increased more in year-on-year terms than in the previous quarter amid a rising number of employees and a higher wage bill. However, output continued to grow faster than personnel costs, although the difference between their annual growth rates narrowed considerably.

From the sectoral perspective, the annual growth in sales, output and operating profit in 2014 Q4 was again driven chiefly by corporations in manufacturing, albeit to a much smaller extent than in previous quarters (see Chart III.5.22). Their share in gross operating surplus still exceeded 50%. With regard to the **ownership structure of corporations**, the growth in this indicator was affected above all by foreign-owned corporations, whose production is mostly export-oriented. Annual growth in gross operating surplus was again the highest in this segment of corporations in 2014 Q4 (8.7%) and the share of this segment in the annual increase in operating profit remained at 60%. The results of corporations owned by residents were less favourable, with annual growth in their operating surplus reaching just 0.3%.

50 The segment of corporations with 50 employees or more consisted of more than 9,000 non-financial corporations at the end of 2014 Q4.
51 In addition, this was fostered by annual growth in personnel costs.
52 The material cost-output ratio defined as the ratio of intermediate consumption to output.
53 The personnel cost-output ratio defined as the ratio of personnel costs to output.

Chart III.5.21

KEY FINANCIAL INDICATORS

Growth in the main financial indicators of non-financial corporations weakened in 2014 Q4
(annual percentage changes)

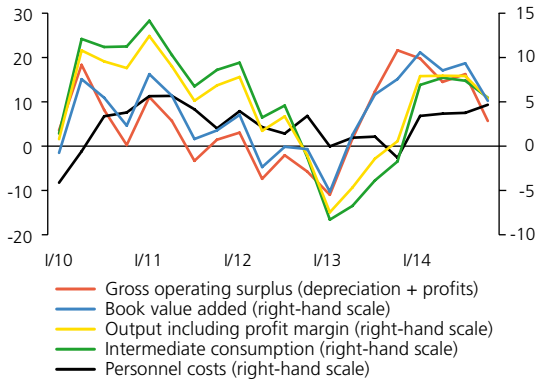


Table III.5.3

PERFORMANCE INDICATORS OF NON-FINANCIAL CORPORATIONS

The material cost-output ratio increased slightly, while the personnel cost-output ratio continued to decrease slightly

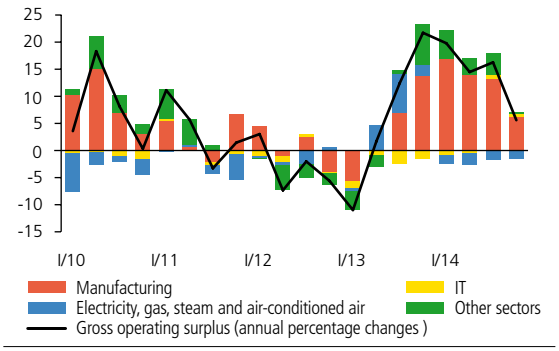
	2013 Q4	2014 Q4	Annual percentage changes
Output incl. profit margin (CZK billions)[a]	1,477.8	1,557.2	5.4
Personnel costs (CZK billions)	218.5	228.7	4.7
Intermediate consumption (CZK billions)	1,089.1	1,148.7	5.5
Book value added (CZK billions)	388.7	408.5	5.1
Sales (CZK billions)	1,987.1	2,104.1	5.9
Gross operating surplus (CZK billions)	170.2	179.8	5.7
	%	%	Annual changes in pp
Ratio of personnel costs to value added[a]	56.2	56.0	-0.2
Material cost-output ratio	73.7	73.8	0.1
Personnel cost-output ratio	14.8	14.7	-0.1
Ratio of book value added to output	26.3	26.2	-0.1
Margin rate – ratio of gross operating surplus to value added	43.8	44.0	0.2

a) CNB calculation

Chart III.5.22

OPERATING PROFIT BY SECTOR

The contribution of corporations in manufacturing to growth in operating profit remained the highest, but decreased noticeably
(annual percentage changes; contributions in percentage points)



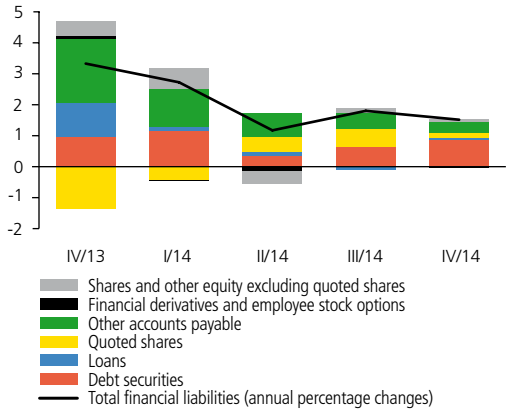
Data for the narrower **segment of large corporations** (with 250 employees or more)[54] indicate similar trends in the main financial indicators in 2014 Q4 as in the larger segment of corporations. However, the slowdown in annual growth of gross operating surplus was more moderate than in the broader segment of corporations with 50 employees or more. Manufacturing companies also account for most of the operating surplus in the segment of large corporations.

CHART III.5.23

FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

Growth in the financial liabilities of corporations slowed slightly due to smaller contributions of quoted shares and other accounts payable

(annual percentage changes; contributions in percentage points)



III.5.6 Financial position of corporations and households

The annual growth rate of **financial liabilities of non-financial corporations** fell slightly to 1.5% in 2014 Q4 (see Chart III.5.23). This was aided by slower growth in quoted shares due to revaluation and a smaller increase in other accounts payable owing mainly to a drop in trade credits and advances. By contrast, debt securities and loans recorded a larger contribution. Debt securities are showing robust annual growth, whereas loan dynamics remain weak. Annual growth in the **financial assets of non-financial corporations** slowed to 2.2% in Q4. This was primarily due to securities and loans. By contrast, the contribution of currency and deposits increased. Growth in corporations' financial assets and liabilities has slowed over the last year. As the growth rate of liabilities was lower than that of assets, the overall negative net financial position improved further.

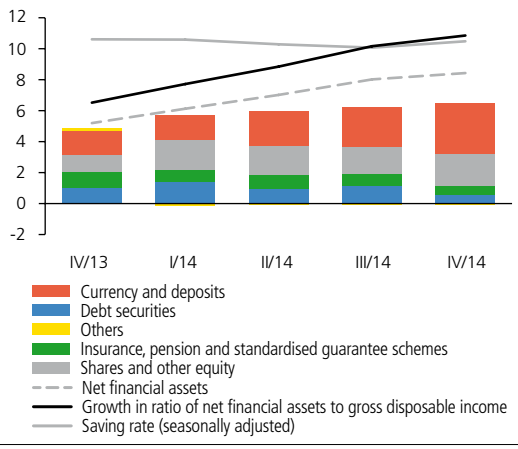
The main **trends in the balance sheets** of non-financial corporations are reflected in their financial indicators. The acid-test ratio[55] of corporations saw a further significant rise in 2014 Q4. The market-based financing ratio[56] fell slightly. Corporate solvency – as measured by the ratio of total financial assets to liabilities excluding shares and other equity – declined in 2014 Q4 owing to lower annual growth in financial assets (in particular a drop in debt securities and loans).

CHART III.5.24

STRUCTURE OF HOUSEHOLD FINANCIAL ASSETS

Growth in the gross and net financial assets of households accelerated again thanks mainly to a rising contribution of currency and deposits

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



Households are traditionally net creditors in the national economy. Annual growth in the **net financial assets of households** accelerated to 8.4% in 2014 Q4. Their increase compared to the same period of 2013 represented almost 11% of the annual gross disposable income of households (see Chart III.5.24). Growth in gross **financial assets** went up slightly to 6.4% year on year. It was fostered mainly by currency and deposits (especially transferable deposits[57]). Annual growth in household deposits increased gradually in previous quarters, reaching 6% in Q4. As regards shares and other equity, growth in investment fund shares and units held by households increased slightly. The other

54 The segment of corporations with 250 employees or more consisted of more than 1,700 non-financial corporations at the end of 2014 Q4.
55 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.
56 A ratio of the sum of bonds issued and quoted shares issued to total liabilities.
57 These are current account deposits (demand deposits); term deposits are included in other deposits.

categories of financial assets rose roughly at the same pace as in the previous quarter. At 2.3%, annual growth in the **financial liabilities of households** was unchanged from the previous quarter. Long-term loans are traditionally the dominant contributor.

III.5.7 The property market

Asking prices of older apartments in Prague continued to rise rapidly in early 2015. Growth in these prices accelerated slightly to 5.8% according to the CZSO. Alternative IRI data point to a further acceleration to a strong 12.6% year on year (see Chart III.5.25). By contrast, asking prices of apartments outside Prague rose modestly in 2015 Q1. CZSO data indicate an increase of only 1.2% year on year. According to the IRI, the movements in asking prices in regions outside Prague also remained very mixed, ranging from -3% to 11.3%.[58]

New data on **transaction prices from the CZSO survey**[59] confirm the acceleration in apartment prices. At the end of 2014, these prices were up by 5.7% and 6.0% year on year in Prague and outside Prague, respectively. According to the survey, annual growth in prices of new apartments was more moderate, at 1.6%. However, the lower price growth for this type of apartment is linked with the smaller declines recorded during the financial crisis: prices of older apartments in Prague fell by up to 15%,[60] while prices of new apartments decreased only by 9.5%.

