

# INFLATION REPORT / I

2016



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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 11 February 2016 and contains the information available as of 22 January 2016. Unless stated otherwise, the sources of the data contained in this Inflation Report are the CZSO or the CNB. All the Inflation Reports published to date are available on the [CNB website](#). Underlying data for the tables and charts presented in the text of this Inflation Report, minutes of Bank Board meetings, and time series of selected economic and monetary indicators (available in the ARAD database) are published at the same internet address.



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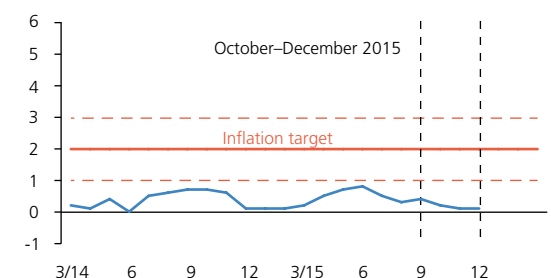
## I. SUMMARY

The Czech economy continued to grow rapidly in the second half of last year, buoyed by easy monetary conditions, a sharp rise in government investment, growth in external demand and low oil prices. In this context, the labour market situation continued to improve. Both headline and monetary policy-relevant inflation decreased towards zero, thus remaining well below the CNB's target. Despite a further drop in oil prices, GDP growth will slow markedly this year due to a drop in government investment financed from EU funds. Economic growth will accelerate slightly again next year. The growing economic activity and, this year, accelerating wage growth will continue to foster higher costs and consequently also higher consumer prices over the entire forecast horizon. The current strongly anti-inflationary effect of import prices will lessen. Both headline and monetary policy-relevant inflation will increase, hitting the 2% target at the monetary policy horizon and then moving slightly above it. The forecast assumes that market interest rates will be flat at their current very low level and the exchange rate will be used as a monetary policy instrument until the end of 2016. Consistent with the forecast is an increase in market interest rates in 2017.

CHART I.1

## FULFILMENT OF THE INFLATION TARGET

Headline inflation decreased towards zero in 2015 Q4, thus remaining well below the CNB's target  
(year on year in %)



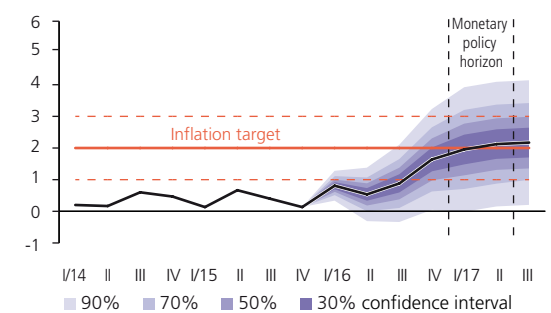
The **Czech economy** expanded by 4.7% year on year in **2015 Q3**, with all domestic demand components making positive contributions. GDP also continued growing in quarter-on-quarter terms at a relatively strong pace. The forecast expects annual GDP growth to accelerate further to more than 5% in 2015 Q4.

Both **headline and monetary policy-relevant inflation** decreased towards zero in **2015 Q4**, thus remaining well below the CNB's target, or below the lower boundary of the tolerance band around the target (see Chart I.1). The decrease in inflation was due to a halt in annual food price growth and a deepening decline in fuel prices. By contrast, adjusted inflation excluding fuels rose somewhat, with the effect of increasing growth in the domestic economy and wages outweighing a continuing marked decline in foreign producer prices.

CHART I.2

## HEADLINE INFLATION FORECAST

Headline inflation will increase, hitting the 2% target at the monetary policy horizon and then moving slightly above it  
(year on year in %)



Growth in economic activity in the **effective euro area** will remain close to 2% over the entire forecast horizon. Producer and consumer price inflation in the euro area remains very subdued. However, both producer and consumer prices will rise gradually as a result of the unwinding of the effect of the drop in oil prices, an expected further slight weakening of the euro against the dollar and stable growth of the euro area economy. This will also be fostered by the ECB's easy monetary policy, which is reflected in the outlook for 3M EURIBOR market interest rates. This outlook is negative until the end of 2017. The Brent crude oil price is expected to rise only gradually after having decreased in late 2015 and early 2016.

According to the **forecast, both headline and monetary policy-relevant inflation** will increase, hitting the 2% target at the monetary policy horizon and then moving slightly above it (see Charts I.2 and I.3).



The overall upward cost pressures on consumer prices will re-emerge this year. Costs in the domestic economy will continue to increase over the entire forecast horizon due to this year's accelerating wage growth and rising prices of capital amid continued growth in economic activity. At the same time, the current strongly anti-inflationary effect of import prices, stemming from a decline in euro area producer prices and a drop in world prices of oil, will gradually unwind. This will lead to a further gradual increase in adjusted inflation excluding fuels. Food prices will return to growth owing to the evolution of world prices of agricultural commodities and the fading of one-off effects observed last year. Administered prices will keep falling slightly year on year until the end of this year and then increase modestly. The current deep year-on-year decline in fuel prices will moderate in 2016. Fuel prices will rise from the start of next year in line with world prices of oil and petrol.

The forecast expects market **interest rates** to be flat at their current very low level until the end of 2016. This reflects an assumption that the 2W repo rate will be left at technical zero and the money market premium will remain unchanged in the same period. Consistent with the forecast is an increase in market interest rates in 2017 (see Chart I.4). The forecast assumes that the **exchange rate** will be used as a monetary policy instrument with the CNB's commitment at CZK 27 to the euro until the end of 2016. The 2% inflation target will be reached at the start of 2017 and sustainable fulfilment of this target is a condition for a return to conventional monetary policy. This return should not result in the exchange rate appreciating sharply to the slightly overvalued level recorded before the CNB started intervening, among other things because the weaker exchange rate of the koruna is in the meantime passing through to the price level and other nominal variables. Nevertheless, a positive interest rate differential, continued quantitative easing by the ECB at least until March 2017 and renewed – although much slower than in the pre-crisis period – real convergence of the Czech economy to the advanced euro area countries will be apparent after the exit from the exchange rate commitment. According to the forecast, the koruna will thus appreciate against the euro next year.

The current strong **growth of the Czech economy** will slow to 2.7% this year because of a temporary decline in gross capital formation due mainly to a drop in government investment financed from EU funds. However, the economy will continue to be supported by easy domestic monetary conditions via the weakened koruna and exceptionally low interest rates. A further decrease in the oil price and rising external demand are also fostering economic growth. Growth will pick up to 3% next year, with positive contributions from all components of domestic demand (see Chart I.5). The rising economic activity will manifest itself in the **labour market** in continued growth in employment, albeit at a slower pace than last year. This will result in a further, albeit more gradual, decrease in unemployment. Wage growth in the business sector will record a further marked increase this year and will exceed that in the non-business sector.

CHART I.3

## MONETARY POLICY-RELEVANT INFLATION FORECAST

Monetary policy-relevant inflation will reach the 2% target at the monetary policy horizon

(year on year in %)

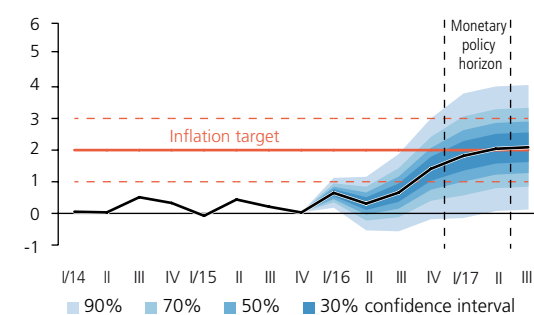


CHART I.4

## INTEREST RATE FORECAST

The forecast expects market interest rates to be flat at their current very low level until the end of 2016; consistent with the forecast is an increase in rates in 2017

(3M PRIBOR in %)

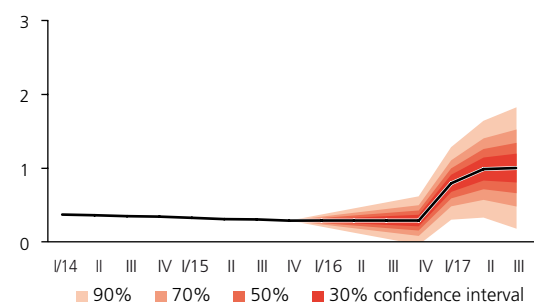
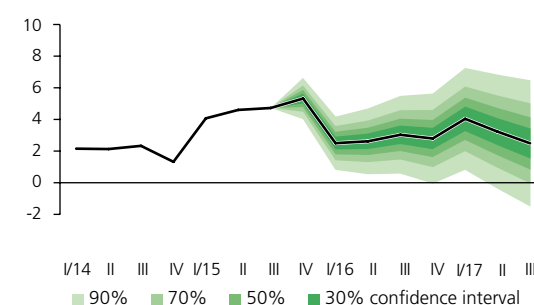


CHART I.5

## GDP GROWTH FORECAST

GDP will slow markedly this year due mainly to a drop in government investment financed from EU funds

(annual percentage changes; seasonally adjusted)



At its monetary policy meeting on 4 February 2016, 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. A need to maintain expansionary monetary conditions at least to the current extent persists. The Bank Board assessed the risks to the forecast at the monetary policy horizon as being broadly balanced. The evolution of oil prices, which have recently seen marked fluctuations, is a significant source of uncertainty in both directions. The Bank Board states that the Czech National Bank will not discontinue the use of the exchange rate as a monetary policy instrument before 2017. The Bank Board considers it likely that the commitment will be discontinued in the first half of next year.

## II. THE FORECAST, ITS CHANGES AND RISKS

### II.1 EXTERNAL ASSUMPTIONS OF THE FORECAST

Growth in external economic activity will accelerate slightly further this year and fluctuate around 2% over the entire forecast horizon. The sharp decline in energy commodity prices is reflected in an outlook for subdued growth in industrial producer prices, which will not return to annual growth until the end of this year. Consumer price inflation will rise gradually from very low levels, but will stay below 2% over the entire horizon. The ECB responded to the subdued inflation by further easing monetary policy. This is reflected in the market outlook for 3M EURIBOR rates, which is negative until the end of 2017. The euro is expected to depreciate slightly further against the US dollar this year. The outlook for the Brent crude oil price reflects its further sizeable fall in late 2015 and early 2016. The Brent price is expected to rise gradually over the forecast horizon.

The outlook for the **effective indicator of euro area GDP** foresees a modest pick-up in economic growth to 2.1% this year, which is 0.2 percentage point higher than in 2015 (see Chart II.1.1).<sup>1</sup> This is mainly due to low oil prices and easier monetary conditions. Next year, economic activity in the effective euro area is expected to rise by 2%. Compared to the previous forecast, the outlooks are unchanged. Slowing demand in emerging countries, especially China, remains a downside risk to growth (see Box 3 in section III.7). By contrast, a further decrease in the oil price and continued easing of monetary policy by the ECB may act in the opposite direction.

The marked decline in energy commodity prices is reflected in the outlook for the **effective indicator of industrial producer prices in the euro area** (see Chart II.1.2). Its growth is not predicted to return to positive values until the close of this year. Producer prices will decline by 0.4% for the year as a whole on average.<sup>2</sup> In 2017, producer prices are expected to rise by 1.9% on average owing to the unwinding of the oil price decrease coupled with continued economic growth. The outlook for this year is substantially lower than the previous forecast.

The expected path of the **effective indicator of consumer prices in the euro area** mainly reflects falling energy prices for households and low food prices. On average, inflation is expected to accelerate to 1.1% this year and 1.8% next year (see Chart II.1.3). This will be

1 The outlooks for euro area GDP, PPI and CPI and the dollar-euro exchange rate are based on the January Consensus Forecasts (CF). The outlooks for the 3M EURIBOR and the Brent crude oil price are derived from prices of market contracts as of 11 January 2016. The outlook is indicated by the grey areas in the charts. This convention is used throughout this Report.

2 This represents a downward expert adjustment of 1.2 percentage points for 2016 compared to the CF outlook, as the January CF analysts expect significantly higher oil prices than the current market outlooks (see below) and materialisation of their forecast would require implausibly strong producer price inflation in early 2016.

CHART II.1.1

#### EFFECTIVE GDP IN THE EURO AREA

**The growth rate of economic activity abroad will fluctuate around 2% over the entire forecast horizon**

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

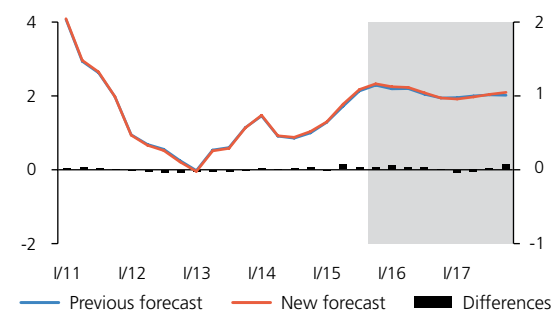


CHART II.1.2

#### EFFECTIVE PPI IN THE EURO AREA

**The decline in producer prices will fade out at the end of this year and their growth will then stabilise around 2%**

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

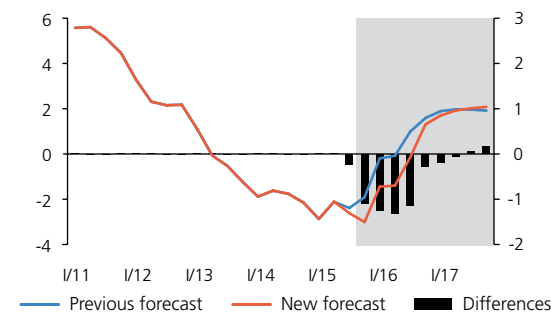


CHART II.1.3

#### EFFECTIVE CPI IN THE EURO AREA

**The currently very low consumer price inflation will rise, but will be below 2% over the entire forecast horizon**

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

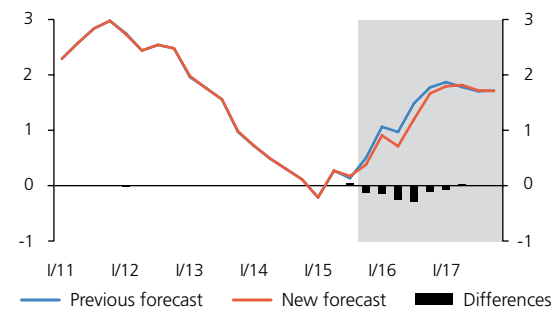
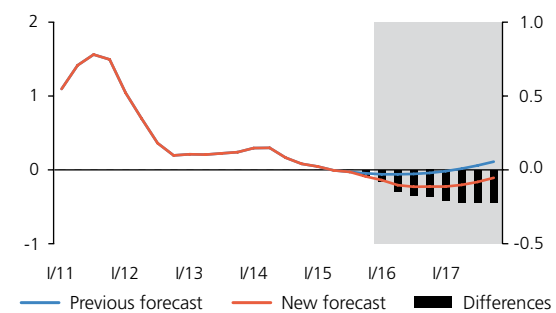


CHART II.1.4

**3M EURIBOR**

**Subdued inflation and a further easing of monetary policy by the ECB is reflected in a low outlook for interest rates in the euro area**

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



fostered by easy ECB monetary policy, the unwinding of the effect of low energy prices and stable economic growth. Nevertheless, the inflation outlook for this year has shifted downwards compared to the previous forecast.