Overall, the rising asking and transaction prices confirm the recovery on the property market in the second half of 2014. While in the past this recovery was very mixed across regions, it now appears that the price growth in Prague is starting to be accompanied by price growth in other cities. The market recovery is also confirmed by a further increase in new apartment sales in development projects in Prague. After increasing by 18.6% year on year in 2014 as a whole, sales continued to rise even faster in 2015 Q1, with growth reaching 37%.[61]

Property price sustainability indicators recorded mixed trends in 2015 Q1 (see Chart III.5.26). The indicators of housing affordability,[62] i.e. the **price-to-average wage ratio** and the **price-to-disposable income ratio**, recorded quarter-on-quarter increases of 1.2% and 1.1% respectively as a result of the higher prices. They are currently

58 The average growth rate was 4.1% and the biggest increase was recorded in Brno.
59 No new data on transaction prices based on tax returns have been published since the previous Inflation Report. The latest available data from this source are therefore from mid-2014 and are still only estimates.
60 Transaction prices from surveys. Transaction prices based on tax returns fell by 18.5%.
61 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). In March 2015 the COSMC did publish new data for 2014, but they are not comparable with the previous data.
62 In the calculation of the housing affordability indicators for 2015 Q1, the increase in apartment transaction prices was proxied by growth in asking prices according to the CZSO.

Chart III.5.25

TRANSACTION AND ASKING PRICES OF APARTMENTS

Growth in apartment prices accelerated in early 2015, especially in Prague
(annual percentage changes; source: CZSO, Institute for Regional Information)

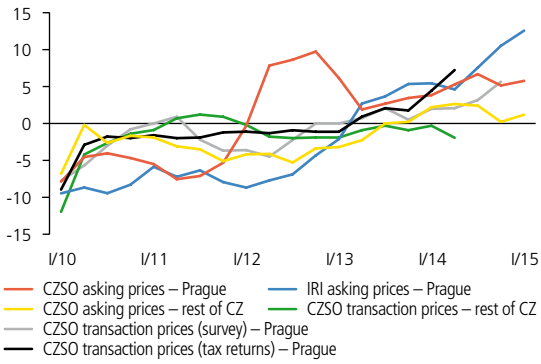


Chart III.5.26

APARTMENT PRICE SUSTAINABILITY INDICATORS I

The price-to-average wage and price-to-disposable income ratios went up, while the price-to-rent ratio fell further
(2000–2007 average = 100; source: CZSO, Institute for Regional Information)

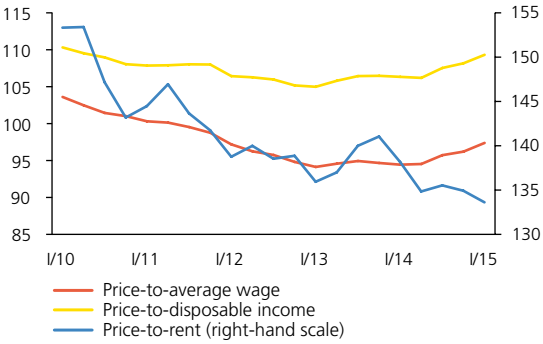
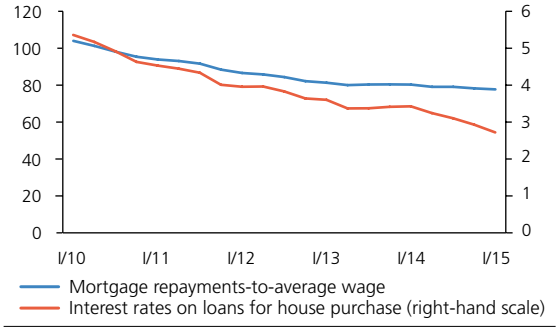


CHART III.5.27

APARTMENT PRICE SUSTAINABILITY INDICATORS II

The mortgage repayments-to-average wage ratio reached an all-time low thanks to a drop in interest rates on loans for house purchase

(2004–2007 average = 100; source: CZSO, CNB)



3.5% and 4.1% respectively above the lows observed in early 2013. The **price-to-rent ratio** saw a quarterly decline of 1.0% and was also close to its historical low. The related rise in rental returns coupled with the decrease in long-term interest rates opens up room for investment property purchases financed through mortgages.

By contrast, an alternative indicator of housing affordability – the **mortgage repayments-to-average wage ratio**[63] – fell by a further 0.7% in the same period, reaching an all-time low, as a result of the drop in mortgage interest rates (see Chart III.5.27).

The **property market recovery** is being driven by growth in domestic economic activity, the related labour market improvement and the decreases in interest rates on loans for house purchase. Although the housing price sustainability ratios do not, overall, indicate that property is overvalued, alternative estimates using econometric methods are now beginning to signal overvaluation of about 2.5%. However, this is only just above the boundary of statistical significance. Continued price growth at a similar pace as in 2015 Q1 can be expected in the rest of 2015. At the same time, the growth rates of asking and transaction prices and of prices in Prague and outside Prague are expected to converge.

63 A mortgage with fixed parameters of an LTV of 65% and a maturity of 20 years was considered in the calculation of this indicator.

III.6 THE BALANCE OF PAYMENTS[64]

The balance of payments in 2014 Q4 was characterised by a large goods and services surplus, which was again fostered by growth in the goods surplus. However, its effect on the current account was almost fully offset by a primary income deficit, associated mainly with direct investment income in the form of dividends paid to non-residents. On the financial account, net lending abroad (i.e. a net outflow) on portfolio investment and an increase in reserve assets were slightly outweighed by net borrowing from abroad (i.e. a net inflow) on the other three balances, above all net borrowing on other investment, connected mainly with higher deposits accepted from non-residents by the banking sector.

III.6.1 The current account

The **current account** recorded a slight surplus of CZK 5.0 billion in 2014 Q4 following two quarters of deficits. In year-on-year terms, the current account balance increased by more than CZK 10 billion. The switch from deficit to surplus was due to the primary income and goods balances (see Chart III.6.1). The annual moving current account surplus rose by more than CZK 10 billion compared to the previous quarter. The ratio of the annual moving ratio of the current account surplus to GDP also increased slightly, reaching 0.6%.

The **goods** balance ended 2014 Q4 in a surplus of CZK 41.6 billion, representing a further year-on-year increase of more than CZK 14 billion. The rise in this surplus was due mainly to price developments associated with a positive year-on-year change in the terms of trade, and to a lesser extent to developments in real terms. The annual growth rate of trade turnover slowed further in Q4, falling to less than 8% following three quarters of double-digit growth. The marked moderation in the year-on-year weakening of the koruna against the euro and decreases in exports to some Eastern markets, especially Russia, led to a decrease in nominal export growth to below 9% amid flat euro area demand. A moderation of import growth at current prices was connected with slower growth in total domestic demand and with a drop in oil prices. In the case of goods imports, the price effect of slower depreciation of the koruna against the euro was largely offset by a rapid weakening of the koruna against the dollar. Turning to the commodity structure, a moderation of the mineral fuels deficit (see Chart III.6.2) was the biggest contributor to the year-on-year rise in the overall surplus,

64 Simultaneously with the publication of the figures for 2014 Q4, revised data for 2013 and 2014 Q1–Q3 were published. On the current account, the largest revisions were recorded in 2013 for the primary income deficit, which moderated by almost CZK 31 billion owing to a drop in direct investment income on the debit side. On the financial account, the most substantial changes occurred in 2013 for direct investment, which saw a correction of almost CZK 65 billion owing to a rise in net acquisition of assets (the originally recorded net inflow turned into a net outflow of CZK 7.4 billion).

CHART III.6.1

CURRENT ACCOUNT

The current account switched from deficit to surplus in 2014 Q4, mainly due to a reduction in the primary income deficit
(CZK billions)

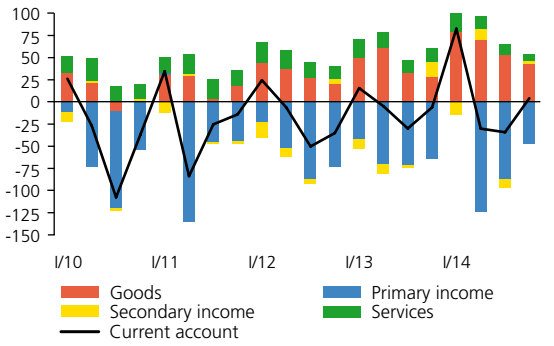


CHART III.6.2

EXTERNAL TRADE IN GOODS

The year-on-year growth in the surplus on external trade in goods was affected most strongly in 2014 Q4 by a decrease in the mineral fuels deficit
(Q4 of relevant year in CZK billions; national concept)

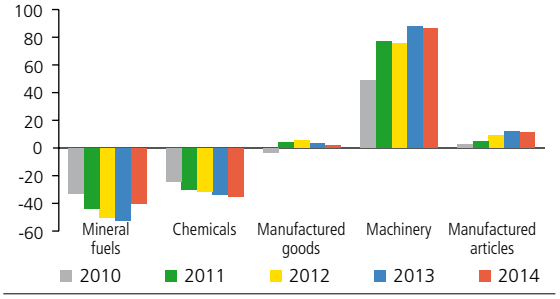


CHART III.6.3

SERVICES

The decline in the services surplus in 2014 Q4 was mainly due to a widening of the other services deficit
(CZK billions)

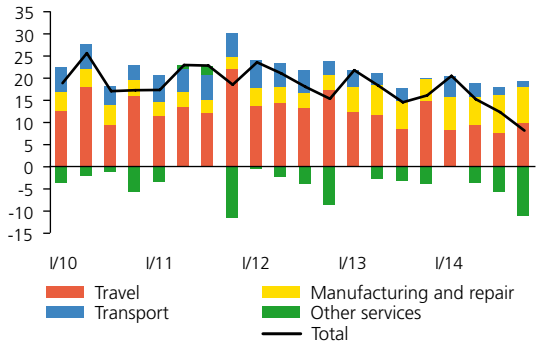


CHART III.6.4

PRIMARY INCOME

Within primary income, the investment income deficit shrank in 2014 Q4
(CZK billions)

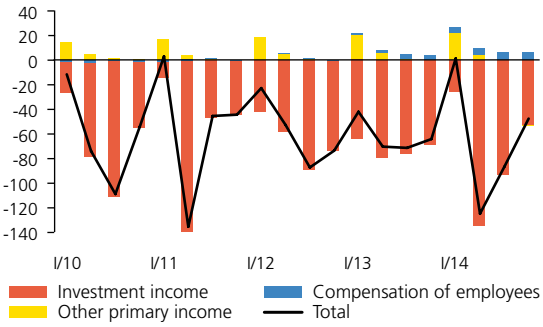
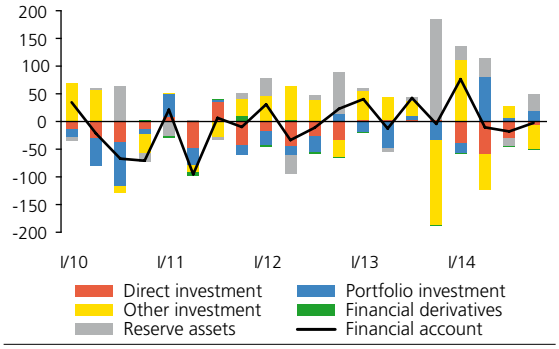


CHART III.6.5

FINANCIAL ACCOUNT

Net borrowing from other investment was the largest item on the financial account in 2014 Q4
(CZK billions)



owing mainly to a marked decline in oil prices and to a lesser extent gas prices. The overall surplus continued to rise year on year during 2015 Q1, growing by CZK 5 billion in January–February.

The goods and services surplus was also due to a surplus on **services** totalling CZK 8.1 billion (see Chart III.6.3). However, the services surplus declined again year on year in Q4 (by almost CZK 8 billion). It was due mainly to travel (CZK 9.7 billion) and production and repair services. Transport also recorded a slight surplus. By contrast, other services ended in a deficit of CZK 11.1 billion, due mainly to deficits on financial services directly measured, charges for the use of intellectual property and professional and advisory services. A widening of the other services deficit owing to a sharp rise in expenditure on financial services was also the main contributor to the year-on-year decrease in the total surplus. However, the contribution of higher expenditure on travel was also significant.

In contrast to the goods and services surplus, **primary income** ended 2014 Q4 in a deficit of CZK 47.9 billion, down by almost CZK 17 billion year on year. The moderation of the overall deficit was linked mainly with a lower direct investment income deficit as a result of lower dividends paid to non-residents and lower estimated reinvested earnings in the Czech Republic of roughly the same magnitude. However, the largest component of the overall balance was still the investment income deficit (see Chart III.6.4), stemming mainly from a direct investment income deficit of CZK 51.9 billion. Portfolio investment income also recorded a modest deficit connected with interest on bonds paid to non-residents. A surplus on compensation of employees was the main factor moderating the overall deficit.

Secondary income recorded a slight surplus of CZK 3.3 billion, down by almost CZK 13 billion year on year. Its main component was net income on current international cooperation, which reached almost CZK 19 billion. However, it was offset to a large extent by deficits on the other components, above all the Czech Republic's VAT- and GNI-based payments to the EU budget, and by a deficit on transfers of social contributions. Net drawdown of funds from the EU budget recorded under secondary income totalled CZK 10.3 billion, down by almost 11 billion year on year. The year-on-year decrease in the overall surplus was mainly due to lower drawdown of funds from the EU budget on the back of lower credits and higher debits.

III.6.2 The capital account

The **capital account** also recorded a surplus in 2014 Q4 (CZK 7.7 billion), resulting mainly from drawdown of funds from the EU budget totalling CZK 6.9 billion. As in the case of secondary income, its year-on-year decline of CZK 14 billion was linked chiefly with lower drawdown of funds from the EU budget.

III.6.3 The financial account

The **financial account** recorded net borrowing from abroad (a net inflow) of CZK 1.9 billion in 2014 Q4, due above all to net inflows of other and direct investment. However, the overall net inflow was almost fully offset by a rise in reserve assets and net lending abroad (a net outflow) on portfolio investment (see Chart III.6.5).

Direct investment recorded net borrowing from abroad of CZK 6.3 billion in Q4, 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 22 billion, roughly two-thirds of which was linked with estimated reinvestment of earnings. In addition, it was aided on the liabilities side by a net increase in shares and other equity (an inflow into equity capital), whereas for debt instruments net repayment slightly outweighed net drawdown. Czech investment abroad was mainly linked with an increase in net acquisition of assets in credit relations and with reinvestment of earnings. Direct investment switched from a net outflow to a net inflow as a result of lower growth in Czech investment abroad in shares and other equity and in credit relations.

Unlike direct investment, **portfolio investment** recorded net lending abroad (a net outflow) of CZK 19.4 billion, in contrast to a net inflow in the same period of 2013 (see Chart III.6.7). The biggest transactions were purchases of foreign bonds, mainly by financial institutions and households, which totalled almost CZK 25 billion. Holdings of foreign investment fund shares and units by residents increased slightly as well. Overall, purchases also dominated trading in domestic securities. However, they were associated solely with purchases of Czech bonds by foreign investors, whereas sales very slightly outweighed purchases in the case of shares. The year-on-year change in portfolio investment flows of CZK 53 billion was due chiefly to debt securities, reflecting a marked rise in residents' interest in foreign bonds and a simultaneous sharp drop in purchases of domestic bonds by non-residents.

Settlement of **financial derivatives and employee stock options** led to net borrowing (a net inflow) of CZK 2.0 billion, almost unchanged from a year earlier.

Other investment recorded net borrowing from abroad (a net inflow) of CZK 42.8 billion. The overall net borrowing was due mainly to a net inflow of CZK 43.3 billion via the banking sector including the CNB. This was related mainly to a rise in deposits accepted from non-residents. The corporate sector also recorded a slight net inflow stemming from repayments of trade credits by non-residents. By contrast, general government recorded a small net outflow related to repayment of loans from the EIB. A marked year-on-year moderation in total net borrowing of almost CZK 110 billion was linked above all with a lower net inflow in the banking sector.

Following a decline in Q3, **reserve assets** increased by CZK 29.7 billion in 2014 Q4 due to a surplus on transactions executed for CNB clients (see Chart III.6.8).

CHART III.6.6

DIRECT INVESTMENT

Reinvestment of earnings contributed the most to net borrowing from direct investment in 2014 Q4
(CZK billions)

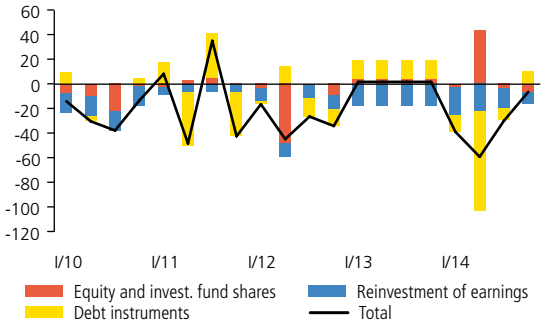


CHART III.6.7

PORTFOLIO INVESTMENT

Portfolio investment recorded net lending in 2014 Q4 due mainly to purchases of foreign securities by residents
(CZK billions)

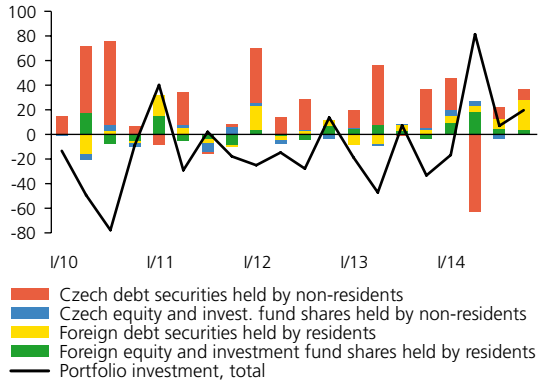
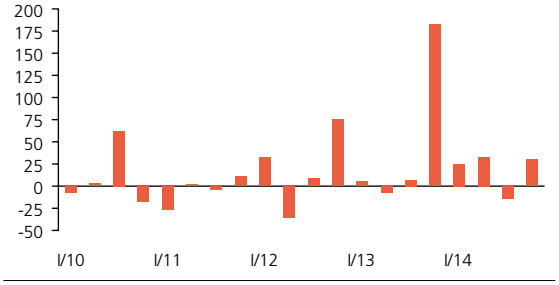


CHART III.6.8

RESERVE ASSETS

Reserve assets increased in 2014 Q4 due to a surplus on transactions for CNB clients
(CZK billions)



III.7 THE EXTERNAL ENVIRONMENT

The external economic environment continued to be affected by the weak exchange rate of the euro against the dollar. Together with low energy prices, this provided support for the modestly accelerating euro area economy but hindered economic growth in the USA, which nevertheless remained more than twice as high as in the euro area. Deflation in the euro area is moderating gradually thanks to a halt in the commodity price decline and a weakening euro. Inflation in the USA was also generally subdued, with the oil price decline and the strong dollar acting against price growth. The outlook for the dollar-euro exchange rate takes into account both the easy monetary policy of the ECB and expected interest rate hikes by the Fed.