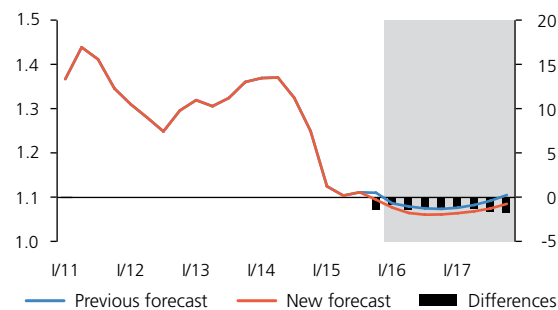
The low level of **3M EURIBOR market interest rates** reflects continuing subdued inflation in the euro area and the corresponding steps of the ECB, which announced a further easing of its monetary policy on 3 December (see section III.7). Market interest rates should thus be negative over the entire forecast horizon (see Chart II.1.4).<sup>3</sup> This represents a downward shift compared to the previous forecast. The market outlook for foreign interest rates is broadly in line with the expectations of the analysts surveyed in the January CF, who expect the 3M EURIBOR to be flat at the current level of -0.1% at the 3–12-month horizon. At the same time, most of the analysts expect the ECB's main refinancing rate to stay at the current level of 0.05% at least until the end of this year.

CHART II.1.5

**EURO-DOLLAR EXCHANGE RATE**

**The euro is expected to weaken slightly further against the dollar this year**

(USD/EUR; differences in % – right-hand scale)



The outlook for the **euro-dollar exchange rate** foresees the euro weakening slightly further to USD 1.07 to the euro on average this year. The exchange rate should stay at the same average level in 2017 (see Chart II.1.5). Compared to the previous forecast, the outlook has shifted towards a weaker euro owing to the further easing of monetary policy by the ECB, whereas the Fed increased its policy rate for the first time in ten years at its December meeting.

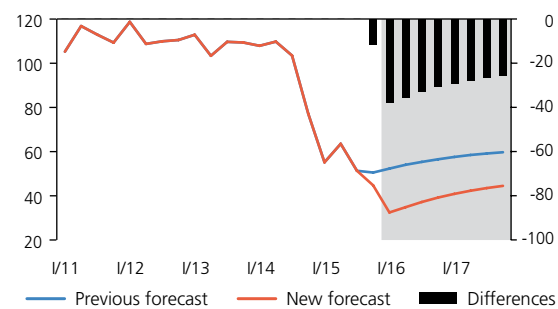
The outlook for the **Brent crude oil price** based on market futures contracts takes into account its further sizeable fall in late 2015 and early 2016. The low price mainly reflects high oil supply on the market. In addition, further growth in OPEC extraction is expected following the lifting of the embargo on oil imports from Iran. Demand for oil represents another uncertainty due to the slowing growth of the Chinese economy and other emerging economies. The price is predicted to rise gradually over the forecast horizon from its current level of around USD 32 a barrel to about USD 45 a barrel at the end of 2017. This is around one-third lower than the previous forecast (see Chart II.1.6). The analysts surveyed in the January CF expect the Brent crude oil price to be approximately USD 50 a barrel at the 12-month horizon, i.e. USD 10 a barrel higher than the market outlooks.

CHART II.1.6

**PRICE OF BRENT CRUDE OIL**

**Following a further sizeable fall at the start of 2016, the forecast expects the price of Brent crude oil to rise gradually over the forecast horizon**

(USD/barrel; differences in % – right-hand scale)



3 The extension of the expanded asset purchase programme by the ECB at least until March 2017 was reflected in the forecast via an expert adjustment using shadow interest rates (see Global Economic Outlook, October 2015), which are more negative than the 3M EURIBOR outlook (by up to 1 percentage point at the start of next year).

## II.2 THE FORECAST

Both headline and monetary policy-relevant inflation decreased towards zero in 2015 Q4, thus remaining well below the target, or below the lower boundary of the tolerance band around the target. However, they will increase in the period ahead, hitting the 2% target at the monetary policy horizon; from mid-2017 they will fluctuate slightly above the target. The domestic economy will continue to foster higher costs and consequently higher consumer prices via accelerating wage growth and rising prices of capital. At the same time, the current strongly anti-inflationary effect of import prices, stemming from a fall in producer prices in the euro area and in global commodity prices, will fade gradually. The currently strong GDP growth will slow markedly this year due to a decline in gross capital formation, which will be affected mainly by a fall in government investment as a result of an only gradual start to the drawdown of EU funds in the new programme period. On the other hand, the economy will be supported by still easy monetary conditions and the positive supply-side effect of low oil prices. The favourable economic developments will be reflected in a further improvement in the labour market situation. The forecast assumes that market interest rates will be flat at their current very low level and the exchange rate will be used as a monetary policy instrument until the end of 2016. Consistent with the forecast is an increase in interest rates in 2017.

Annual **headline inflation** dropped to 0.1% on average in 2015 Q4. However, it will accelerate noticeably in early 2016, reaching 0.8%. This will be fostered by renewed growth in food prices and a slower year-on-year decline in fuel prices. Adjusted inflation excluding fuels will increase further owing to cost pressures from the domestic economy. The unwinding of the current strong anti-inflationary effect of import prices, reflecting the current decline in euro area industrial producer prices and the fall in energy commodity prices on global markets, will act in the same direction. Following a slight decrease this year, administered prices will record modest growth in 2017. Headline inflation will reach the 2% target at the monetary policy horizon and then will be slightly above it until the end of 2017 (see Chart II.2.1).

**Monetary policy-relevant inflation**, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, reached zero in 2015 Q4. It was thus still well below the CNB's 2% target, or below the lower boundary of the tolerance band around the target. Over the forecast horizon, monetary policy-relevant inflation will follow a similar path to headline inflation, although it will be slightly lower owing to slightly positive contributions from changes to indirect taxes (see Chart II.2.1). It will thus be close to the 2% inflation target as from mid-2017.

The contribution of changes to **indirect taxes** to annual headline inflation was 0.1 percentage point in 2015 Q4. This reflected the harmonisation increase in excise duties on cigarettes at the end of 2014. This was offset by the introduction of a second reduced VAT

CHART II.2.1

### HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

**Both headline and monetary policy-relevant inflation will rise and hit the 2% target at the monetary policy horizon**  
(year on year in %)

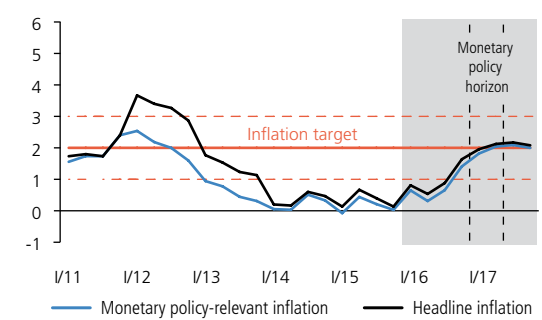


CHART II.2.2

## ADMINISTERED PRICES

**Administered prices will decline until the end of this year and will start rising again as the negative contribution of gas prices fades out**

(annual percentage changes; contributions in percentage points)

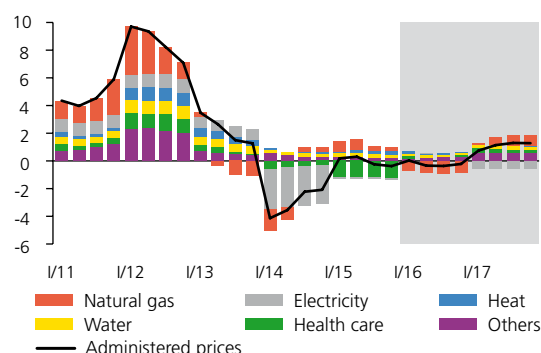


TABLE II.2.1

## FORECAST OF ADMINISTRATIVE EFFECTS

**Administered prices will not returned to modest growth until 2017, when most of the components will increase**

(annual average percentage changes; contributions to headline inflation in percentage points)

	2015		2016		2017	
	actual		forecast		forecast	
Administered prices – total <sup>a)</sup>	-0.0	-0.01	-0.2	-0.04	1.1	0.19
of which (main changes):						
electricity	-0.4	-0.02	0.0	0.00	-2.0	-0.09
natural gas	3.1	0.09	-4.7	-0.14	3.3	0.10
heat	1.9	0.04	1.1	0.02	0.2	0.00
water	3.4	0.03	2.0	0.02	3.0	0.03
health care	-17.0	-0.20	1.3	0.02	3.9	0.05
First-round impacts of indirect tax changes in non-administered prices		0.21		0.21		0.10

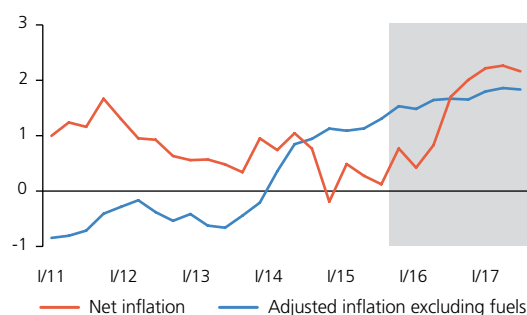
a) Including effects of indirect tax changes

CHART II.2.3

## NET INFLATION AND ADJUSTED INFLATION EXCLUDING FUELS

**The measures of market and core inflation will increase, mainly as a result of accelerating wage growth and the unwinding of foreign anti-inflationary effects**

(year on year in %)



rate of 10% on medicines, books and irreplaceable infant food with effect from 1 January 2015. The forecast assumes a further two increases in excise duty on tobacco products in 2016 and 2017 with an estimated impact on headline inflation of 0.2 percentage point and 0.1 percentage point respectively.

**Administered prices** continued to show a modest year-on-year decline in 2015 Q4 (see Chart II.2.2). This was due to the abolition of a large proportion of fees in health care and a decrease in electricity prices at the start of 2015. By contrast, last year's increase in gas prices and water supply and sewerage collection charges had an upward effect on administered prices. The forecast expects a continued moderate decline in administered prices this year (-0.2%), owing chiefly to a decrease in natural gas prices for households (-4.7%). The decrease in gas prices is due to an announced reduction in prices of their commodity component, which is offset only slightly by a rise in administered fees implemented by the Energy Regulatory Office. As regards electricity for households, a decline in the electricity generation price will be fully offset by an increase in the price of the administered component. The forecast expects administered prices to increase by 1.1% in 2017. This will be due to renewed growth in natural gas prices and continued positive contributions from most other components. The exception will be electricity prices, for which market outlooks indicate falling electricity generation prices, albeit partly offset by further growth in administered fees (see Table II.2.1).

Annual **net inflation** slowed further to 0.1% on average in 2015 Q4 (see Chart II.2.3). This was due to a halt in food price growth and a deepening year-on-year decline in fuel prices. Net inflation will go up this year as a result of continuing growth of the domestic economy and strengthening cost pressures from the labour market. The current strong anti-inflationary effect of import prices, reflecting a persisting decline in euro area producer prices due to the year-on-year drop in prices of oil and other industrial commodities, will meanwhile moderate gradually. In 2017, net inflation will fluctuate just above 2% owing to inflation pressures from the domestic economy, despite a renewed slightly anti-inflationary effect of import prices following the assumed exit from the CNB's exchange rate commitment.

**Adjusted inflation excluding fuels** accelerated slightly in 2015 Q4, averaging 1.3%. Growth in prices of both non-tradables and tradables picked up pace despite the strong anti-inflationary effect of import prices. The robust growth in domestic economic activity, which is also reflected on the labour market, suggests continued growth in prices of both non-tradables and tradables, which will also start to be affected by the unwinding of the drop in foreign prices. Adjusted inflation excluding fuels will thus accelerate to 1.7% by the end of this year (see Chart II.2.3). In 2017, prices of tradables will be affected by appreciation of the koruna following the assumed exit from the CNB's exchange rate commitment, but adjusted inflation will nonetheless rise slightly further and approach 2% on account of inflation pressures from the domestic economy.

Growth in **food prices** came to a halt on average in 2015 Q4. This was due to the long-running fall in agricultural producer prices, which manifested itself in retail prices with a lag. The embargo on imports of selected foodstuffs into Russia, which caused surpluses on the European market, as well as the lifting of milk quotas in the EU, also fostered lower price growth last year. However, food prices will start rising again this year (see Chart II.2.4), as already signalled by the January leading indicators. This will be due to strengthening growth in global agricultural commodity prices (i.e. the unwinding of the effect of the highly above-average harvests in the last two years), the fading of the above one-off effects and partly also a rise in inflation pressures from the domestic economy. In 2017, food price inflation will rise further and fluctuate around 3%.

The year-on-year decline in **fuel prices** deepened in 2015 Q4 (to 16.6% on average) owing to a further decrease in global prices of oil and petrol (see Chart II.2.5). According to the available indicators,<sup>4</sup> the decline will continue at the start of this year, but will moderate to around 10% as the effect of the fuel price drop recorded in late 2014 and early 2015 dissipates. The year-on-year decline will stay at similar levels for most of 2016. In line with the assumed rise in global oil and petrol prices, domestic fuel prices will also start rising again in early 2017 and maintain growth of around 5% as from 2017 Q2.

Domestic money market **interest rates** remained at historical lows at all maturities in 2015 Q4. The forecast expects market interest rates to be flat at their current very low level until the end of this year. This reflects an assumption that the 2W repo rate will be left at technical zero and the money market premium will remain unchanged in the same period. Consistent with the forecast is an increase in market interest rates in 2017 (see Chart II.2.6).

The **exchange rate of the koruna against the euro** averaged CZK 27.1 in 2015 Q4. The forecast expects it to remain at the level of the CNB's exchange rate commitment (i.e. CZK 27 to the euro) in the quarters ahead, very close to where it has been in recent months. The forecast meanwhile assumes that the exchange rate will be used as a monetary policy instrument until the end of 2016. The 2% inflation target will be reached at the start of 2017 and sustainable fulfilment of this target is a condition for a return to conventional monetary policy. This return should not result in the exchange rate appreciating sharply to the slightly overvalued level recorded before the CNB started intervening, among other things because the weaker exchange rate of the koruna is in the meantime passing through to the price level and other nominal variables. Nevertheless, a positive interest rate differential,<sup>5</sup> continued quantitative easing by the ECB at least until March 2017 and renewed

CHART II.2.4

## FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

**Food prices will start rising again due to growth in agricultural commodity prices and fading one-off effects**  
(annual percentage changes)

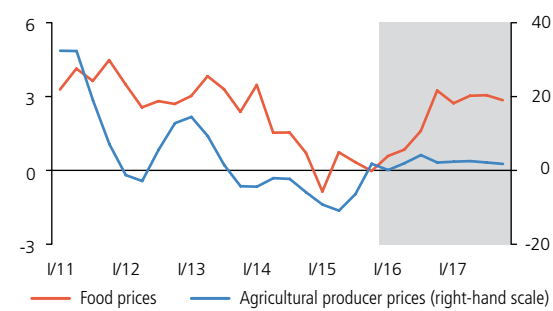


CHART II.2.5

## FUEL PRICES AND OIL PRICES

**The decline in fuel prices will fade away at the start of next year, in line with global oil prices**  
(annual percentage changes)

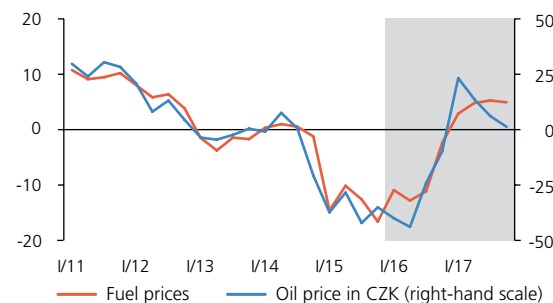
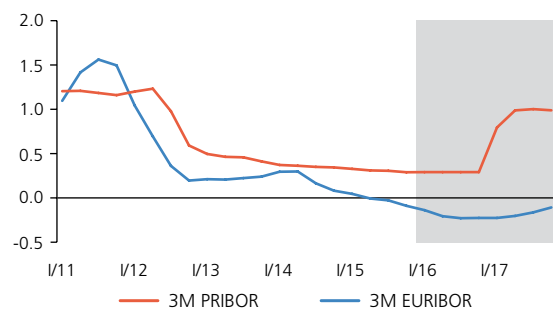


CHART II.2.6

## INTEREST RATE FORECAST

**The forecast expects market interest rates to be flat at their current very low level until the end of 2016; consistent with the forecast is an increase in rates in 2017**  
(percentages)



<sup>4</sup> CCS payment cards portal data and the CZSO's weekly surveys of fuel prices.