III.7.1 The euro area

Euro area GDP growth edged up further in 2014 Q4 in both quarter-on-quarter and year-on-year terms (by 0.1 percentage point to 0.3% and 1.1% respectively; see Chart III.7.1). The higher year-on-year output growth was due to accelerating growth in private consumption. Change in inventories acted in the opposite direction. The annual cumulative current account surplus reached 2.1% of GDP in 2014 Q4. GDP growth stood at 1.1% in 2014 as a whole, a marked acceleration compared to the economic contractions observed in the previous two years. As regards individual countries, the Irish economy recorded the strongest growth in 2014. Greece also saw modest growth following six years of decline. By contrast, Cyprus experienced a sharp economic contraction, as, to a lesser extent, did Finland and Italy.

Euro area economic growth is expected to accelerate to around 1.5% **in 2015** (see Chart III.7.2) and then rise by a further 0.3 percentage point in 2016. Industrial production increased significantly in February in both month-on-month and year-on-year terms. In addition, the PMI leading indicator in manufacturing rose further in March. Its initial estimate for April then underwent a slight correction, but still points to an optimistic outlook for the industrial sector supported by low oil prices and a weak euro. Annual growth in real retail sales was also favourable in January and February, although sales went down slightly compared to the previous month. The unemployment rate fell only marginally in February (to 11.3%), with economic growth not yet strong enough to cause a more pronounced decrease.

The decline in **consumer prices in the euro area** bottomed out in January 2015 (-0.6%). A gradual turnaround has been apparent since then, with prices falling by just 0.1% year on year in March (see Chart III.7.3). This moderation of deflation was due to energy and food prices, as core inflation was broadly stable at 0.6% in March. Average headline inflation declined by 1 percentage point to 0.4% in 2014 as a whole. Its levels this year will be affected on the one hand by the low oil prices and on the other hand by the accommodative monetary policy of the ECB and a weaker euro. The annual growth rate of M3 has been

CHART III.7.1

GDP IN THE EURO AREA

GDP growth edged up further in 2014 Q4 and was supported mainly by household consumption

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

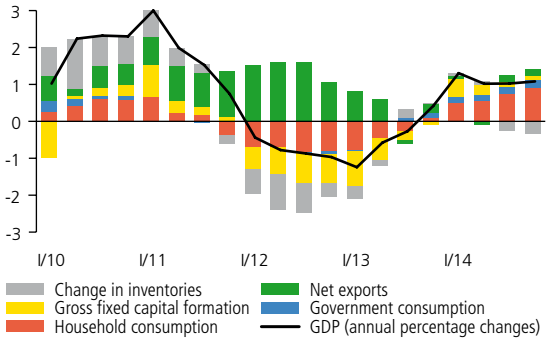
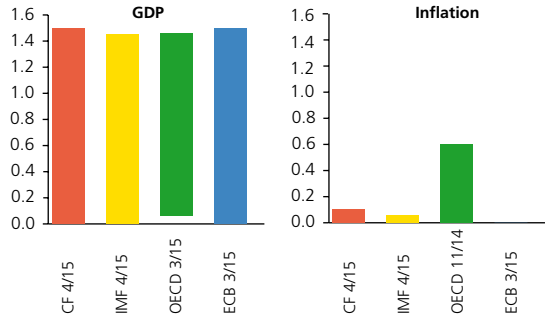


CHART III.7.2

EURO AREA GDP AND INFLATION OUTLOOKS FOR 2015

Euro area GDP growth is expected to accelerate further in 2015, while inflation is expected to remain 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.

rising steadily since May (to 4% in February 2015). The April CF expects a roughly flat price level (an increase to just 0.1%) in 2015, but next year inflation should rise to 1.2% (see Chart III.7.2).

At its April meeting, the **ECB** left its key interest rates unchanged. It will continue its expanded bond purchase programme until inflation hits the target.[65] The ECB's current easy monetary policy is being reflected in a decline in client interest rates and – according to the April bank lending survey – in an easing of credit standards applied to loans to firms and consumer credit. Yields on most government bonds decreased across all maturities due to ECB bond purchases. The yields on the five-year bonds of several countries dropped to negative values and German ten-year bond yields are approaching these levels, too. However, the situation is different for Greek government bonds amid concerns about the government's ability to meet its commitments to creditors in the months ahead. In this context, Greece had its rating downgraded by S&P, and bond yields and CDS premia are rising sharply.

Annual GDP growth in Germany increased by 0.3 percentage point to 1.5% in 2014 Q4, thanks mainly to an upswing in household and government consumption. By contrast, a drop in inventories dampened growth, and the positive contribution of net exports decreased (see Chart III.7.4). GDP grew by 1.6% in 2014 as a whole, up from 0.1% in 2013. All components of domestic demand improved, and the contribution of net exports was also significant.

The **quarterly growth rate** of the German economy also rose considerably in 2014 Q4, returning to the buoyant levels observed in early 2014 (0.7%) following two quarters of stagnation at very low levels (-0.1% and 0.1%). The strong growth was mainly due to higher investment, which had fallen in the previous quarter, and to net exports.

The **April CF** expects a slight quarter-on-quarter and year-on-year economic slowdown in 2015 Q1, but this does not put the favourable outlook for the year as a whole in jeopardy. CF has repeatedly raised its GDP growth estimates for 2015 and 2016, and the April outlook foresees 1.9% and 2% respectively. Aside from falling oil prices, a depreciating euro-dollar exchange rate and low interest rates, the main source of the prediction of strong growth is improving consumer sentiment in Germany, reflecting falling unemployment, rising employment and increasing real wages. These expectations are supported by leading indicators, which declined slightly overall but remain well above the long-term average. Conversely, a renewal of fighting in Ukraine or a Greek exit from the euro area might jeopardise the expected economic growth.

65 From March 2015 to September 2016 the ECB will purchase bonds at a rate of EUR 60 billion a month, roughly EUR 50 billion of which will now be government bonds of euro area countries.

CHART III.7.3

INFLATION AND PRODUCER PRICES IN THE EURO AREA

Consumer prices fell by 0.3% year on year in 2015 Q1, but, as in the case of producer prices, their decline slowed
(annual percentage changes; source: Datastream)

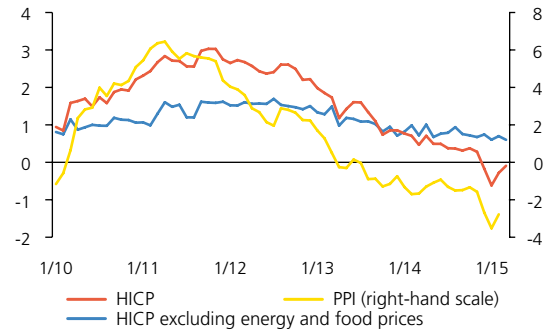


CHART III.7.4

GDP IN GERMANY

Annual GDP growth increased in 2014 Q4, thanks mainly to a rising contribution of household consumption
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)

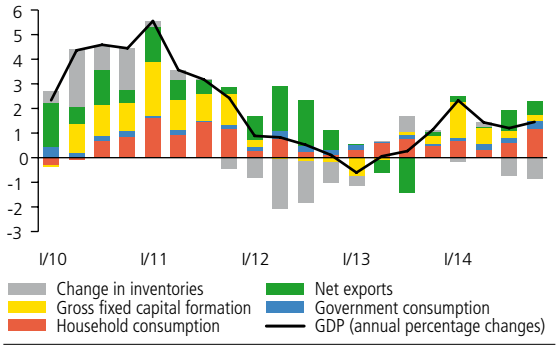


CHART III.7.5

INFLATION AND PRODUCER PRICES IN GERMANY

Inflation rose by a further 0.2 percentage point to 0.3% in March, while the decline in industrial producer prices slowed
(annual percentage changes; source: Datastream)

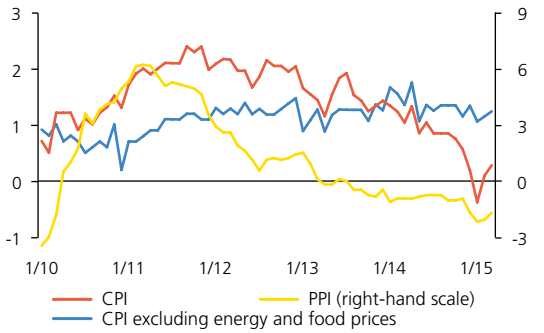
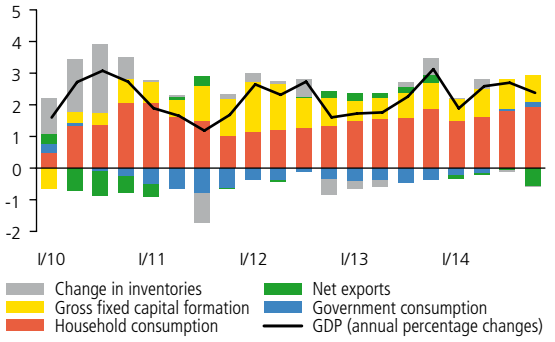


CHART III.7.6

GDP IN THE USA

Household consumption and investment again contributed significantly to GDP growth in 2014 Q4
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)



Annual inflation in Germany moved further away from deflation territory. Inflation rose by 0.2 percentage point to 0.3% in March, mainly due to a slowing decline in energy prices. Food prices were flat and services prices increased by 1.2%. Core inflation also went up and the decline in industrial producer prices slowed (see Chart III.7.5).

The **German government** will increase its investment spending by EUR 5 billion over the next three years. This money, which is earmarked for improving the country's infrastructure, is on top of the investment announced by the German Ministry of Finance in November for the case of a balanced federal budget. The budget actually ended in a surplus.

The **Slovak economy** maintained its high quarterly and annual rate of economic growth in 2014 Q4 (0.6% and 2.4% respectively). This growth was driven by strong growth in all components of domestic demand. It was also reflected in a year-on-year rise in employment of 2.1% in 2014 Q4 and a year-on-year decline in the unemployment rate of 1.5 percentage points to 12.3% in February this year.

In 2014 as a whole, **Slovak GDP** grew by 2.4% year on year. According to the April CF, it will accelerate to 2.7% this year and 3.1% next year. Similar forecasts have been issued by a number of other institutions (the European Commission, the IMF, the EBRD and Infostat).

The **decline in consumer prices in Slovakia** slowed by 0.2 percentage point to -0.3% in March. The persisting negative inflation rate was driven by falling prices of food and energy and was counteracted only by rising services prices. The consumer price level decreased by 0.1% in 2014 as a whole. According to the April CF, inflation is expected to rise to 0.2% this year and 1.6% next year. However, the Slovak Ministry of Finance and the NBS expect consumer price inflation to be zero or slightly negative this year.

III.7.2 The United States

Annual **GDP** growth in the USA slowed by 0.3 percentage point to 2.4% in 2014 Q4. In quarter-on-quarter terms, the growth eased by almost one-half to 0.6% (see Chart III.7.6). The annual economic growth was driven chiefly by household consumption and fixed investment, although their contributions shrank slightly compared to the previous quarter. The negative contribution of net exports increased as a result of faster import growth. In 2014 as a whole, GDP rose by 2.4%, an increase of 0.2 percentage point on a year earlier.

According to the available indicators, economic growth continued to slow **at the start of this year**. The economy was affected by a stronger dollar,[66] which had an adverse effect on the price competitiveness of US exports. The economy was also significantly affected by the oil price decline, which on the one hand increased households' disposable income and reduced corporations' costs, but on the other hand led to cuts in output and capital expenditure in the energy sector. In 2015 Q1, industrial production saw the first quarterly decrease since 2009 (0.2%). Job creation and the decline in the unemployment rate (5.5% in March) both slowed.

Leading indicators have decreased in recent months but remain in the growth band. The PMI fell for the fifth consecutive month in March, to 51.5. In addition to the stronger exchange rate, this was due to adverse weather fluctuations at the start of the year and problems with supplies from West Coast harbours owing to trade union bargaining. A slightly falling trend notwithstanding, the University of Michigan Consumer Sentiment Index was close to a several-year high in 2015 Q1, so household consumption can be expected to show continued buoyant growth in the months ahead. Despite downward revisions and an economic slowdown at the start of the year, the outlooks for US economic growth are favourable. Growth of 2.5%–3.1% is expected this year (see Chart III.7.7) and roughly the same pace of growth is predicted for next year.

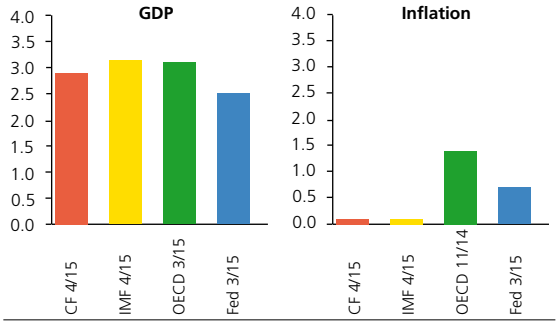
As regards price developments, disinflationary pressures stemming from falling oil prices and a stronger dollar are visible in the US (see Chart III.7.8). Annual **consumer price inflation** declined to -0.2% in January owing to a marked negative contribution of fuel prices and converged on zero in the following two months after fuel prices stabilised. Core inflation was not affected by the drop in fuel prices and increased to 1.8% in March. In addition to the factors mentioned above, inflation will be affected over the outlook horizon by wage growth, which remains low despite the robust recovery. According to updated outlooks, growth in the price level will be muted this year (see Chart III.7.7). Next year, inflation should be around 2% (according to CF, the OECD and the Fed) or roughly 0.5 percentage point lower (according to the IMF). The low inflation pressures and weaker economic output in early 2015 are increasing the uncertainty regarding the first interest rate hike by the Fed, which the markets currently do not expect to happen until the second half of 2015.

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)



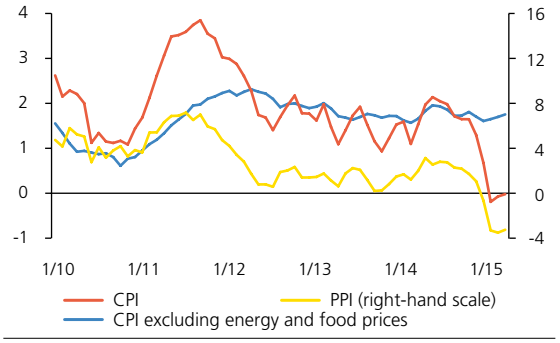
Note: Horizontal axis shows most recent forecast data in format "Source month/year of publication". Midpoint of range for Fed.

CHART III.7.8

INFLATION AND PRODUCER PRICES IN THE USA

Consumer prices decreased in 2015 Q1 as a result of the sharp fall in oil prices

(annual percentage changes; source: Datastream)



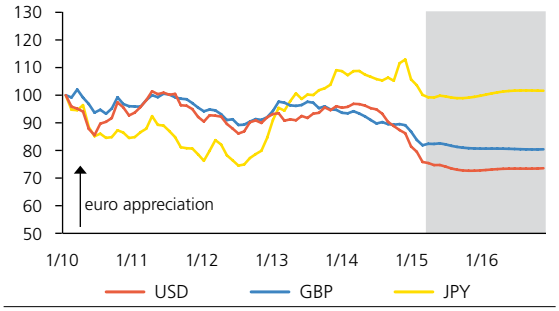
66 The real effective exchange rate appreciated by around 11% year on year in March.

CHART III.7.9

EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

The euro has weakened significantly against the major world currencies since the start of 2015

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



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

The **exchange rate of the euro against major world currencies** weakened further in 2015 Q1 (see Chart III.7.9). The euro recorded the biggest year-on-year depreciation against the US dollar (17.8% for the whole-quarter average) in reaction to the growing difference in the current and expected monetary policy settings in the euro area and the USA. At its January meeting, the ECB announced an expansion of its securities purchase programme to include new instruments, in particular government bonds. In the USA, by contrast, financial markets are expecting the Fed to increase its key rates in the course of 2015 H2. The depreciation of the single European currency was also due to uncertainty connected with developments in Greece following the January elections, as the new government has so far not been willing to accept creditors' reform demands. The financial markets calmed down in the short term after the maturity of the second bailout programme was extended by four months.

The euro weakened by 10.2% against the **British pound** in 2015 Q1. The annual growth of the UK economy accelerated to 2.8% in 2014 and the outlook for 2015 Q1 remains optimistic. Inflation was zero in February. No monetary policy tightening is thus expected before 2016.

The euro weakened by only 4.7% against the **Japanese yen** in year-on-year comparison. The Japanese economy emerged from recession at the close of the year. In particular, its export growth figures came as a positive surprise in 2015 Q1. However, domestic demand remains weak and inflation saw a further year-on-year slowdown to 2% in February.

The euro weakened again **in the first half of April 2015**, mainly because of the so far unsuccessful negotiations regarding Greece. On the other hand, new macroeconomic data confirm a continuing recovery of the euro area economy, while the appreciating dollar is adversely affecting US economic growth.