<sup>5</sup> However, the forecast routinely attaches only a minor weight to foreign interest rates beyond the six-quarter horizon, as it also takes into account model mechanisms which ensure a gradual return of these rates to their steady state.

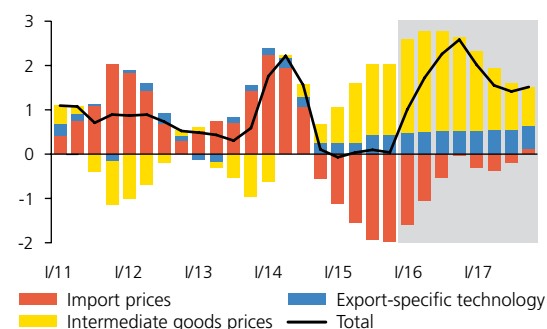


CHART II.2.7

## COSTS IN THE CONSUMER SECTOR

**A sharp acceleration in growth in costs this year will reflect the growing domestic economy and wages and fading negative contributions of import prices**

(quarterly percentage changes; contributions in percentage points; annualised)



– although much slower than in the pre-crisis period – real convergence of the Czech economy to the advanced euro area countries will be apparent after the exit from the exchange rate commitment. According to the forecast, the koruna will thus appreciate against the euro next year.<sup>6</sup> Given the CF outlook for a slightly depreciating euro against the dollar (see section II.1), this implies gradual depreciation of the koruna-dollar rate until the end of 2016. By contrast, the koruna will start to strengthen against the dollar at the beginning of 2017, due to appreciation of the koruna against the euro and simultaneous slight appreciation of the euro against the dollar.

**Nominal marginal costs in the consumer goods sector** were broadly flat in 2015 Q4 – as they were throughout 2015 (see Chart II.2.7). This reflected still falling import prices resulting from deflation in euro area industrial producer prices, which are being significantly affected by the fall in global oil prices. Counteracting this are rising intermediate goods prices resulting from cost pressures from the domestic economy, in particular rising wages in the business sector. 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 gradually increasing. The overall upward cost pressures on consumer prices will strengthen quickly until the end of 2016 and temporarily exceed 2%, reflecting accelerating wage growth and continued growth in both domestic and foreign demand. Renewed growth in producer prices abroad this year will result in a gradual moderation of the currently strong anti-inflationary effect of import prices. Next year, i.e. after the assumed exit from the exchange rate commitment, import prices will again have a slight anti-inflationary effect, even amid continued growth in euro area producer prices.

**Nominal marginal costs in the intermediate goods sector** continued to grow by more than 2% in 2015 Q4. This was due mainly to nominal wage growth in the business sector outpacing labour productivity growth. The price of capital also made a positive contribution to marginal costs, reflecting robust growth in investment activity and overall economic activity (see Chart II.2.8). The growth rate of domestic nominal costs will stay above 2% throughout 2016, reflecting gradually increasing wage growth and a still rising price of capital in an environment of strong domestic demand. Conversely, continued growth in labour productivity will dampen the rise in costs. Growth in nominal marginal costs in the intermediate goods sector will slow next year, as stable wage growth will be counteracted by increasing labour-augmenting technology. Together with the exchange rate appreciation after the exit from the CNB's commitment, the positive contribution of the price of capital will almost vanish.

CHART II.2.8

## COSTS IN THE INTERMEDIATE GOODS SECTOR

**Domestic costs will rise on the back of accelerating wage growth and a rising price of capital**

(quarterly percentage changes; contributions in percentage points; annualised)

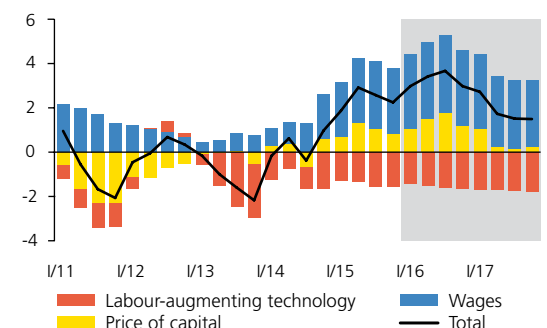
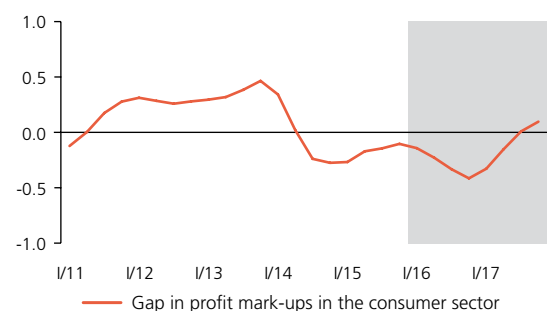


CHART II.2.9

## GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

**The gap in profit mark-ups will temporarily turn more negative and then close during 2017**

(percentages)



<sup>6</sup> However, the forecast does not take into account that the appreciation of the koruna may be dampened by hedging of exchange rate risk by exporters before the exit from the CNB's exchange rate commitment, by the closing of koruna positions by financial investors and by possible CNB interventions to mitigate exchange rate volatility after the exit.



The gap in **profit mark-ups in the consumer goods sector** closed gradually last year but remained slightly negative at the end of the year. Its closing was a result of falling costs in the import sector, which outweighed the observed low market price inflation. The growth rate of nominal wages was meanwhile partly offset by improved labour productivity. The gap in profit mark-ups will turn more negative again this year, as growth in costs (stemming mainly from wage increases and the unwinding of the significantly anti-inflationary effect of import prices) will temporarily exceed inflation. However, a turnaround will occur at the start of 2017 and the gap will close at the year-end as the exchange rate appreciates slightly again with net inflation running at just above 2% (see Chart II.2.9).

Whole-economy **labour productivity** continued to grow at around 3% year on year in 2015 Q3. A marked pick-up in the economy driven by higher investment activity linked with the drawdown of EU funds resulted in faster annual growth in labour productivity (exceeding 4%) in 2015 Q4. The fading of the one-off factors observed last year will also be reflected in a slowdown in productivity growth this year to an average level of just under 2%. Slightly higher economic growth coupled with a further slowdown in employment growth will result in labour productivity growth accelerating to 2.6% on average in 2017.

The average nominal **wage in the business sector** rose by 4% year on year (seasonally adjusted) in 2015 Q3. The forecast expects it to pick up further in Q4, to 4.4%. The growth rate of the average wage will increase further this year (see Chart II.2.10) owing to continued growth in domestic economic activity, falling unemployment and a gradual return of inflation to the target. This increase will also be fostered by a further rise in the minimum wage.<sup>7</sup> According to the forecast, the average wage in the business sector rose by 3.5% on average in 2015 as a whole and its growth will accelerate to 5.1% this year and remain at this level in 2017.

Average nominal **wage growth in the non-business sector** slowed to 3.5% year on year in 2015 Q3 (see Chart II.2.10). At the end of the year, wage growth was affected by an increase in public sector wages. Wages in the non-business sector thus rose by 3.6% in 2015 as a whole. At the start of 2016, wages will be affected by an increase in the wages of constitutional officials. Annual wage growth in the non-business sector will reach 3.3% this year and slow further to 2.8% next year.

**Real GDP** recorded a further year-on-year acceleration to 4.7% and a quarter-on-quarter rise of 0.7% in **2015 Q3** (see Chart II.2.11). All components of domestic demand made positive contributions to the annual growth, with gross capital formation and household consumption being the main drivers (see Chart II.2.12). According to

<sup>7</sup> The minimum wage was increased from CZK 9,200 to CZK 9,900 on 1 January 2016. The increase will make a 0.2 percentage point contribution to wage growth.

CHART II.2.10

## AVERAGE NOMINAL WAGE

**Wage growth in the business sector will pick up, whereas that in the non-business sector will slow**

(annual percentage changes; business sector – seasonally adjusted; non-business sector – seasonally unadjusted)

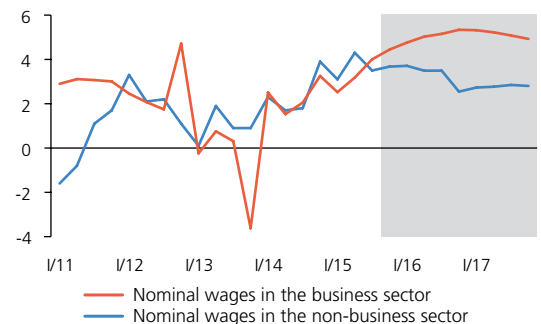


CHART II.2.11

## GDP GROWTH FORECAST

**Annual GDP growth will slow this year as the extraordinary factor of growth in government investment and inventories subsides**

(percentage changes; seasonally adjusted)

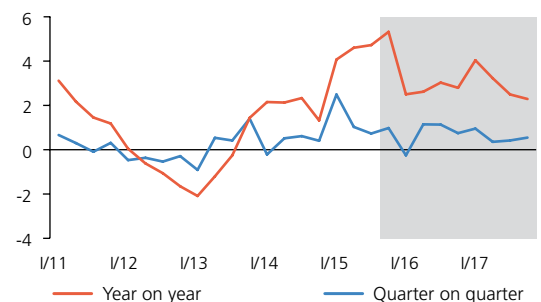


CHART II.2.12

## ANNUAL GDP GROWTH STRUCTURE

**Household consumption will be the biggest contributor to GDP growth, whereas the contribution of investment will be temporarily negative**

(annual percentage changes; contributions in percentage points; seasonally adjusted)

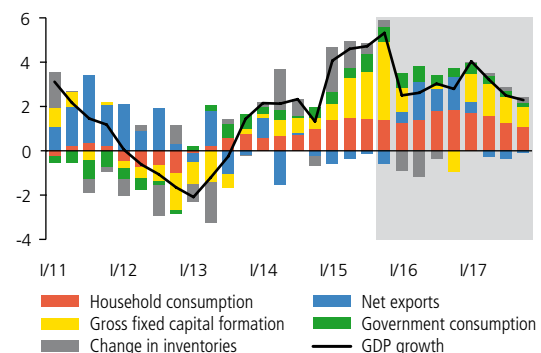
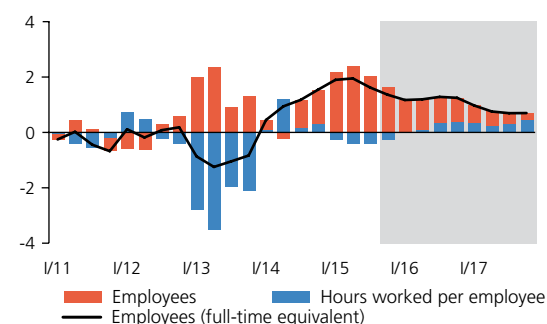


CHART II.2.13

## NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

Growth in the converted number of employees will gradually slow

(annual percentage changes; contributions in percentage points)



the forecast, GDP rose by 5.3% year on year and 1% quarter on quarter in 2015 Q4. The faster annual growth was driven mainly by gross capital formation. The contributions of the other GDP components were similar to those in Q3. Overall, **GDP** grew by 4.7% in 2015. The growth in gross capital formation was fostered by expansionary fiscal policy due to fast growth in government investment financed mainly from European sources. Growth in household consumption was fostered by high real growth in wages and salaries, still easy monetary policy and low oil prices. Despite growing external demand, the contribution of net exports was negative due to continued growth in imports of consumer goods and machinery.<sup>8</sup>

**GDP growth** will slow to 2.7% in 2016, mainly because of a temporary decline in gross capital formation due, among other things, to a fall in government investment as a result of an only gradual start to the new programme period for EU funds. This effect, coupled with a negative contribution from inventories, will outweigh accelerating growth in private investment reflecting favourable domestic and external demand and a further decline in commodity prices. GDP growth will also continue to be fostered by household consumption, which will be supported by continued high real wage growth and the positive effect of low commodity prices. The contributions of government consumption and net exports will also be positive. **GDP growth** will edge up to 3% in 2017, with positive contributions from all components of domestic demand, while net exports will have a slight dampening effect.

The continuing growth in economic activity is reflected in increasing demand for labour and consequently in annual growth in the **number of employees converted into full-time equivalents**, which stood just above 1.5% in 2015 Q3 as a result of an increase in the number of employees coupled with slightly shorter average hours worked per employee. However, growth in the converted number of employees will gradually slow over the forecast horizon. Growth will initially be generated mainly by a further increase in the number of employees; the contribution of average hours worked will also renew during the course of this year (see Chart II.2.13). The forecast also expects annual growth in **total employment** to slow gradually (despite an assumed rise in employment in the non-business sector), due to slower economic growth this year. Annual growth in total employment will ease further to 0.4% in 2017, amid an increasing shortage of available labour (see Chart II.2.14).

The seasonally adjusted **general unemployment rate** continued to decline in 2015 Q4, falling to 4.7%. This indicator will gradually decrease further this year, albeit at a slower pace. The general unemployment rate will stabilise at 4.4% from mid-2016 due to similar quarterly growth in the labour force and employment

CHART II.2.14

## LABOUR MARKET FORECAST

Total employment will continue to rise slowly, albeit at a falling pace, while the decline in the unemployment rate will slow

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

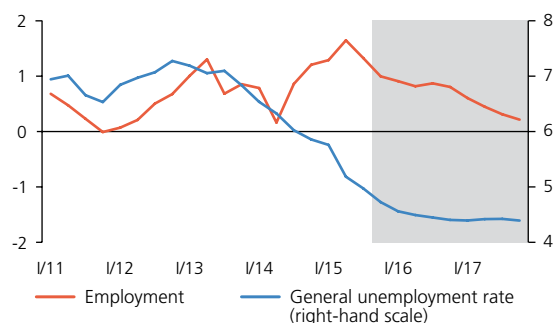
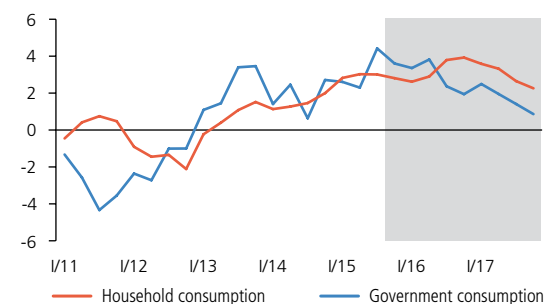


CHART II.2.15

## REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption will rise appreciably and outpace government consumption

(annual percentage changes; seasonally adjusted)



<sup>8</sup> In 2015 Q4, the accounting effect of an extension of the lease of JAS-39 Gripen supersonic fighter aircraft resulted in a strongly negative contribution of net exports. From the perspective of GDP, however, this is fully offset by an increase in fixed investment.

(see Chart II.2.14). The seasonally adjusted **share of unemployed persons, as determined by the MLSA**, will gradually decline over the entire forecast horizon from 6.1% in 2015 Q4 to 5.5% in 2017, assuming a continued slight decline in the population aged 15–64.

Real **household consumption** went up by 3% in year-on-year terms in 2015 Q3 (see Chart II.2.15). This growth was fostered by all of its components in terms of kind. According to the forecast, the annual growth rate of household consumption slowed somewhat in late 2015 and early 2016. However, household consumption will remain a large contributor to annual growth in economic activity, consistent with the still sizeable growth in retail sales and prevailing positive consumer confidence (see section III.3). Household consumption will thus grow slightly faster this year on average (3.3%), thanks mainly to higher growth in real wages amid still easy monetary conditions. In 2017, by contrast, household consumption growth will slow in line with real wages.