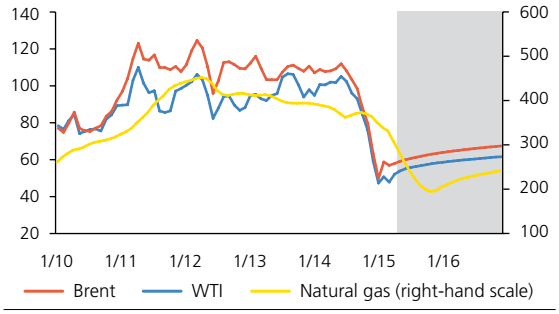
The **April CF** expects the exchange rate of the euro against the dollar to remain above USD 1.05 at the one-year horizon. The euro is expected to depreciate by 1.3% against the British pound and appreciate by 3.5% against the Japanese yen at the same horizon.

CHART III.7.10

OIL AND NATURAL GAS PRICES IN USD

The slump in oil prices halted in January, but natural gas prices have yet to fully reflect the previous decline in oil prices

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



III.7.4 Prices of oil and other commodities

The seven-month-long slump in oil prices halted in January. The **average monthly Brent crude oil price** (USD 49.8 a barrel) reached its lowest level since March 2009 (see Chart III.7.10). In the first half of February, however, part of the previous decline was quickly reversed, and oil prices mostly exceeded USD 60 a barrel in the second half of the month. The turnaround in oil prices occurred in the wake of frequent reports of cuts in extraction investment, a sharper decrease

in the drilling rig count in the USA and delayed well completion. This raised hopes that supply and demand on the market would balance out earlier than originally expected. Some financial investors thus began to close out their short positions in expectation that oil prices had bottomed out. The exchange rate of the dollar, which temporarily stopped appreciating at the time, also affected the price of oil.

In early March, however, the Brent crude oil price came under pressure again, as some analyses warned that the drop in US extraction might not be as sharp as indicated by fall in the new rig count. This was supported by a rapid rise in oil stocks, especially in the USA. In addition, concerns emerged that sanctions on Iranian oil exports might be lifted and the US dollar returned to its previous sharply appreciating trend. The Brent crude oil price thus fell below USD 55 a barrel again in the first half of March and then stayed below USD 60 a barrel amid large fluctuations. Another abrupt change occurred in mid-April, when Brent prices surged by USD 6 to USD 64 a barrel in two days in reaction to EIA information of slower growth in oil stocks in the USA (despite a further strengthening of the dollar). In koruna terms, the oil price growth was amplified by a marked depreciation of the koruna against the US dollar (see Chart III.7.11).

A **decrease in excess supply** on the oil market is expected in the second half of this year, when seasonal consumption tends to be considerably higher. Oil production in the USA is expected to drop temporarily at the same time. Most forecasts therefore predict a slight increase in the oil price in this period. However, record-high oil stocks in OECD countries and a potential increase in Iranian oil exports if Western sanctions are lifted will act against a stronger rise. Further actions by OPEC are unclear. However, some member countries – especially Saudi Arabia – are tending to increase their extraction.

The **market outlook for Brent crude oil prices**, prepared before the mid-April price surge, was implying a gradual rise in prices from USD 58 to USD 68 a barrel at the end of 2016. The April CF foresees only slightly faster growth to USD 67 a barrel at the one-year horizon. The EIA outlook is steeper, expecting the average Brent crude oil price to stand at USD 67 a barrel in 2015 Q4 and rise further to USD 75 a barrel in 2016. However, if sanctions against Iran were to be lifted gradually during 2016, the forecast would move downwards by USD 5–15 a barrel. The WTI crude oil price is expected to be USD 7 and USD 5 a barrel below Brent this year and the next, respectively. Rapidly filling storage capacity in the USA remains a risk to this outlook. A sharp fall in the WTI price is a threat unless extraction in the USA is reduced fast enough (or the ban on crude oil exports is lifted).

After flattening out temporarily in 2014 Q4, the average monthly **non-energy commodity price index** returned to a downward trend at the start of this year. However, the intensity of the fall is gradually decreasing (see Chart III.7.12). Similar developments can be observed for the food commodity sub-index, whereas the industrial metals sub-index has been virtually flat since February following a sharp

CHART III.7.11

DECOMPOSITION OF KORUNA OIL PRICE GROWTH

The year-on-year fall in koruna prices of oil will continue to be significantly smaller than the decline in dollar prices this year as a result of a weakening of the koruna-dollar exchange rate

(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)

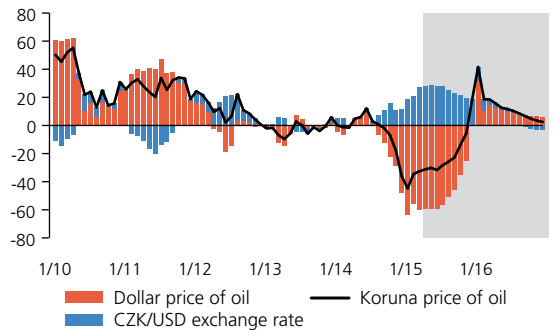
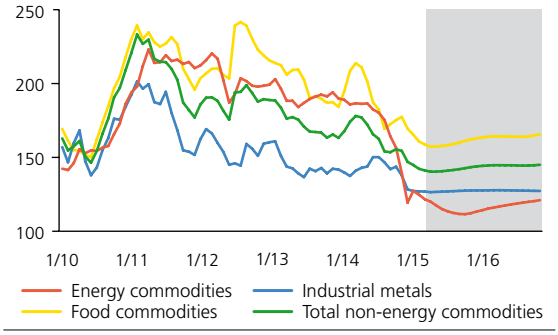


CHART III.7.12

COMMODITY PRICES

The food commodity index declined in 2015 Q1, but its outlook is now slightly rising. The industrial metals index has been flat since February and its outlook is also 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).

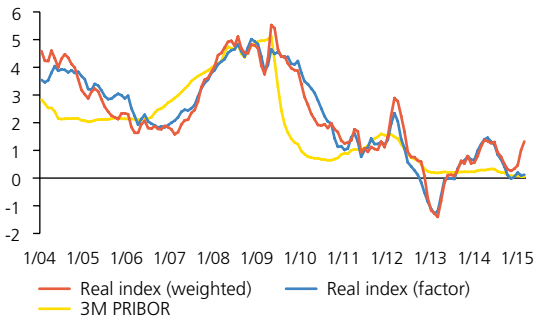
decrease. The previous price declines, which reflected among other things falling production costs due to the drop in energy prices, seem to have exhausted their potential. The outlook for metal prices in 2016 is thus flat, even though excess extraction capacity persists. On the other hand, the low prices might already be stimulating demand. The outlook for food commodities is slightly rising despite mostly favourable weather and expectations of a good harvest this year and high stocks after this year's harvest.

CHART 1 (BOX)

REAL MONETARY CONDITIONS INDEX FOR EURO AREA

In late 2014 and early 2015, the indices are signalling a halt in the easing, or even a tightening, of the monetary conditions due to a fall in inflation expectations in the euro area

(source: ECB, EC; CNB calculation)



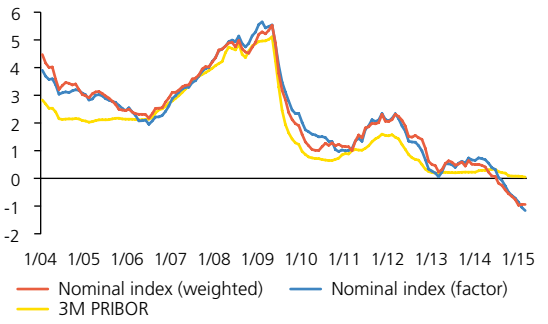
Note: A rise in the index refers to a tightening of the monetary conditions and a fall to an easing. The dimensionless values of the indices were adjusted to 3M EURIBOR rates, so a zero index value has no interpretation.

CHART 2 (BOX)

NOMINAL MONETARY CONDITIONS INDEX FOR EURO AREA

Unlike the real indices, the nominal indices are signalling an easing of conditions at the end of the period under review due to a fall in nominal interest rates and the effective exchange rate

(source: ECB, EC; CNB calculation)



Note: A rise in the index refers to a tightening of the monetary conditions and a fall to an easing. The dimensionless values of the indices were adjusted to 3M EURIBOR rates, so a zero index value has no interpretation.

BOX 4
The monetary conditions index for the euro area

This box describes the monetary conditions in the euro area using an index that summarises information from indicators of the monetary conditions in the main sectors of the euro area economy: households (interest rates on loans for house purchase), companies (rates on loans of up to EUR 1 million), general government (synthetic ten-year bond yields), the banking sector (3M EURIBOR) and the rest of the world (the effective exchange rate of the euro vis-à-vis 38 main trading partners). The index is estimated in two variants: as the weighted average of the interest rate component and the exchange rate component (weighted 6:1[67] in favour of interest rates; the *weighted* series) and as the principal component of all the input series (the *factor* series).

Chart 1 shows the **real monetary conditions index**, which contains ex ante real interest rates together with the real effective exchange rate. Between the start of the period under review and approximately mid-2006 we can see an easing of the monetary conditions, reflecting a narrowing of the spread of individual interest rates against the 3M EURIBOR. The rise in nominal interest rates starting in late 2005 had a lagged effect on the real monetary conditions. The same goes for the falls in nominal rates in late 2008 and late 2011. The lowering of ECB rates to zero as from the end of 2011 was initially reflected in an easing of the real monetary conditions due to both falling real rates and a weakening exchange rate. Between the start of 2013 and the start of 2014, however, the real indices are signalling a tightening of the monetary conditions linked with appreciation of the euro, a fall in inflation expectations and a temporary rise in government bond yields (lasting until the start of 2014).

67 The weights are based on European Commission estimates (http://ec.europa.eu/economy_finance/db_indicators/conditions/index_en.htm).

During 2014, all nominal components of the interest rate component of the index acted in the direction of monetary policy easing, although this was counteracted by a fall in inflation expectations. This fall accelerated at the end of the year and, together with a temporary appreciation of the euro, started to act against a further easing the monetary conditions. At the end of the period under review, the *factor* index was thus signalling a halt in the easing of the monetary conditions due to the higher weight of the exchange rate in the index, while the *weighted* index was indicating a tightening due to the real interest rate component.

The effect of inflation expectations on the monetary conditions is apparent from the difference between the curves in Chart 1 and Chart 2, which shows the **nominal monetary conditions indices** for the euro area. Of primary interest here is the end of the period under review, when the nominal index was signalling a further easing of the monetary conditions while a decline in inflation expectations was fostering a real tightening.

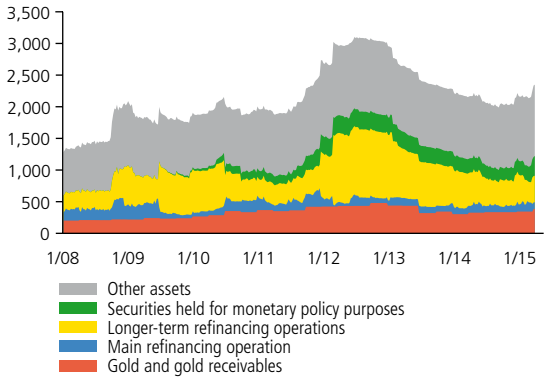
The aforementioned indices do not include the effects of the ECB's non-standard monetary policy tools, which are difficult to quantify for monetary conditions index purposes. These tools are reflected in the size and structure of the **ECB balance sheet** (see Chart 3). In it, we can see growth in assets as a result of two extraordinary longer-term refinancing operations (LTROs) conducted in December 2011 and March 2012. However, these facilities were subsequently gradually repaid. This caused the ECB's balance sheet to shrink again, a process that corresponds to the phase of autonomous tightening of the monetary conditions in Chart 1. To increase its balance-sheet total to the early-2012 level, the ECB therefore introduced a series of programmes last year (TLTROs, CBPP3, ABSPP) and started purchasing public assets under the EAPP in March 2015.

CHART 3 (BOX)

MAIN ASSET ITEMS OF EUROSYSTEM CONSOLIDATED BALANCE SHEET

In 2014 and 2015, the ECB introduced a series of programmes, including public asset purchases, to further ease the monetary conditions

(EUR billion; source: ECB)



AEIS	Average Earnings Information System
CDS	credit default swaps
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
EAPP	expanded asset purchase programme
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EIA	Energy Information Administration
EIB	European Investment 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
GNI	gross national income
GVA	gross value added
HICP	harmonised index of consumer prices
HP filter	Hodrick-Prescott filter
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
LTV	loan to value
M1, M2, M3	monetary aggregates
MLSA	Ministry of Labour and Social Affairs
NAIRU	non-accelerating inflation rate of unemployment
NBS	National Bank of Slovakia
NFCs	non-financial corporations
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
RMCI	real monetary conditions index
TLTROs	targeted longer-term refinancing operations
USD	US dollar
VAT	value added tax
WTI	West Texas Intermediate
ZEW	Zentrum für Europäische Wirtschaftsforschung

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The relationship between the Brent crude oil price and the dollar exchange rate	(Box)	II/2011
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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
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Comparison of corporate investment and employment from the perspective of ownership and reinvestment	(Box)	IV/2013
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Effects of the weakened exchange rate on consumer prices (input-output analysis)	(Box)	I/2014
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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
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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
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Labour market developments from the perspective of the NAIRU and the cyclicality of the unemployment rate and wages	(Box)	II/2015
The monetary conditions index for the Czech Republic	(Box)	II/2015
The monetary conditions index for the euro area	(Box)	II/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).

Gross operating surplus and mixed income of the household sector: gross operating surplus – as a part of the gross disposable income of households – is the difference between gross value added in the household sector and the sum of compensation of employees and other taxes less other subsidies on production in this sector. Gross mixed income is generated only in the household sector, where remuneration for labour performed by a firm's owner or by family members cannot be distinguished from the entrepreneurial profit of the owner.