Growth in **gross nominal disposable income** slowed considerably in 2015 Q3 (by 2 percentage point to 1.5%), mainly as a result of an increased negative contribution of current taxes and social contributions (see Chart II.2.16). However, the contribution of the most significant item – wages and salaries – remained significantly positive. Annual growth in disposable income will strengthen to around 5% at the forecast horizon. This will again be due primarily to wages and salaries thanks to continued growth in wages and employment. The contributions stemming from income of entrepreneurs will also start to rise gradually. The positive contributions of social benefits will be broadly flat.

The seasonally adjusted **household saving rate** decreased slightly in 2015 Q3 to 10.4%, where it remained at the end of 2015 according to the forecast. It will drop further below 10% in 2016 (see Chart II.2.17) amid faster annual growth in nominal household consumption than gross nominal disposable income. It will stay below that level next year.

Annual growth in real **government consumption** rose noticeably to 4.4% in 2015 Q3. The forecast assumes a still high, albeit somewhat lower growth rate at the end of last year (see Chart II.2.15). In 2015 as a whole, government consumption rose by 3.2%. This year, government consumption will be affected by a pronounced increase in compensation of employees due to a rise in the public sector's wage bill (the forecast incorporates a rise in the number of public sector positions in addition to an increase in the average wage in the non-business sector). Real growth in government consumption will slow in 2017 due to both an increase in the government consumption deflator and slower growth in nominal expenditure.

Annual growth in **gross capital formation** slowed slightly in 2015 Q3, but remained above 10% (see Chart II.2.18). This slowdown was driven exclusively by a lower contribution of additions to inventories, while growth in fixed investment picked up further. The forecast expects

CHART II.2.16

## NOMINAL DISPOSABLE INCOME

**Disposable income growth will gradually accelerate thanks mainly to rising growth in wages and salaries and in the income of entrepreneurs**

(annual percentage changes; contributions in percentage points)

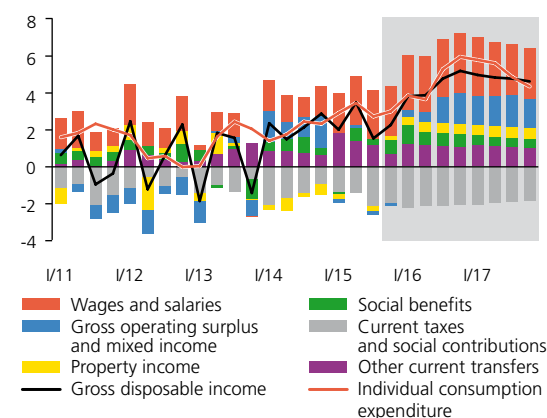


CHART II.2.17

## HOUSEHOLD SAVING RATE

**The household saving rate will gradually decline below 10% (percentages)**

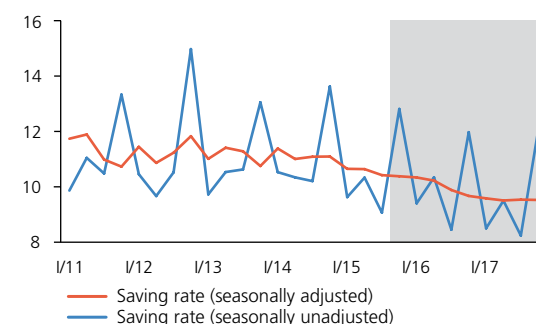


CHART II.2.18

## GROSS CAPITAL FORMATION

**Gross capital formation will fall this year, mainly due to a drop in government investment**

(annual percentage changes; seasonally adjusted)

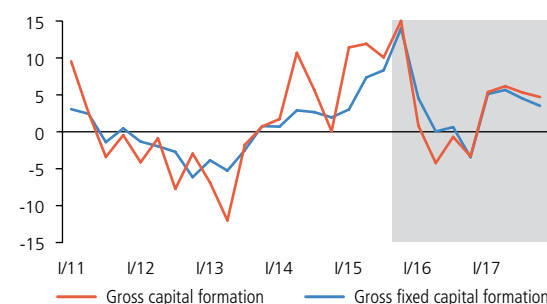
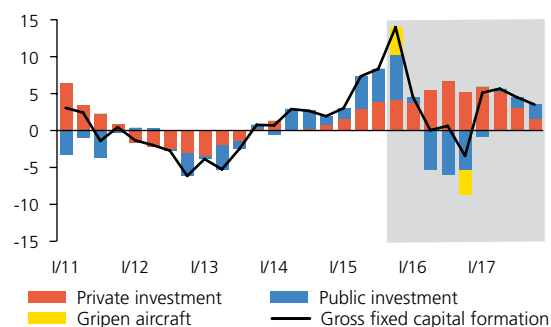


CHART II.2.19

## FIXED INVESTMENT DECOMPOSITION

Growth in total fixed investment will halt temporarily in 2016 as a result of a sharp year-on-year decline in government investment

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



growth in gross capital formation to have strengthened significantly at the end of 2015, mainly as a result of an extension of the lease of Gripen fighter aircraft and the drawdown of EU funds from the 2007–2013 programme period. Gross capital formation thus increased by 12.1% overall in 2015 as a whole. The forecast expects significantly lower growth in fixed investment in 2016, when government investment will fall sharply as a result of an only gradual start to the drawdown of EU funds for the new programme period (see Chart II.2.19; see Box 1). By contrast, growth in private fixed investment will pick up further, reflecting both external demand and the positive effect of low oil prices. Growth in total fixed investment will accelerate again in 2017 as government investment returns to growth.

## BOX 1

## Public procurement data as a leading indicator of public investment

This box examines the use of **public procurement**<sup>9</sup> data for analytical and forecasting purposes in the area of fixed investment. The forecast for public investment in the period of drawdown of EU funds from the previous programme period and the switch to the new period is surrounded by considerable uncertainty. This increases the importance of leading indicators for this area. Both the material and sectoral structures of fixed investment indicate that 2015 saw increased investment in buildings and structures, especially in the government sector. This reflected continued efforts to draw down all the EU structural funds that were available in the previous programme period, predominantly for infrastructure projects.

Investment-type public procurement<sup>10</sup> consists largely of procurement of construction and supplies (see Chart 1). By contrast, procurement of services is recorded mainly as consumption in the national accounts methodology. According to the sectoral accounts, seasonally adjusted investment-type public procurement leads public investment by around three quarters<sup>11</sup> (see Chart 2). It can therefore be used as a **leading indicator of public investment**. The increased efforts to draw down EU funds in 2015 H2 seem to have shortened the lead to two quarters. At the same time, the currently observed public procurement data are indicating a sharp fall in public investment this year. This is consistent with the expected only gradual start to the drawdown of funds from the new programme period.

CHART 1 (BOX)

## ASSIGNED PUBLIC PROCUREMENT

The bulk of public procurement is investment-type procurement

(CZK billions; seasonally adjusted; source: MRD)

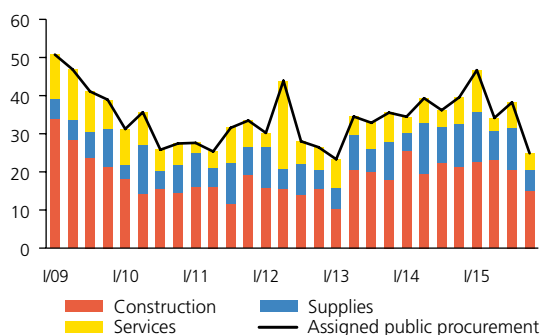
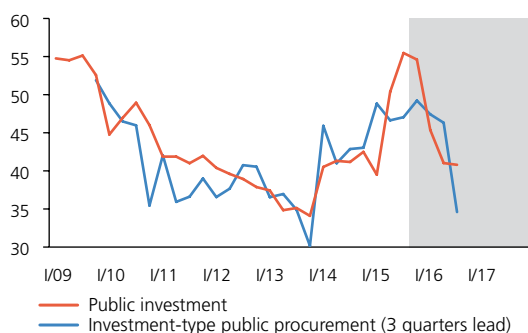


CHART 2 (BOX)

## PUBLIC INVESTMENT AND INVESTMENT-TYPE PUBLIC PROCUREMENT

Public procurement data can be used as a leading indicator of public investment; they are currently indicating a sharp fall in public investment this year

(CZK billions; seasonally adjusted; source: CZSO, MRD)



9 Since 2009, the Ministry for Regional Development has registered almost 80,000 assigned public procurements, totalling more than CZK 1 trillion.

10 Adjusted for contracts of sectoral contracting authorities, which fall under investment of non-financial corporations in the national accounts.

11 The volumes of investment-type public procurement and public investment show a relatively constant difference in level of around CZK 15 billion a quarter. This difference is due mainly to statutory minimum limits for the publication of public contracts.

Growth in private investment in the Czech Republic, as a small and open economy, can largely be explained by changes in foreign demand. The combined deviation of foreign demand and public investment from their trends therefore corresponds to the **deviation from the trend in total fixed investment**.<sup>12</sup> This relationship shows that the currently significantly positive deviation from the trend in fixed investment is being driven exclusively by growth in public investment (see Chart 3). At the same time, the sharp fall in public investment associated with the only gradual start to the new programme period will result in a temporary negative deviation of fixed investment from its trend in 2016. By contrast, foreign demand will have a slightly positive effect on total fixed investment.

Annual growth in real **exports of goods and services** picked up slightly to 8.2% year on year in 2015 Q3. Export growth decreased only slightly at the end of 2015. The growth rate of exports of goods and services thus amounted to 7.6% in 2015 as a whole (see Chart II.2.20). The forecast expects this growth to rise only slightly this year, in line with external demand and given a stable exchange rate of the koruna against the euro. In 2017, by contrast, annual export growth will fall slightly to 7.5% as a result of the assumed appreciation of the koruna after the exit from the CNB's exchange rate commitment.

Annual growth in real **imports of goods and services** also increased in 2015 Q3. According to the forecast, it also rose somewhat faster at the end of 2015, although this was a result of accounting for the extension of the lease of Gripen fighter aircraft. Import growth thus stood at 8.8% in 2015. In 2016, however, the forecast expects lower annual import growth (7.1%) associated with a decline in investment activity. Conversely, in 2017, growth in imports will pick up to 8.3%.

The contribution of **net exports** to annual GDP growth at constant prices was again slightly negative in 2015 Q3. According to the forecast, it increased further at the end of the year. For 2015 as a whole, the contribution of net exports to annual GDP growth was negative at 0.4 percentage point as a result of robust growth in domestic demand and the related lead of import growth over export growth. In 2016, by contrast, the contribution of the change in net exports will be significantly positive owing to a slight upswing in external demand and slower investment growth. The forecast expects a slightly negative contribution again in 2017.

The **balance of payments** forecast expects the current account surplus to grow to 1% of GDP in 2015 (from 0.6% in 2014), to increase further to 2% in 2016 and then to fall to 1.4% of GDP in 2017 (see Table II.2.3).

12 Calculated as the deviation from the trend using the HP filter with coefficient  $\lambda = 1,600$ .

CHART 3 (BOX)

#### FIXED INVESTMENT GAP

The combined deviation of public investment and foreign demand from their trends corresponds approximately to the deviation of total fixed investment from its trend (in % of trend)

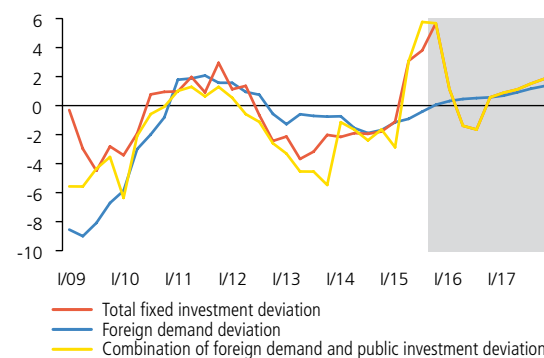


CHART II.2.20

#### REAL EXPORTS AND IMPORTS

Exports and imports will grow at rates of 7%–8% owing to foreign and domestic demand respectively

(annual percentage changes; annual changes in CZK billions; seasonally adjusted)

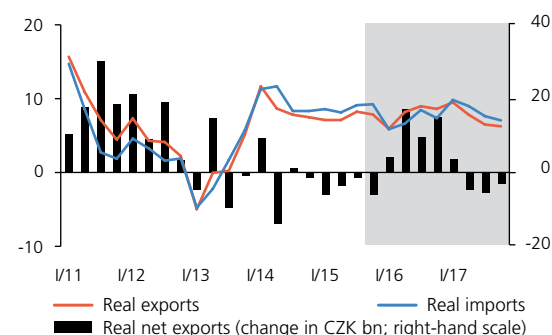


TABLE II.2.2

#### 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	2015	2016	2017
	actual	exp. outcome	forec.	forec.
Real gross disposable income of households	1.7	2.1	3.1	2.6
Total employment	0.8	1.3	0.9	0.4
Unemployment rate (in per cent) <sup>a)</sup>	6.2	5.2	4.5	4.4
Labour productivity	1.4	3.3	1.9	2.6
Average nominal wage	2.3	3.5	4.7	4.7
Average nominal wage in business sector	2.2	3.4	5.1	5.1
Average real wage	1.9	3.1	3.8	2.6
Current account balance (ratio to GDP in per cent)	0.6	1.0	2.0	1.4
M3	5.1	7.4	9.3	8.1

a) ILO methodology, 15–64 years



TABLE II.2.3

## BALANCE OF PAYMENTS FORECAST

The current account surplus will increase further this year thanks mainly to falling prices of energy commodities (CZK billions)

	2014 actual	2015 exp. outcome	2016 forecast	2017 forecast
A. CURRENT ACCOUNT	26.1	45.0	95.0	70.0
Goods	238.9	210.0	275.0	280.0
Services	55.9	75.0	80.0	85.0
Primary income	-259.0	-240.0	-260.0	-285.0
Secondary income	-9.7	0.0	0.0	-10.0
B. CAPITAL ACCOUNT	32.2	100.0	60.0	20.0
C. FINANCIAL ACCOUNT <sup>a)</sup>	48.0	350.0	155.0	12.0
Direct investment	-133.6	0.0	-70.0	-70.0
Portfolio investment	90.3	-65.0	-140.0	-40.0
Financial derivatives	-6.0			
Other investment	24.2	90.0	70.0	50.0
Reserve assets	73.1	325.0	295.0	72.0

a) forecast excluding operations of banking sector and financial derivatives

The increase in the **current account surplus in 2015** was due to a rise in the services surplus (in particular lower debits in financial services and, to a lesser extent, rising credits from communication and information services), the elimination of the previous secondary income deficit (solely as a result of higher drawdown of EU funds) and a drop in the primary income deficit (a rise in the surplus on compensation of employees and a fall in the investment income deficit). Conversely, a decline in the goods surplus fostered a lower current account surplus. This was mainly a result of faster growth in domestic than external demand and a decrease in exports of goods to Russia and Ukraine, which outweighed a drop in import prices due to lower energy prices.

The **current account surplus in 2016** will increase further compared to last year, mainly because of the goods balance. A further decline in prices of energy commodities, a modest upswing in external demand and a slowdown in domestic demand (in particular gross capital formation) will contribute to the increase. By contrast, a higher primary income deficit, linked with a 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 secondary income account will remain balanced owing to payments related to the completion of projects financed by EU funds under the previous programme period. The expected slight decrease in the **current account surplus in 2017** is linked mainly with expected lower net drawdown from EU funds and a widening of the investment income deficit. A slight rise in the goods and services surpluses will continue to act in the opposite direction.

The forecast expects a relatively large decrease in the **capital account surplus** this year compared to last year. This is associated with the winding down of payments from EU funds for the 2007–2013 programme period. In 2017, this item will reflect the only gradual start of drawdown of funds from the programmes for 2014–2020.

The net inflow of **direct investment** halted last year due to extraordinary factors (a one-off outflow of residents' capital and a drop in equity in major domestic subsidiaries owned by non-residents). The net direct investment inflow will be renewed in 2016 and 2017; in addition to an unwinding of the above-mentioned factors, it will be fostered quite significantly by a major new investment of more than CZK 20 billion by Nexen in the Czech Republic. However, the forecast predicts that direct investment in the Czech Republic will still primarily take the form of reinvested earnings. The amount of direct investment in 2017 is expected to be the same as in 2016.

Non-residents' increased interest in domestic government koruna bonds since mid-2015 (probably linked with speculation by non-residents on a future strengthening of the koruna) led to a reversal in flows of **portfolio investment** and a renewed net capital inflow (the year-on-year change was more than CZK 150 billion). This trend will probably continue into 2016. Moreover, the Ministry of Finance has announced increased issuance activity in order to take advantage

of the current interest rates to cut the cost of government debt financing. In relation to current developments on world stock markets and an assumed moderate rise in interest rates in the USA, the forecast expects residents' interest in purchasing foreign stocks to decrease.

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 private investment in the Czech Republic.

Besides expected returns on international reserves, the forecast for **reserve assets** mainly reflects a surplus vis-à-vis the EU (drawdown of EU funds from the previous programme period and the gradual start of the new programmes) and, in 2016, under the current exchange rate commitment, generally an inflow into the reserves stemming from a surplus on the other items of the balance of payments (excluding banking sector operations, which are not forecasted).

The future macroeconomic developments described above and the fiscal policy settings are reflected in the **government finance** outlook for 2016 and 2017 (see Table II.2.4).

According to the CNB's current estimate, the government deficit fell to 1.3% of GDP in **2015**. However, the overall effect of fiscal policy was strongly expansionary last year, making a positive contribution of around 0.7 percentage point to economic growth (see Table II.2.5). This was due chiefly to stronger growth in government investment, reflecting an effort to draw as much EU money as possible from the previous programme period.<sup>13</sup> The increase in the growth rate of government expenditure was amplified by a further acceleration of wage growth in the government sector<sup>14</sup> and an increase in pensions. An increase in public budget revenues reflecting the fast economic growth and the improving labour market situation was hindered by the introduction of a second reduced VAT rate of 10%. Counteracting this was higher excise duty on tobacco products.

In an environment of continuing economic growth, the general government deficit will decline further to 0.5% of GDP in **2016**. On the expenditure side, a marked year-on-year decrease in government investment can be expected owing to the end of the previous programme period for drawing down European funds and the only gradual start of the new one. A further moderate decrease in debt service costs will act in the same direction. Counteracting this will be faster growth in wages in the government sector, an increase

TABLE II.2.4

## FISCAL FORECAST

**A continuing decline in the public finance deficit will culminate in a balanced government budget in 2017**

(% of nominal GDP)

	2014	2015	2016	2017
	actual	exp. outcome	forecast	forecast
Government revenue	40.6	41.1	40.7	40.9
Government expenditure	42.6	42.4	41.2	40.9
of which: interest payments	1.3	1.2	1.1	1.0
GOVERNMENT BUDGET BALANCE	-1.9	-1.3	-0.5	0.0
of which:				
primary balance <sup>a)</sup>	-0.6	-0.1	0.6	1.0
one-off measures <sup>b)</sup>	-0.6	-0.2	0.1	0.1
ADJUSTED BUDGET BALANCE <sup>c)</sup>	-1.4	-1.1	-0.6	-0.1
Cyclical component (ESCB method) <sup>d)</sup>	-0.7	-0.3	0.0	0.0
Structural balance (ESCB method) <sup>d)</sup>	-0.6	-0.9	-0.6	-0.1
Fiscal stance in pp (ESCB method) <sup>e)</sup>	-0.2	-0.2	0.3	0.5
Cyclical component (EC method) <sup>d)</sup>	-1.1	-0.3	-0.1	0.1
Structural balance (EC method) <sup>d)</sup>	-0.3	-0.9	-0.5	-0.2
Fiscal stance in pp (EC method) <sup>e)</sup>	-0.2	-0.6	0.4	0.3
Government debt	42.7	41.2	39.7	38.4

a) government budget balance minus interest payments

b) This item consists of sales of emission permits, subsidies for the (New) Green Savings Programme, the impact of the auction of mobile frequencies, in 2014 compensation payments to clients of bankrupt credit unions and a fall in excise duties due to restriction of stockpiling, and in 2015 the impact of the extension of the 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 be markedly negative in 2016 and will have an impact primarily through a temporary slump in government investment**

(contributions to GDP growth in percentage points)

	2014	2015	2016	2017
	actual	exp. outcome	forecast	forecast
Fiscal impulse <sup>a)</sup>	0.3	0.7	-0.6	0.1
of which impact through:				
private consumption	0.1	0.1	0.0	-0.2
private investment	0.0	0.1	-0.1	0.0
government investment, domestic	0.1	0.1	0.0	0.1
government investment, EU funded	0.2	0.4	-0.4	0.2

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

<sup>13</sup> In addition, government investment expenditure rose at the end of last year due to the accounting effect of an extension of the lease of Gripen aircraft of 0.2% of GDP. However, this one-off factor does not affect the estimate of the fiscal impulse, as it is GDP neutral.

<sup>14</sup> This was fostered by an increase in the wage scales of state employees, public services employees and teachers brought forward to 1 November 2015.

in subsidies for renewable resources and an extraordinary benefit payment to pensioners.<sup>15</sup> The general government revenue side will be bolstered by additional revenues from the introduction of VAT control statements,<sup>16</sup> a further increase in excise duty on tobacco and a rise in the rate of tax on lotteries and other similar games. Fiscal policy will be significantly restrictive overall in 2016, making a contribution to economic growth of around -0.6 percentage point, primarily due to the aforementioned decrease in government investment.

In **2017**, a balanced general government budget can be expected, due mainly to continued favourable economic growth. On the expenditure side, debt service costs are expected to decrease further next year. The total expenditure will also reflect a drop in some one-off measures made this year. The overall effect of fiscal policy will be slightly expansionary in 2017, making a contribution to economic growth of around 0.1 percentage point due to expected renewed growth in government investment activity linked with the start of drawdown of EU funds from the new programme period.

The general government **structural deficit** increased to 1% of GDP last year and will decrease again by 2017. Given the current fiscal policy settings, the medium-term objective of 1% of GDP will thus be met at the forecast horizon.

The use of excess Treasury liquidity as a source of funding, coupled with rapid economic growth, caused the **ratio of government debt to GDP** to fall significantly to an estimated level of approximately 41% last year. The forecast expects a further decrease in government debt relative to GDP this year and the next – to 38.4% in 2017. Amid rapidly decreasing general government deficits and increasing primary surpluses, this will be aided by accelerating nominal GDP growth and an assumed further reduction in the effective interest rate on government debt owing to financial market developments and positive perceptions of the Czech Republic.

The main **risk** to the fiscal forecast is the potential positive impact of electronic sales registration, which has not yet been approved by Parliament and whose quantification and entry into force are still subject to a high degree of uncertainty.<sup>17</sup> There is also uncertainty about the materialisation of the government investment outlook.<sup>18</sup>

<sup>15</sup> A one-off payment of CZK 1,200 per person (totalling approximately CZK 3.5 billion) will be made to pensioners in February 2016.

<sup>16</sup> The impact on VAT revenue of 0.2% of GDP is based on a conservative Finance Ministry estimate drawing on an analysis of the change in the implicit tax rate based on the Slovak experience after the introduction of a similar measure.

<sup>17</sup> In its November 2015 Fiscal Outlook, the Ministry of Finance expects electronic sales registration to have a positive year-on-year impact of approximately 0.1% of GDP in 2016 and 0.2% of GDP in 2017.

<sup>18</sup> The entry into force of the new Act on Environmental Impact Assessment (EIA) represents a downside risk to investment. Many construction projects were approved under the old law and must now go through this process again, which may delay them by approximately two years. The list of projects jeopardised by this includes roads and motorways worth CZK 226 billion. The approaching parliamentary elections scheduled for 2017 represent a risk of an increase in the public finance deficit.



### II.3 COMPARISON WITH THE PREVIOUS FORECAST

Compared to the previous forecast, the predictions for headline and monetary policy-relevant inflation are lower over the entire forecast horizon, owing to lower observed net inflation, a more subdued outlook for foreign producer prices and a further drop in oil prices. All these factors will outweigh higher growth in domestic nominal wages, especially in the next three quarters. The revision of overall GDP compared to the previous forecast is negligible. Nominal wage growth in the business sector has shifted upwards until mid-2017 due to the higher levels observed in the second half of last 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. After the exit from the exchange rate commitment in 2017, the path of market interest rates is lower, primarily as a result of the extension of quantitative easing by the ECB.

The forecast for annual **headline inflation** is lower over the entire forecast horizon, but most of all in the next three quarters (see Chart II.3.1). The revision of the net inflation forecast (see Chart II.3.2) is similar; in the short run it is affected by the lower inflation observed in recent months (an unexpected halt in food price growth combined with a larger decrease in fuel prices). The forecast also reflects weaker cost pressures due to a sharper drop in import prices in 2015, which, in turn, primarily reflects greater anti-inflationary effects of foreign producer prices and a continuing decline in oil prices. In 2016, by contrast, the fundamental upward pressures on costs will be slightly higher (higher growth in both wages and the price of capital), enabling annual net inflation to gradually converge towards the previous forecast. The administered price outlook is slightly higher for both forecasted years. The revision of the forecast reflects an increase in the distribution component of the price of natural gas for households and the fact that the assumed drop in electricity prices this year did not materialise. The estimated impacts of changes to indirect taxes remain in line with the previous forecast, so the outlook for **monetary policy-relevant inflation** has been revised in the same way as that for headline inflation.

Turning to the assumptions regarding the **external environment** (see the charts in section II.1), the outlook for industrial producer prices in the effective euro area has been lowered significantly for this year compared to the previous forecast owing to the current decline in oil prices and the observed continued sharp decline in producer prices. The overall revision for 2017 is negligible. The prediction for external demand growth is unchanged. The market outlook for 3M EURIBOR rates is slightly lower over the entire horizon in response to the further easing of monetary policy by the ECB. The forecast also incorporates the extension of the ECB's asset purchases to March 2017, doing so via 3M EURIBOR shadow rates.

CHART II.3.1

#### CHANGE IN THE HEADLINE INFLATION FORECAST

**The forecast for headline inflation is lower until the end of 2017, most of all in the short run**

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

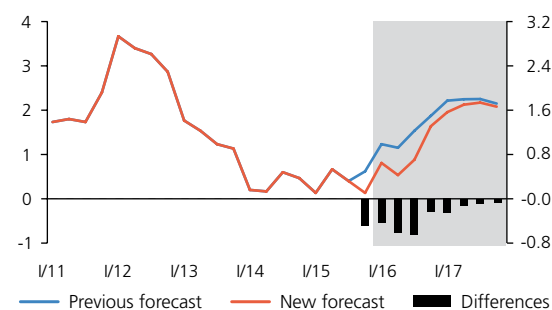


CHART II.3.2

#### CHANGE IN THE NET INFLATION FORECAST

**The significantly lower outlook for net inflation at the start of the forecast horizon reflects its evolution in recent months and external effects**

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

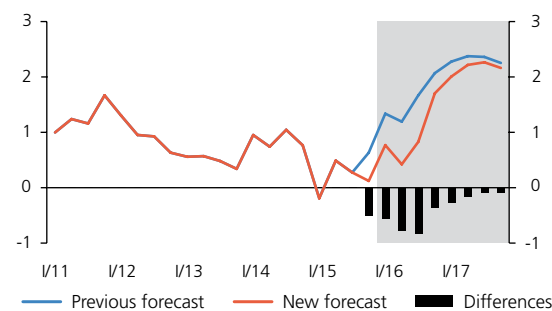
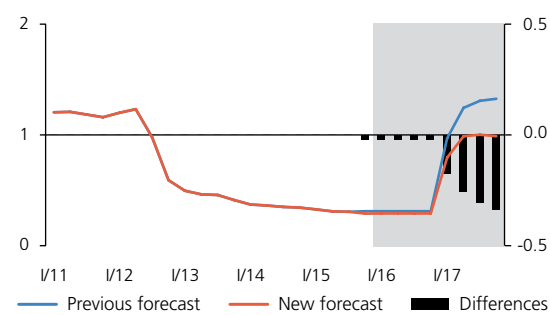


CHART II.3.3

## CHANGE IN THE INTEREST RATE PATH

After the exit from the exchange rate commitment in 2017, the path of interest rates is lower

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



The assumption of the use of the exchange rate as an additional monetary policy instrument until the end of 2016 is maintained as in the previous forecast. The assumed level of the **koruna-euro exchange rate** until the end of this year is slightly stronger than in the previous forecast, i.e. at the level of the CNB's exchange rate commitment. For 2017, i.e. after the exit from the exchange rate commitment, the outlook for the exchange rate is revised towards slightly stronger levels compared with the previous forecast, largely due to the further easing of monetary policy by the ECB as captured by a downward shift in foreign interest rates. The path of domestic market **interest rates** remains unchanged until the end of this year and is lower thereafter (see Chart II.3.3). This is due mainly to easier ECB monetary policy.

The forecast for annual **GDP** growth in 2015 is in line with the previous prediction (see Chart II.3.4). However, its components have been revised, with higher growth in government consumption roughly offsetting lower growth in household consumption. The GDP growth outlook for this year and the next is almost unchanged overall too. However, changes have been made to the individual demand components in both years. The forecast for household consumption this year has moved upwards owing to higher real growth in wages and salaries and the positive supply-side effect of lower oil prices. In 2017, by contrast, it is revised slightly downwards due to rather slower growth in wages. Gross capital formation growth is significantly affected by government investment, which will record a larger fall in 2016, as the new forecast expects – in light of assigned public procurement (see Box 1 in section II.2) – a slower start to the drawdown of EU funds under the new programme period. Fixed investment growth will thus be more subdued this year despite the positive supply-side effect of low oil prices on private fixed investment. Government consumption will grow faster this year, reflecting an increase in the forecasted rise in compensation of employees and health care expenditure; the changes for 2017 are negligible. The expected fiscal impulse for 2016 is more negative. In 2017, it is largely unchanged and remains slightly positive.

CHART II.3.4

## CHANGE IN THE GDP FORECAST

The GDP growth forecast is almost unchanged over the entire forecast horizon

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

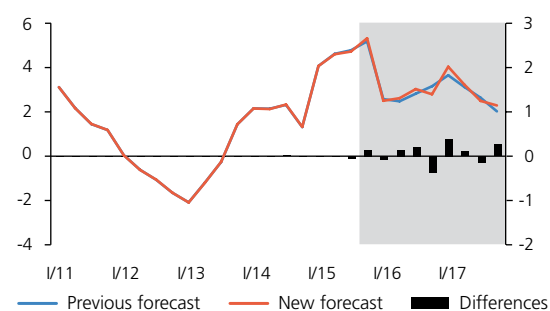
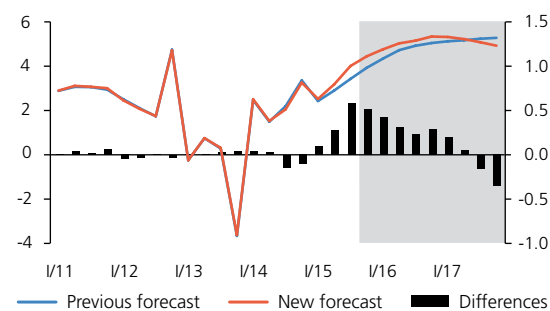


CHART II.3.5

## CHANGE IN THE FORECAST FOR NOMINAL WAGES IN THE BUSINESS SECTOR

The nominal wage forecast has shifted to higher rates of growth until mid-2017

(annual percentage changes; differences in pp – right-hand scale, seasonally adjusted<sup>a)</sup>)



The contribution of **net exports** to GDP growth in 2015 remained slightly negative, as predicted by the previous forecast, with only growth in exports and imports increasing. This year this contribution will be positive and markedly higher than in the previous prediction as a result of a greater slowdown in overall investment activity. For 2017, the contribution of net exports is unchanged and the same goes for the prediction of external demand growth.