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	4,049.9	**4,153.7**	**4,287.6**
GDP	%, y-o-y, real terms, seas. adjusted	7.1	5.5	2.5	-4.7	2.1	2.0	-0.7	-0.7	2.0	**2.6**	**3.2**
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	1.7	**2.3**	**2.4**
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	2.3	**2.2**	**1.9**
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	3.0	**5.7**	**3.6**
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	8.8	**8.0**	**9.8**
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	9.6	**9.3**	**9.7**
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	252.6	**233.2**	**258.9**
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	4.9	-	-
Construction output	%, y-o-y, real terms	6.0	7.1	0.0	-0.9	-7.4	-3.6	-7.6	-6.7	4.3	-	-
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	5.4	-	-
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	**0.2**	**1.7**
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	**-1.1**	**0.2**
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	**0.1**	**1.7**
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	**0.3**	**2.1**
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	**0.9**	**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	**-12.0**	**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	**0.0**	**1.5**
GDP deflator	%, y-o-y, seas. adjusted	0.7	3.5	2.0	2.6	-1.4	-0.2	1.4	1.7	2.4	**2.1**	**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	**-1.8**	**2.1**
Agricultural prices	%, y-o-y, average	1.3	16.5	9.3	-24.9	7.1	22.1	3.3	5.0	4.7	**-5.8**	**0.1**
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	**-40.1**	**10.4**
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	2.4	**2.5**	**3.9**
Average monthly wage	%, y-o-y, real terms	4.0	4.3	1.4	2.3	0.7	0.6	-0.8	-1.4	2.0	**2.3**	**2.2**
Number of employees	%, y-o-y	1.1	1.8	1.6	-2.2	-2.2	0.0	-0.1	1.6	0.6	**1.0**	**0.9**
Unit labour costs	%, y-o-y	0.2	2.6	4.8	3.0	-1.7	0.3	2.9	0.4	1.1	**0.9**	**1.6**
Unit labour costs in industry	%, y-o-y	-8.9	3.4	-1.7	3.3	-6.2	0.7	4.1	2.8	-0.4	**-**	**-**
Aggregate labour productivity	%, y-o-y	5.5	3.4	0.5	-3.1	3.4	2.2	-1.2	-1.1	1.6	**1.5**	**2.6**
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	**5.4**	**5.0**
Share of unemployed	%, average	6.1	4.9	4.1	6.2	7.0	6.7	6.8	7.7	7.7	**6.7**	**6.2**
PUBLIC FINANCE												
Public finance deficit (ESA 2010)	CZK bn, current p.	-79.1	-26.6	-84.6	-216.2	-174.5	-108.9	-157.9	-47.2	-84.6	**-71.8**	**-46.3**
Public finance deficit / GDP**	%, nominal terms	-2.3	-0.7	-2.1	-5.5	-4.4	-2.7	-3.9	-1.2	-2.0	**-1.6**	**-1.0**
Public debt (ESA 2010)	CZK bn, current p.	978.9	1,065.5	1,150.7	1,335.7	1,508.5	1,604.0	1,803.6	1,839.7	1,816.1	**1,814.0**	**1,873.0**
Public debt / GDP**	%, nominal terms	27.9	27.8	28.7	34.1	38.2	39.9	44.6	45.0	42.6	**40.6**	**40.0**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current p.	24.4	10.4	-4.4	65.0	40.4	75.5	123.8	167.0	238.9	**280.0**	**320.0**
Trade balance / GDP	%, nominal terms	0.7	0.3	-0.1	1.7	1.0	1.9	3.1	4.1	5.6	**6.3**	**6.8**
Balance of services	CZK bn, current p.	76.8	88.1	89.3	81.9	78.5	81.3	77.6	70.4	55.9	**45.0**	**50.0**
Current account	CZK bn, current p.	-74.3	-164.5	-75.3	-89.2	-141.8	-84.8	-63.3	-21.8	26.1	**50.0**	**70.0**
Current account / GDP	%, nominal terms	-2.1	-4.3	-1.9	-2.3	-3.6	-2.1	-1.6	-0.5	0.6	**1.1**	**1.5**
Foreign direct investment												
Direct investment	CZK bn, current p.	-90.3	-179.1	-36.3	-37.7	-95.0	-46.8	-121.3	7.4	-133.6	**-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	3.5	**0.1**	**1.4**
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	**-1.0**	**1.7**
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	**5.6**	**6.3**
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	1,007.2	1,010.3	1,014.3	1,018.1	**1,026.4**	**1,034.9**	**1,041.9**	**1,050.5**	**1,057.2**	**1,067.5**	**1,076.8**	**1,086.2**
0.2	-0.6	-1.1	-1.4	-2.2	-1.3	-0.5	1.1	2.3	2.1	2.2	1.4	**1.9**	**2.4**	**2.7**	**3.2**	**3.0**	**3.1**	**3.3**	**3.4**
-1.2	-1.6	-1.9	-2.4	-0.6	-0.5	1.0	1.6	1.1	2.0	1.7	2.0	**2.3**	**2.1**	**2.6**	**2.0**	**2.5**	**2.4**	**2.4**	**2.4**
-1.6	-2.0	-0.8	0.4	1.0	0.8	3.5	3.7	1.0	3.5	0.4	4.2	**3.9**	**2.4**	**3.5**	**-1.0**	**1.2**	**1.7**	**2.1**	**2.5**
-2.6	-1.4	-5.1	-5.4	-6.0	-8.4	-3.3	-2.8	1.1	6.0	5.6	-0.4	**3.3**	**2.2**	**2.9**	**14.7**	**6.0**	**5.2**	**4.0**	**-0.6**
7.0	4.2	3.4	2.5	-4.6	-0.2	0.6	5.6	11.6	9.1	7.2	7.4	**5.3**	**7.4**	**10.3**	**9.1**	**10.3**	**9.9**	**9.8**	**9.3**
4.6	3.1	1.7	1.1	-4.3	-1.6	1.7	5.5	10.6	11.4	7.9	8.5	**6.9**	**7.6**	**11.2**	**11.6**	**11.2**	**10.4**	**9.8**	**7.6**
61.3	58.4	68.7	62.7	56.0	68.1	61.2	66.6	68.9	58.9	60.5	64.2	**60.9**	**61.7**	**60.1**	**50.5**	**59.7**	**63.4**	**66.4**	**69.3**
2.6	-0.8	-0.9	-4.1	-5.9	-2.8	3.7	5.0	6.7	5.7	3.9	3.2	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
-10.0	-6.0	-6.2	-9.0	-11.2	-11.7	-3.9	-3.1	8.3	3.9	1.2	-0.5	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
0.9	-2.2	-1.1	-1.7	-2.7	0.4	2.9	3.8	6.7	4.7	5.6	4.7	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2.4	2.8	3.2	3.3	2.8	2.3	1.8	1.4	1.0	0.7	0.5	0.4	0.3	-	-	-	-	-	-	-
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	**0.3**	**-0.1**	**0.3**	**1.2**	**1.5**	**2.0**	**2.1**
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	**0.1**	**-2.3**	**-2.5**	**-1.1**	**-0.9**	**1.2**	**1.4**
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**	**0.6**	**1.5**	**1.6**	**1.9**	**2.0**
3.5	2.6	2.8	2.7	3.0	3.8	3.3	2.4	3.5	1.5	1.5	0.7	-0.9	**0.1**	**0.7**	**1.4**	**1.8**	**1.9**	**2.2**	**2.5**
-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	**0.8**	**0.6**	**0.9**	**1.1**	**1.5**	**1.6**	**1.6**
8.0	5.8	6.4	3.8	-1.5	-3.8	-1.4	-1.7	0.3	1.0	0.5	-1.2	-14.6	**-11.4**	**-12.4**	**-9.7**	**4.6**	**2.7**	**3.7**	**3.8**
2.5	2.2	2.0	1.6	0.9	0.8	0.4	0.3	0.1	0.0	0.5	0.3	-0.1	**0.1**	**-0.3**	**0.2**	**1.1**	**1.2**	**1.8**	**1.9**
1.7	1.5	1.2	1.3	1.6	1.4	1.6	2.1	2.3	2.7	2.7	1.8	**2.6**	**1.8**	**1.9**	**2.0**	**0.7**	**2.0**	**2.3**	**1.2**
3.6	1.8	1.7	1.6	1.2	0.5	0.7	0.8	-0.7	-0.2	-0.1	-1.9	-3.3	**-2.5**	**-1.9**	**0.4**	**3.0**	**2.5**	**1.8**	**1.1**
-1.3	-2.9	5.6	12.8	14.5	9.3	1.5	-4.3	-4.4	-2.1	-2.3	-6.0	-9.3	**-9.3**	**-4.0**	**1.5**	**-1.1**	**-0.7**	**0.7**	**1.8**
-0.7	-0.6	-0.6	-0.8	-1.0	-1.3	-1.3	-0.8	-0.3	0.5	0.7	0.8	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	-48.9	**-46.3**	**-40.6**	**-16.5**	**17.1**	**10.9**	**8.3**	**6.6**
3.2	2.1	1.4	3.2	-0.5	1.2	1.4	-1.7	3.3	2.3	1.8	2.3	**1.9**	**2.3**	**2.8**	**2.9**	**3.6**	**3.8**	**4.0**	**4.1**
-0.5	-1.3	-1.8	0.4	-2.3	-0.3	0.2	-2.8	3.1	2.1	1.2	1.8	**1.8**	**1.9**	**2.8**	**2.6**	**2.2**	**2.3**	**2.2**	**2.3**
-0.6	-0.6	0.3	0.6	2.0	2.4	0.9	1.3	0.4	-0.2	1.0	1.2	**1.0**	**1.0**	**1.0**	**0.8**	**0.9**	**0.9**	**0.8**	**0.9**
2.4	2.6	2.5	4.0	2.3	1.9	0.7	-3.1	1.0	0.8	0.0	2.6	**0.9**	**0.8**	**1.1**	**0.8**	**1.5**	**1.6**	**1.5**	**1.7**
1.6	3.3	5.9	6.0	3.7	4.0	3.0	0.5	1.2	-0.4	-1.9	-0.3	-	-	-	-	-	-	-	-
0.5	-1.3	-2.0	-2.0	-3.3	-2.1	0.2	0.7	1.8	2.3	2.0	0.3	**0.8**	**1.3**	**1.7**	**2.5**	**2.4**	**2.4**	**2.7**	**2.9**
7.2	6.8	7.0	7.2	7.5	6.8	7.0	6.7	6.8	6.1	6.0	5.8	**6.0**	**5.2**	**5.2**	**5.3**	**5.5**	**4.7**	**4.8**	**5.0**
7.1	6.5	6.6	7.0	8.0	7.5	7.5	7.8	8.5	7.6	7.4	7.2	**7.5**	**6.6**	**6.4**	**6.4**	**6.9**	**6.1**	**6.0**	**6.0**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43.3	36.2	25.7	18.7	48.4	59.7	31.7	27.3	77.4	68.2	51.7	41.6	**79.0**	**80.0**	**65.0**	**56.0**	**92.0**	**92.0**	**73.0**	**63.0**
4.5	3.5	2.5	1.8	5.1	5.9	3.1	2.5	7.8	6.4	4.7	3.7	**7.7**	**7.2**	**5.7**	**4.8**	**8.6**	**7.9**	**6.0**	**5.1**
23.5	21.0	17.9	15.3	21.7	18.2	14.5	16.0	20.4	15.2	12.2	8.1	**12.0**	**12.0**	**11.0**	**10.0**	**14.0**	**13.0**	**12.0**	**11.0**
25.4	-5.2	-49.3	-34.2	16.5	-4.0	-29.1	-5.2	83.6	-29.2	-33.3	5.0	**124.0**	**-43.0**	**-39.0**	**8.0**	**111.0**	**-15.0**	**-40.0**	**14.0**
2.7	-0.5	-4.8	-3.2	1.7	-0.4	-2.8	-0.5	8.5	-2.7	-3.0	0.5	**12.0**	**-3.9**	**-3.4**	**0.7**	**10.4**	**-1.3**	**-3.3**	**1.1**
-16.3	-44.6	-26.3	-34.0	1.9	1.9	1.9	1.9	-38.7	-59.0	-29.7	-6.3	-	-	-	-	-	-	-	-
19.1	19.7	20.0	19.4	19.4	19.8	19.5	19.6	20.0	20.0	20.9	22.1	24.5	-	-	-	-	-	-	-
25.1	25.3	25.1	25.2	25.6	25.8	25.9	26.7	27.4	27.4	27.6	27.6	27.6	-	-	-	-	-	-	-
2.0	2.9	2.0	-0.7	2.1	2.5	3.5	5.9	7.9	6.6	6.6	3.2	0.3	-	-	-	-	-	-	-
2.6	4.4	3.3	0.2	1.8	1.7	1.9	3.9	6.1	4.8	5.1	3.3	1.2	-	-	-	-	-	-	-
4.0	3.9	3.3	0.3	0.9	0.6	0.4	2.9	4.1	3.4	4.7	2.0	**-0.5**	**-0.1**	**0.0**	**1.0**	**1.8**	**2.0**	**1.6**	**0.3**
5.7	5.7	4.7	1.0	-0.3	-0.7	-0.9	1.0	2.4	1.3	2.9	1.1	**-1.6**	**-0.9**	**-1.2**	**-0.4**	**1.6**	**2.1**	**2.1**	**1.0**
6.0	5.8	5.7	5.0	4.2	4.1	4.9	4.6	4.6	4.5	3.4	4.4	5.0	**5.7**	**5.9**	**5.7**	**5.9**	**6.0**	**6.6**	**6.8**
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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