Growth in the average **nominal wage** in the business sector has increased compared to the previous forecast until the middle of next year (see Chart II.3.5). This revision primarily reflects the higher growth in wages observed last year. As from mid-2017, by contrast, wage growth will slow below the previous forecast amid slightly lower inflation and a faster strengthening of the koruna-euro exchange rate.

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

## II.4 FORECASTS BY OTHER ENTITIES

Analysts' inflation expectations remain slightly below the CNB's target at the one-year horizon and are stable at the target level at the three-year horizon. The indicator of inflation perceived by households is slightly negative, while the indicator of expected inflation is slightly positive. On average, the analysts expect economic growth to slow below 3% this year and maintain a similar pace next year. According to the analysts, the exchange rate of the koruna will appreciate to just below CZK 27 to the euro on average at the one-year horizon. None of the analysts expects the exchange rate commitment to be discontinued before the first half of 2016 and most of them expect the exit to happen in the first half of next year. By contrast, the CNB forecast assumes an exit from the exchange rate commitment at the start of next year. At the same time, all the analysts were expecting key interest rates to be left unchanged both at the CNB Bank Board's February meeting and at the one-year horizon. The market outlook indicates only a minor decrease in interest rates until the end of this year and is therefore slightly below the interest rate path contained in the new CNB forecast.

**Inflation expected by financial market analysts** at the one-year horizon has been stable in recent months slightly below the CNB's target of 2%. In January it increased only marginally to 1.8%. Inflation expected at the three-year horizon has recently been exactly at the level of the CNB's 2% target. The inflation expectations of business managers at the one-year horizon remain below the target (see Table II.4.1).

The indicator of **inflation perceived by households** turned slightly more negative on average in 2015 Q4 (see Chart II.4.1). This means that households overall felt that prices did not increase over the last 12 months. By contrast, the indicator of **expected inflation** has long been slightly positive. This signals that the number of respondents who expect prices to rise more rapidly over the next 12 months is slightly higher than the number of those who expect prices to stay the same or increase more slowly than in the recent past.

**Both the FMIE and CF analysts** expect economic growth to slow below 3% this year after one-off factors from 2015 have subsided (see Tables II.4.1 and II.4.2). The economy is expected to maintain a similar growth rate next year. Wages are expected to increase by about 4% in both years. The analysts on average expect the koruna to appreciate to just below CZK 27 to the euro at the one-year horizon. All the analysts expect that the exchange rate commitment will not be discontinued before second half of 2016; their expectations are concentrated in the first half of next year. Before the Bank Board meeting in February, all fifteen 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.

TABLE II.4.1

### EXPECTED INDICATORS OF FMIE AND CORPORATIONS

The analysts' inflation expectations are slightly below the CNB's target of 2% at the one-year horizon and at the target at the three-year horizon

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

	9/15	10/15	11/15	12/15	1/16
FMIE:					
CPI	1.6	1.7	1.7	1.7	1.8
CPI, 3Y horizon	2.0	2.0	2.0	2.0	2.0
Real GDP in 2015	4.1	4.2	4.3	4.3	
Real GDP in 2016	2.6	2.5	2.6	2.6	2.7
Nominal wages in 2015	3.0	3.1	3.1	3.3	
Nominal wages in 2016	3.8	3.8	3.8	3.9	4.0
CZK/EUR exchange rate (level)	26.7	26.8	26.8	26.8	26.8
2W repo rate (in per cent)	0.05	0.05	0.05	0.05	0.05
1Y PRIBOR (in per cent)	0.6	0.6	0.6	0.6	0.6
Corporations:					
CPI	1.4			1.5	

CHART II.4.1

### PERCEIVED AND EXPECTED INFLATION

Perceived inflation stayed negative, while expected inflation has long been slightly positive

(source: European Commission Business and Consumer Survey)

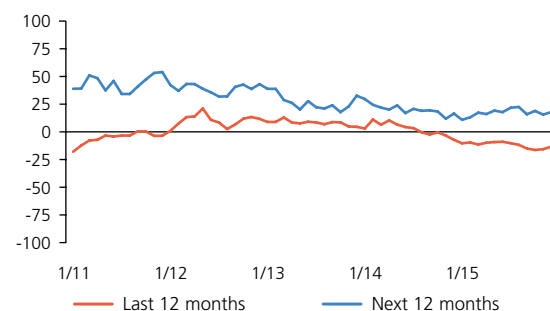


TABLE II.4.2

### CF EXPECTED INDICATORS

The CF analysts expect economic growth to slow below 3% this year

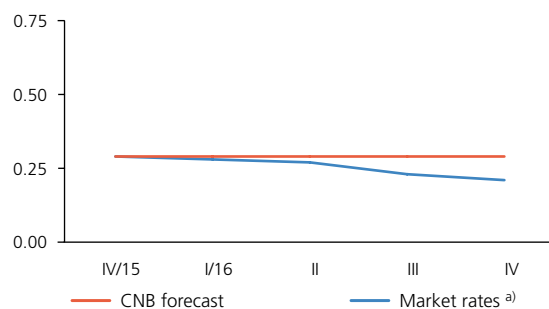
(at 1Y; annual percentage changes unless otherwise indicated)

	9/15	10/15	11/15	12/15	1/16
Real GDP in 2015	3.8	4.1	4.2	4.3	
Real GDP in 2016	2.7	2.6	2.6	2.5	2.6
Nominal wages in 2015	3.0	3.2	3.2	3.2	
Nominal wages in 2016	3.8	3.8	3.8	3.8	3.9
CZK/EUR exchange rate (level)	26.9	26.9	26.9	26.9	26.7
3M PRIBOR (in per cent)	0.3	0.3	0.3	0.3	0.3

CHART II.4.2

## FRA RATES VERSUS THE CNB FORECAST

Expected interest rates derived from FRA quotations are slightly below the rates contained in the new CNB forecast (percentages)



a) for 2015 Q4 and 2016 Q1 the 3M PRIBOR and for 2016 Q2–2016 Q4 the average values of the FRA 3\*6, 6\*9 and 9\*12 rates for the last 10 trading days as of 22 January 2016

Overall, the analysts expect the same real GDP growth this year and slightly lower growth next year **compared with the CNB's new forecast**. Inflation expected by the analysts at the one-year horizon is slightly below the CNB forecast. The analysts' expectations regarding the 2W repo rate and market rates are lower at the beginning of next year than the 3M PRIBOR path contained 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 assumed by the new CNB forecast. The current market outlook for 3M rates implies a minor decrease until the end of this year. This is in line with expectations of flat monetary policy interest rates at least until the same date and a negligible decline in the money market premium. Over the entire horizon, the expected market rates are thus slightly below the interest rate path assumed in the new CNB forecast, which is based on stability of the money market premium.

### III. CURRENT ECONOMIC DEVELOPMENTS

#### III.1 INFLATION

Annual headline inflation fell further in 2015 Q4, averaging 0.1%. Consumer prices adjusted for the first-round effects of changes to indirect taxes were flat year on year. Inflation was thus still well below the CNB's target. The fall in inflation was due to a renewed annual decline in food prices towards the year-end and a further acceleration of the decline in fuel prices. Administered prices continued to decrease moderately year on year. The fast-growing domestic economy and a continued improvement in the labour market situation fostered growth in domestic cost pressures and consequently also consumer prices. This was reflected in a further modest increase in adjusted inflation excluding fuels despite the long-running strongly anti-inflationary effect of prices abroad.

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

In 2015 Q4, both **headline inflation and monetary policy-relevant inflation** were still well below the CNB's target, or below the lower boundary of the tolerance band around the 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 Q4, we have to examine the period from April 2014 to September 2015, 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 Inflation Report III/2014 with subsequent inflation.

The **Inflation Report III/2014 forecast** was based on the assumption that the exchange rate would be used as an instrument for easing monetary policy with a CNB exchange rate commitment of CZK 27 to the euro until 2015 Q3. The pass-through of the weakened exchange rate to import prices was expected to fade out gradually amid assumed renewed growth in foreign producer prices, whereas the growing domestic economy and accelerating wage growth were expected to contribute to inflation over the entire forecast horizon. Inflation pressures from the domestic economy were thus expected to take over the main role in price developments. This was expected to result in a steady increase in adjusted inflation excluding fuels. Administered prices were expected to decline in both 2014 and 2015. The low growth in food prices observed in mid-2014 was not expected to strengthen until 2015. Subdued growth was predicted for

CHART III.1.1

#### FORECAST VERSUS ACTUAL INFLATION

**Inflation was well below the IR III/2014 forecast in 2015 Q4**  
(year on year in %)

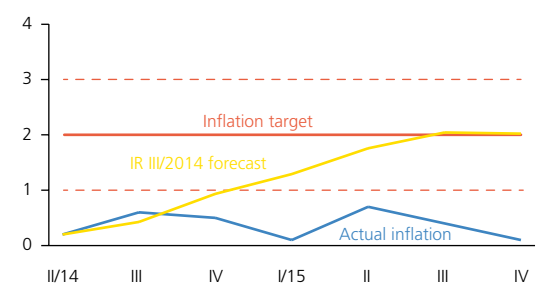


TABLE III.1.1

**FULFILMENT OF THE INFLATION FORECAST**

**The deviation of inflation from the forecast was due to all components of net inflation**

(annual percentage changes; contributions in percentage points)

	IR III/2014 forecast	2015 Q4 outturn	Contribution to total difference <sup>d</sup>
CONSUMER PRICES	2.0	0.1	-1.9
Breakdown into contributions:			
administered prices	-0.5	-0.4	0.0
first-round impacts of changes to indirect taxes <sup>a)</sup>	0.0	0.1	0.1
food prices <sup>b)</sup>	2.4	0.0	-0.7
fuel prices <sup>b)</sup>	1.8	-16.6	-0.6
adjusted inflation excl. fuels <sup>b)</sup>	2.4	1.3	-0.6

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 may not equal the sum of the individual items.

TABLE III.1.2

**FULFILMENT OF THE EXTERNAL ASSUMPTIONS**

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

(annual percentage changes unless otherwise indicated)

		III/14	IV/14	I/15	II/15	III/15	IV/15
GDP in euro area <sup>a), b), c)</sup>	p	1.6	1.7	2.0	2.1	2.1	2.0
	o	0.9	1.0	1.3	1.8	2.2	-
PPI in euro area <sup>b), c)</sup>	p	-0.6	-0.3	1.0	1.5	1.5	1.6
	o	-1.8	-2.2	-2.9	-2.1	-2.6	-
3M EURIBOR (percentages)	p	0.2	0.2	0.2	0.2	0.2	0.3
	o	0.2	0.1	0.0	0.0	0.0	-0.1
USD/EUR exchange rate (levels)	p	1.36	1.34	1.32	1.31	1.30	1.29
	o	1.32	1.25	1.13	1.10	1.11	1.09
Brent crude oil price (USD/barrel)	p	111.9	110.8	109.4	108.2	106.9	105.7
	o	103.5	77.1	55.1	63.5	51.3	44.7

p – prediction, o – outturn

a) at constant prices

b) seasonally adjusted

c) IR III/2014 outlook for effective indicator

TABLE III.1.3

**FULFILMENT OF THE FORECAST FOR KEY VARIABLES**

**Observed GDP growth was slower than forecasted in 2014 but faster in 2015; wage growth lagged behind the forecast**

		III/14	IV/14	I/15	II/15	III/15	IV/15
3M PRIBOR (percentages)	p	0.4	0.4	0.4	0.4	0.4	0.9
	o	0.4	0.3	0.3	0.3	0.3	0.3
CZK/EUR exchange rate (levels)	p	Exchange rate commitment: close to CZK 27 to the euro					
	o	27.6	27.6	27.6	27.4	27.1	27.1
Real GDP <sup>a)</sup> (annual perc. changes)	p	3.9	2.1	2.6	3.3	2.5	3.5
	o	2.3	1.3	4.1	4.6	4.7	-
Nominal wages <sup>b)</sup> (annual perc. changes)	p	2.4	3.6	4.4	4.7	5.2	5.3
	o	1.5	1.8	2.2	3.3	3.8	-

p – prediction, o – outturn

a) seasonally adjusted

b) in the business sector

fuel prices. Headline inflation was thus expected to increase towards the CNB's 2% target and stay very close to it at the monetary policy horizon (see Chart III.1.1). Owing to the first-round effects of changes to indirect taxes, monetary policy-relevant inflation was expected to be just below headline inflation.

Headline **inflation in reality** was well below the forecast for almost the entire period and the deviation increased gradually. The gap between actual headline inflation and the forecast reached -1.9 percentage points in 2015 Q4, with all components of net inflation contributing. Adjusted inflation excluding fuels has been accelerating slightly since mid-2014, although much more slowly than forecasted owing to a drop in producer prices in the euro area and a slow recovery in domestic wage growth. A stronger-than-expected fall in global agricultural commodity prices, the embargo on imports into Russia and the abolition of EU milk production quotas led to a deviation in food prices. The deviation of actual inflation from the forecasted values was also due to fuel prices, which reflected the unexpected fall in global oil prices. Administered prices and the first-round effects of changes to indirect taxes were approximately in line with the forecast (see Table III.1.1).

**External economic factors** contributed significantly to the substantially lower-than-forecasted domestic inflation. The biggest deviation was recorded by foreign production prices (as much as 4 percentage points), which did not record the expected growth and on the contrary continued to show strongly negative year-on-year dynamics (see Table III.1.2). The unexpected fall in oil prices contributed substantially to these developments. External demand growth was also lower than expected. Foreign interest rates decreased further, a trend which had not been expected by the forecast either. Overall, then, external developments had an anti-inflationary effect on domestic inflation, i.e. they acted towards a need for much easier monetary conditions. **Domestic market interest rates**, however, were stable (see Table III.1.3), as the zero lower bound meant that no reduction occurred. A marked deviation of the monetary conditions from the predicted values towards an easier effect can be seen only at the end of 2015, for which the forecast had assumed the exit from the use of the exchange rate as an additional monetary policy instrument and the return to the standard regime. However, this did not occur in reality. The **exchange rate** stayed at levels that were slightly weaker than the commitment announced by the CNB, but they were not weak enough to offset the deflationary pressures from abroad and deliver a return of inflation to the target. The impacts of the anti-inflationary developments abroad 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. The assumption of a recovery of the Czech economy and a renewal of domestic inflationary pressures



materialised qualitatively, although actual GDP growth was lower than predicted in the second half of 2014, with real export growth slowing due to weaker external demand. In 2015, by contrast, GDP growth was higher than forecasted as a result of increasing investment (drawdown of EU funds) and real household and government consumption (higher wage growth in the government sector). Unexpectedly low prices of energy commodities also had a positive impact on GDP growth. By contrast, nominal variables deviated substantially downwards from the forecast. Nominal wage growth lagged behind the predicted figures over the entire period. This, together with strongly anti-inflationary price developments abroad, led to considerably lower inflation than forecasted.

In addition to the forecast, an assessment of the risks associated with this forecast is important for the Bank Board's decisions on **monetary policy settings**. The Bank Board assessed the balance of risks to the forecast as being either 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 commodity prices, and later also appreciation of the exchange rate and a decrease in food commodity prices) clearly prevailing overall. 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 direct pass-through of the weakened exchange rate to inflation through import prices faded out, but the exchange rate is still contributing to growth in the domestic economy, which is fostering an increase in costs and consequently also consumer prices. The inflation target is being significantly undershot at present, i.e. headline inflation is well below the lower boundary of the tolerance band, but without the weakening of the koruna it would have been negative.

**Overall**, based on current knowledge, it seems that the monetary policy pursued between April 2014 and September 2015 should have been substantially easier. Nonetheless, thanks to the action taken to weaken the koruna in November 2013, the threat of deflation linked with a drop in demand was averted.

### III.1.2 Current inflation

**Annual inflation**<sup>19</sup> was 0.1% on average in 2015 Q4, 0.3 percentage point lower than in the previous quarter. Inflation stayed at very low but positive levels in all three months (see Chart III.1.2). The slowdown in annual consumer price inflation was chiefly due to food prices, whose growth slowed in October and November and switched to a year-on-year decline in December. Fuel prices continued to decline sharply

<sup>19</sup> Measured by year-on-year growth in the consumer price index.

CHART III.1.2

#### INFLATION

**Both headline and monetary policy-relevant inflation fell towards zero in 2015 Q4**  
(annual percentage changes)

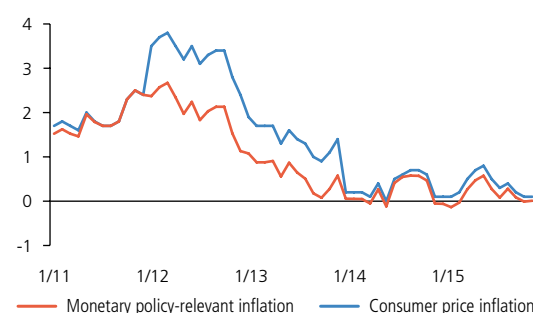


CHART III.1.3

#### STRUCTURE OF INFLATION

**The decline in fuel prices and administered prices was outweighed by adjusted inflation excluding fuels and by tax changes; food prices had a neutral effect on average**  
(annual percentage changes; contributions in percentage points)

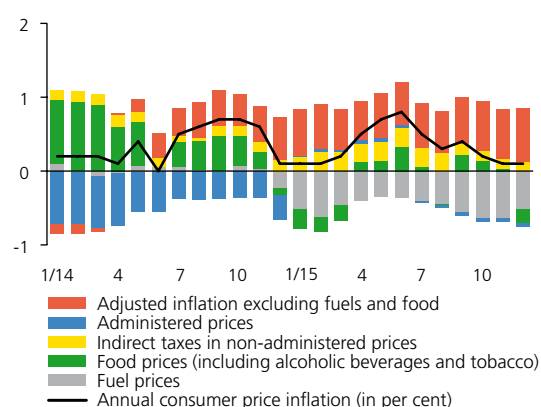


CHART III.1.4

#### INFLATION COMPONENTS

**In 2015 Q4, adjusted inflation accelerated slightly further, food prices switched to a decline and fuel prices continued to fall sharply**  
(annual percentage changes; excluding indirect tax changes except for administered prices)

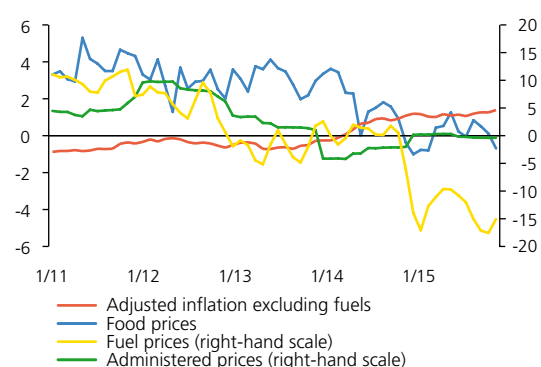


CHART III.1.5

## FOOD PRICES

**Food prices switched to a year-on-year decline despite renewed growth in agricultural producer prices and food import prices**

(annual percentage changes)

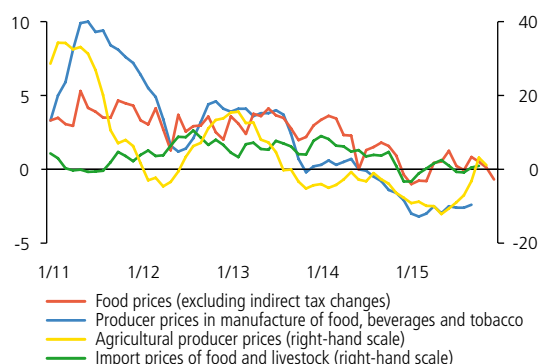


CHART III.1.6

## STRUCTURE OF FOOD, ALCOHOL AND TOBACCO PRICE INFLATION IN DECEMBER 2015

**Prices of fruit and vegetables went up due to the summer drought, while prices of dairy products and meat went down because of the abolition of EU quotas and the prohibition of imports into Russia respectively**

(size of tile – relative weight in consumer basket; colour of tile – annual percentage changes)

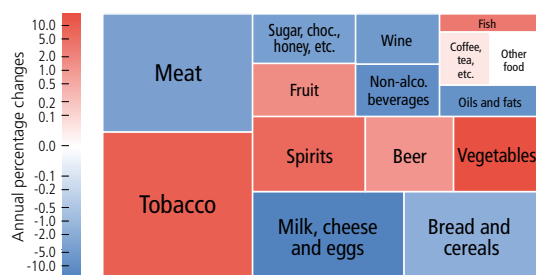
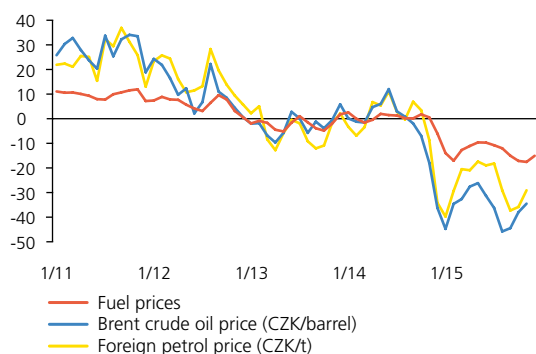


CHART III.1.7

## FUEL PRICES

**Fuel prices continued to fall sharply as a result of a drop in foreign crude oil and petrol prices**

(annual percentage changes)



due to a deepening fall in oil prices. By contrast, adjusted inflation excluding fuels accelerated slightly on the back of the continued fast growth of the domestic economy and a recovery in wage growth. It remained the biggest contributor to consumer price inflation despite the long-running significantly anti-inflationary developments in foreign prices. Administered prices continued to decline modestly year on year (see Chart III.1.3).

The contribution of changes to **indirect taxes** to annual consumer price inflation was 0.1 percentage point in 2015 Q4. The harmonisation adjustment made to excise duty on cigarettes and tobacco at the end of 2014 contributed to higher inflation. Its effect on the price level of 0.2 percentage point materialised during the first few months of 2015. The introduction at the start of last year of a second reduced VAT rate of 10% on medicines, books and irreplaceable infant food had an impact of -0.1 percentage point, and thus acted in the opposite direction.

**Monetary policy-relevant inflation**, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, was zero on average in 2015 Q4. The price level adjusted for the effects of the above-mentioned tax changes was therefore unchanged. Monetary policy-relevant inflation was thus still well below the CNB's target, i.e. below the lower boundary of the tolerance band around the target.

**Administered prices** continued to decline modestly (-0.4%) in 2015 Q4. Changes made at the start of last year still contributed the most to their decrease. These included the abolition of regulatory fees in health care (except for the emergency fee) and a decline in prices of electricity for households. The reduction in prices in these categories last year was partially offset by a rise in prices of natural gas for households and water supply and sewerage collection charges.

Annual growth in **market prices**, as measured by net inflation,<sup>20</sup> slowed slightly in 2015 Q4, averaging 0.1%. Market prices reflected food prices, which switched to a year-on-year decline in December, and an accelerated fall in fuel prices. By contrast, adjusted inflation excluding fuels went up slightly (see Chart III.1.4).

**Prices of food, beverages and tobacco** showed very weak growth in October and November and switched to a year-on-year decline in December despite renewed growth in agricultural producer prices. Food prices thus remained unchanged on average in year-on-year terms in 2015 Q4 (see Chart III.1.5). Falling prices of milk, dairy products and meat continued to contribute significantly to the weak dynamics of food prices. The fall in prices of bread and cereals, chocolate and chocolate products, edible oils and fats and non-alcoholic beverages simultaneously intensified. By contrast, prices of alcoholic beverages

<sup>20</sup> The following text describes the year-on-year evolution of the individual categories of market prices adjusted for tax changes.



and tobacco increased. Owing to the dry summer last year, prices of fruit, vegetables and fish also contributed positively to the growth in food prices (see Chart III.1.6).

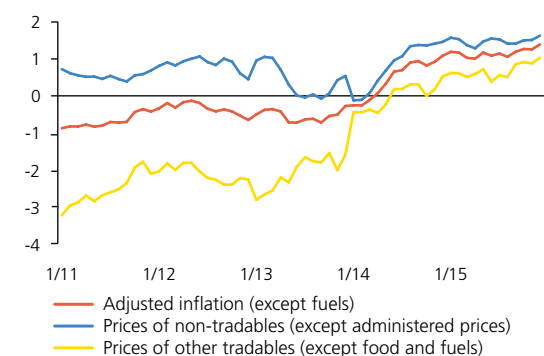
The annual decline in **fuel prices** intensified further in 2015 Q4, averaging 16.6%, although it started to slow in December (see Chart III.1.7). Fuel prices thus followed the continuing drop in Brent crude oil prices and foreign petrol prices.

**Adjusted inflation excluding fuels** accelerated slightly during 2015 Q4 (to 1.3% on average; see Chart III.1.8). Growth in prices of both tradables and non-tradables accelerated. Growth in **prices of tradables**<sup>21</sup> reached 1% in December despite the strong anti-inflationary effect of foreign prices, which was only partly offset by the weaker exchange rate of the koruna against the dollar. Prices of shoes and clothing were the biggest contributor to the growth in prices in this category. Growth in **prices of non-tradables**<sup>22</sup> reached 1.6% in December. These prices reflected the continuing growth in domestic economic activity, especially in the service sector, and the improving labour market situation. The increase in prices of non-tradable commodities was fostered above all by rents, package holiday prices and prices of restaurant and hotel services.

CHART III.1.8

## ADJUSTED INFLATION EXCLUDING FUELS

**Adjusted inflation excluding fuels accelerated slightly as a result of increases in both of its components**  
(annual percentage changes)



21 Prices of other tradable commodities comprise prices of goods excluding food and fuels.

22 Prices of other non-tradable commodities primarily comprise prices of services excluding administered prices.

CHART III.2.1

## IMPORT PRICES AND PRODUCER PRICES

The decline in import prices strengthened in 2015 Q4, whereas the decline in industrial producer prices moderated; agricultural producer prices rose slightly, as did prices in construction; prices in market services were flat (annual percentage changes)

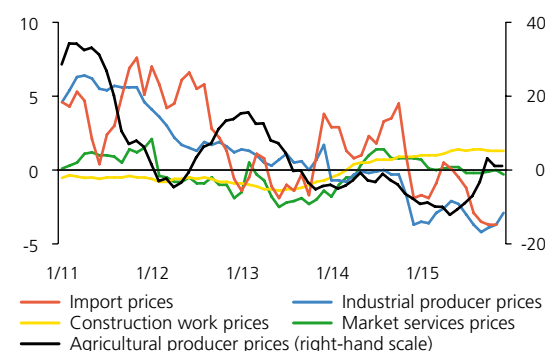


CHART III.2.2

## IMPORT PRICES

The decline in import prices was due most of all to falling prices of energy commodities (annual percentage changes; contributions in percentage points)

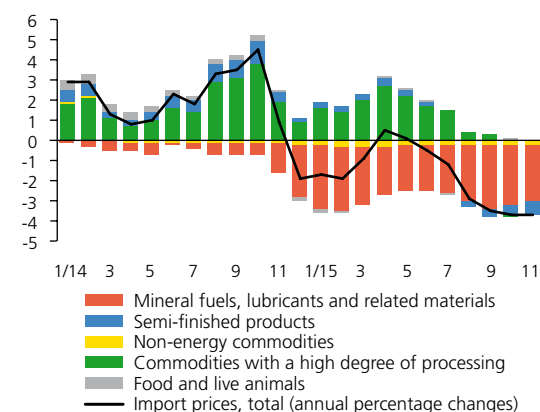
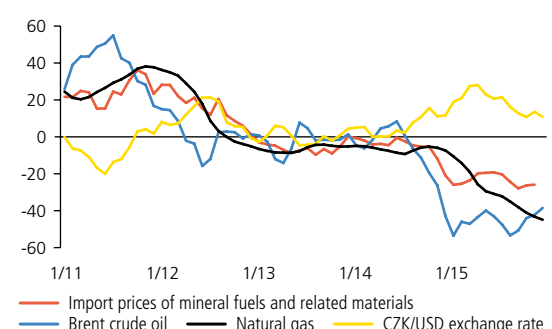


CHART III.2.3

## 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 deepened further during 2015 Q4. This was due mainly to a persisting fall in prices of energy and non-energy commodities and a simultaneous halt of growth in prices of commodities with a high degree of processing. Low prices of imported inputs also contributed to a fast year-on-year decline in industrial producer prices, especially in manufacturing. Agricultural commodity prices started to rise year on year in October 2015 due to increasing prices of crop products (while livestock product prices continued to fall). Growth in construction work prices remained subdued, only just exceeding 1%. Prices of market services for the business sector decreased slightly year on year in 2015 Q4.

## III.2.1 Import prices

The year-on-year decline in **import prices** deepened slightly further in October and November, reaching 3.7% in November (see Chart III.2.1). The further strengthening of the decline in import prices was due mainly to a continued sharp fall in prices of mineral fuels and lubricants and a simultaneous acceleration of the decline in import prices of semi-finished products and non-energy commodities. The positive contribution of products with a high degree of processing, which had partly offset the decline in commodity prices in the first three quarters of last year, dropped to zero in October and November (see Chart III.2.2).

The fall in import prices continued to be due most of all to prices in the **mineral fuels** category, whose year-on-year decline moderated slightly in October and November compared to September (see Chart III.2.2). The Brent crude oil price continued to fall sharply on world markets at the end of 2015, but in year-on-year comparison the declines were more than 10 percentage points smaller compared to 2015 Q3 (42.3% in November; see Chart III.2.3). However, the annual decline in global natural gas prices, which tend to follow oil price changes with a lag, strengthened further to a sizeable 42.6% in November. The impact of the sharply falling global prices of energy commodities on domestic prices meanwhile continued to be considerably dampened by year-on-year depreciation of the koruna-dollar exchange rate, albeit to a lesser extent than in 2015 Q3. In these circumstances, the year-on-year decline in import prices of mineral fuels slowed by 2 percentage points compared to September (to 25.9% in November; see Table III.2.1).

The annual decline in import prices in the category of **non-energy commodities** accelerated compared to 2015 Q3 (to 9.8% in November). Import prices of **semi-finished products** showed similar developments, their annual decline accelerating in the first two months of 2015 Q4 (to 3.6% in November). Out of all the main categories under review, only import prices of **food and live animals** rose slightly, although the annual growth in this category halted in

November too. The growth was fostered mainly by prices of imported fruit and vegetables amid a persisting decline in prices of meat and milk (see Table III.2.1).

Year-on-year growth in **import prices of commodities with a high degree of processing** slowed gradually. In October and November 2015 these prices were broadly flat in year-on-year terms. This was due to a deepening decline in import prices of chemicals and related products, which are also being affected by the rapidly falling oil prices with a lag. Annual growth in import prices of machinery and transport equipment and miscellaneous manufactured articles slowed further compared to Q3 (to 1.4% and 1.3% respectively in November; see Table III.2.1). In the first of those categories, prices of imported industrial machinery and equipment fell particularly sharply. At the same time, growth in import prices of electrical equipment and road vehicles was only slightly positive (at 0.2% and 0.7% year on year respectively).

### III.2.2 Producer prices

#### Industrial producer prices

**Industrial producer prices** continued to be affected most strongly in 2015 Q4 by sharply falling prices of imported inputs, particularly oil, but also other non-energy commodities. The sharp year-on-year decline in industrial producer prices therefore persisted, although it gradually moderated at the end of last year (to 2.9% in December; see Chart III.2.4).

The sharp annual decline in industrial producer prices was most apparent in the **composite indicator of energy producer prices and prices of water-related services**<sup>23</sup> (see Chart III.2.4). A closer look at the structure of this indicator reveals very mixed trends in its individual components at the end of last year.

The price trends in industries where producer prices are usually adjusted at the start of the year were stable. This was true of the **electricity, gas, steam and air-conditioned air** industry, where prices have been declining at a rate of less than 1% year on year since the start of the year, and of the **water supply and sewerage-related services** industry, where prices have been maintaining stable growth of 3.4% in the same period (see Chart III.2.5). Producer prices in **mining and quarrying** continued to decline, although the fall slowed during 2015 Q4 (to 0.5% in December). However, the low weight of this industry meant that this change had little effect on the composite indicator. Prices in the **manufacture of coke and refined**

<sup>23</sup> In May 2015, the CZSO ceased to publish separate data on producer prices in the manufacture of coke and refined petroleum products. For this reason, in Chart III.2.4 this item is combined with mining and quarrying, electricity, gas, steam and air-conditioned air and water supply and sewerage-related services.

TABLE III.2.1

#### STRUCTURE OF IMPORT PRICE INFLATION

The overall decline in commodity import prices intensified and growth in prices of commodities with higher value added slowed (annual percentage changes)

	8/15	9/15	10/15	11/15
IMPORTS, TOTAL	-2.9	-3.5	-3.7	-3.7
of which:				
food and live animals	-0.8	0.7	1.4	0.0
beverages and tobacco	-1.0	-1.0	-3.0	-3.8
crude materials inedible, except fuels	-6.6	-7.3	-8.1	-9.8
mineral fuels and related products	-24.4	-27.9	-26.3	-25.9
animal and vegetable oils	5.6	8.3	6.5	7.3
chemicals and related products	-3.5	-4.5	-6.2	-6.1
manufactured goods classified chiefly by material	-2.0	-2.1	-2.8	-3.6
machinery and transport equipment	1.5	1.3	1.3	1.4
miscellaneous manufactured articles	2.6	2.0	1.0	1.3

CHART III.2.4

#### INDUSTRIAL PRODUCER PRICES

The decline in industrial producer prices gradually moderated in 2015 Q4 owing to a slower year-on-year decline in the price of oil

(annual percentage changes; contributions in percentage points)

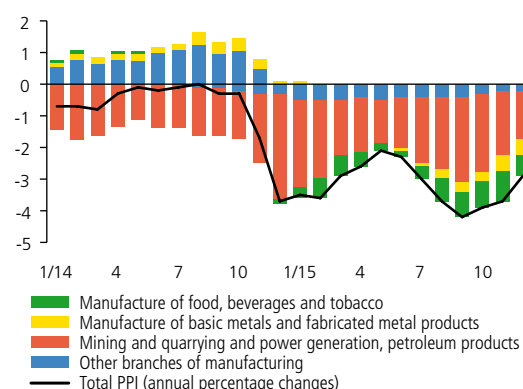


CHART III.2.5

#### PRICES OF ENERGY AND WATER-RELATED SERVICES

Electricity prices are declining slightly year on year, whereas prices of water-related services are maintaining stable growth (annual percentage changes)

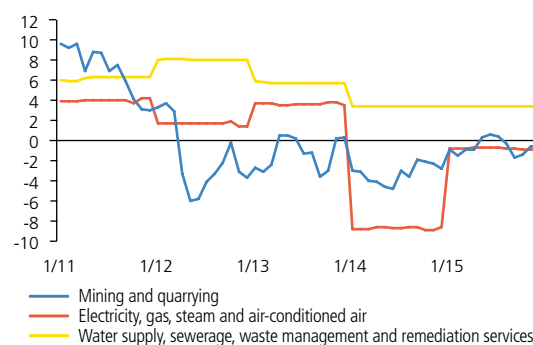
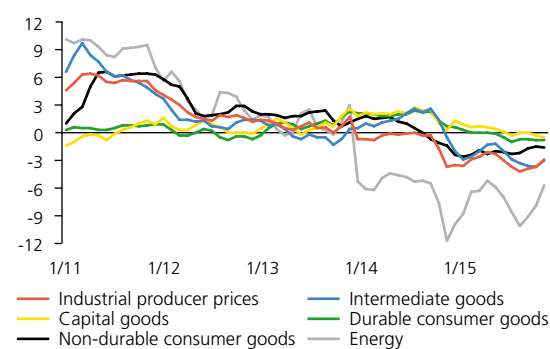


CHART III.2.6

## PRODUCER PRICES BY MAIN INDUSTRIAL GROUPINGS

Producer prices are falling in all the main industrial groupings, and most of all in the energy sector  
(annual percentage changes)



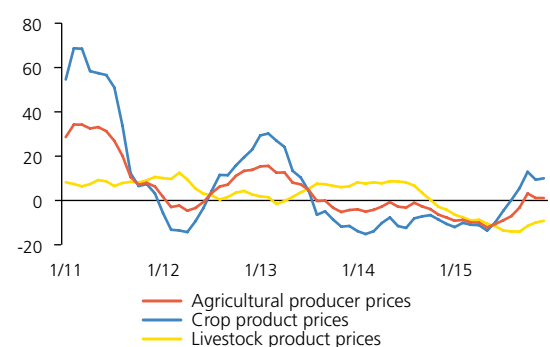
**petroleum products** thus had the largest impact on the size of the negative contribution again in 2015 Q4. The negative contribution of this industry gradually decreased owing to a slowdown in the annual decline in global oil prices during 2015 Q4. This was also reflected in the classification by main industrial groupings (see Chart III.2.6), where the drop in energy prices also gradually moderated.

The changes in global oil prices were also reflected in producer prices of chemical products, whose annual decline gradually weakened in 2015 Q4, reaching 7.1% in December. The annual decline in producer prices in the food industry also slowed in 2015 Q4. The rising agricultural producer prices thus started to show up in food prices with a lag. By contrast, the decline in producer prices in the manufacture of basic metals and fabricated metal products deepened further (to 4.6%). Producer prices in other manufacturing sectors fell faster. This was true of transport and electrical equipment and computer, electronic and optical products.<sup>24</sup> Overall, the annual decline in **producer prices in manufacturing** moderated in 2015 Q4 (to 3.5% in December), but still remained strong. This was due not only to persistently low global oil prices and a continued decline in producer prices in the effective euro area, but also to modest year-on-year appreciation of the koruna against the euro.

CHART III.2.7

## AGRICULTURAL PRODUCER PRICES

Agricultural producer prices were rising only slightly on average at the end of last year  
(annual percentage changes)

**Agricultural producer prices**

**Agricultural producer prices** returned to annual growth at the start of 2015 Q4 after having declined for 26 months, but the growth slowed during the period under review (to 1.1% in December, see Chart II.2.7). This renewed annual growth was a result of faster growth in crop product prices (10% in November) and a slower decline in prices of livestock products (9.2%). In crop production, growth in prices of most items of vegetables (including potatoes) and fruit accelerated further. At the same time, prices of the high-weight items of oilseeds and cereals recorded renewed growth. The year-on-year decline in prices of livestock products moderated due to growth in prices of cattle and a slower decline in prices of pigs. Milk prices continued to fall sharply, but this decline also slowed slightly compared to the end of the previous quarter (to 17.5% in December).

The renewed annual growth in agricultural producer prices in 2015 Q4 reflected the gradual fading of the effect of several significant **factors**. First, the decline in crop product prices, which had been due largely to above-average harvests in 2014 and 2015, stopped deepening. Prices of some commodities, such as potatoes and oilseeds, started to recover at the end of the year. Second, the effect of retaliatory trade sanctions imposed by Russia on the EU in the second half of 2014 and the abolition of milk quotas in the EU in April 2015 did not increase any further. The continuing year-on-year depreciation of the koruna against the dollar during 2015 Q4 also fostered growth in agricultural producer prices.

<sup>24</sup> Only in furniture manufacture and other branches of manufacturing did producer prices go up slightly.

**Other producer prices**

Annual growth in **construction work prices** remained just above 1% in 2015 Q4 (1.3% in December; see Chart III.2.8). The decline in prices of materials and products consumed in the construction industry deepened, reaching 1.4% in December.

The slight annual decline in **prices of market services for the business sector** continued into 2015 Q4 (0.3% in December; see Chart III.2.8). The fastest year-on-year fall was recorded for prices of information services, but prices in the high-weight categories of transport and storage also went down by more than 2%. Prices of insurance services, real estate services and legal services were also lower. Prices in other categories were flat or increased only very slightly. The only industry to record substantial price growth was postal and courier services.

CHART III.2.8

**PRICES OF MARKET SERVICES FOR THE BUSINESS SECTOR**

**Growth in construction work prices stayed just above 1%, while market services prices continued to fall slightly**  
(annual percentage changes)

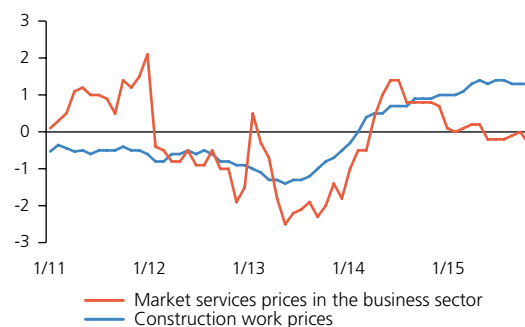
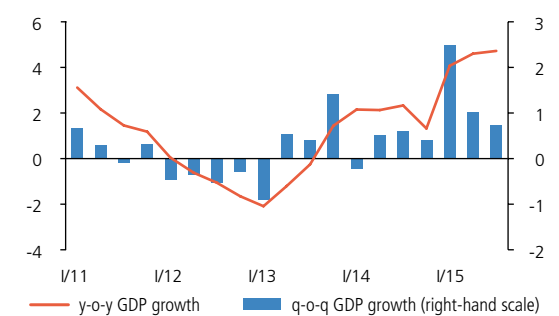


CHART III.3.1

## GROSS DOMESTIC PRODUCT

## Annual GDP growth picked up slightly further in 2015 Q3

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



## III.3 DEMAND AND OUTPUT

Annual real GDP growth picked up slightly to 4.7% in 2015 Q3. In quarter-on-quarter terms, economic activity increased by 0.7%. All components of demand except net exports continued to contribute to the annual output growth. On the supply side, gross value added growth accelerated further, with industry and services contributing in roughly equal measure to its growth. As a result, economic output approached its potential.

## III.3.1 Domestic demand

The rapid annual GDP growth (see Chart III.3.1.) was driven by **domestic demand**, whose annual growth remained buoyant in 2015 Q3 (at 5.2%), despite slowing slightly. All the components of domestic demand contributed to the growth (see Chart III.3.2). Growth in inventories slowed noticeably compared to the first half of the year, but the slowdown was almost fully offset by an increase in government consumption and a slight upswing in gross fixed capital formation. Household consumption maintained the growth rate observed in the previous quarter.

## Final consumption

The significant annual growth in real **final consumption expenditure of households** continued into 2015 Q3, reaching 3% (see Chart III.3.3). However, the similar rate of growth of household consumption compared to the previous quarter was this time achieved amid lower growth in gross disposable income, reflected in a decline in the saving rate.

Annual growth in nominal **gross disposable income**, which is the main source of financing of households' consumption expenditure, slowed sharply in 2015 Q3 (by 2 percentage points to 1.5%; see Chart III.3.3). With the household consumption deflator showing almost zero growth, its real purchasing power rose by 1.4%. Annual growth in wages and salaries, which represent almost 60% of disposable income, accelerated to 4.7% in 2015 Q3, contributing significantly to the growth in income (see Chart III.3.4). Social benefits and other transfers also made positive contributions, although less so than in the previous quarter. By contrast, a significantly negative contribution of taxes and social contributions, reflecting growth in households' taxable income, fostered lower growth in gross disposable income. Income of entrepreneurs and property income also recorded year-on-year declines.

Households' **saving rate**<sup>25</sup> decreased by more than 1 percentage point to 9.1% in 2015 Q3. An only slight pick-up in the annual growth rate of consumer credit (to 2.7% in November) for the time being did not indicate a significant increase in household interest in credit financing of consumption (see section III.5).

25 According to seasonally unadjusted data.

CHART III.3.2

## STRUCTURE OF ANNUAL GDP GROWTH

## Gross fixed capital formation again contributed the most to GDP growth in 2015 Q3

(contributions in percentage points to annual percentage change; seasonally adjusted data)

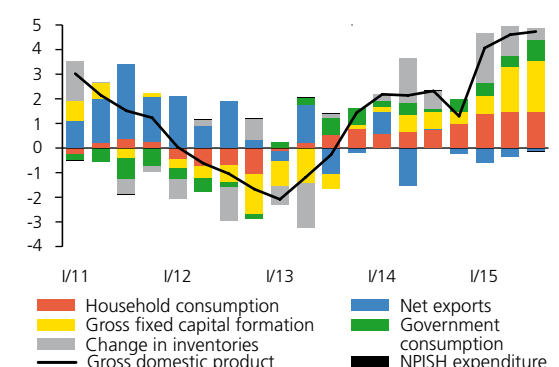
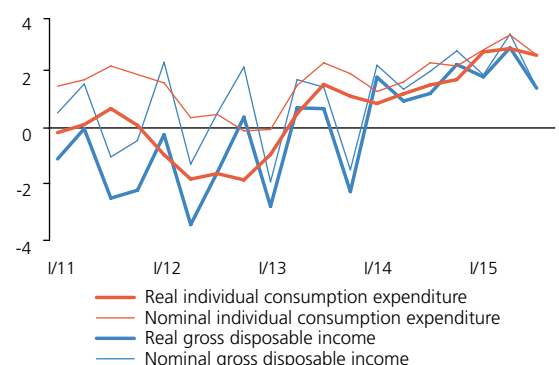


CHART III.3.3

## HOUSEHOLD CONSUMPTION EXPENDITURE

## Household consumption rose faster than gross disposable income in 2015 Q3

(annual percentage changes; seasonally unadjusted data)



For the third consecutive quarter, the growth in **consumption expenditure** was channelled into all the monitored categories (see Chart III.3.5). Unlike in previous quarters, however, the growth in households' consumption was due most of all to an increase in expenditure on services, whereas the contribution of household expenditure on non-durables and semi-durables shrank slightly. Growth in expenditure on durable goods was similar to that in the previous quarter.

According to the latest available **monthly indicators**, annual growth in seasonally adjusted retail sales stayed high in November and December 2015 both in the automotive segment and in the rest of the retail sector. The consumer confidence indicator increased further, reaching a historical high in January 2016 (see Chart III.3.6).

Annual growth in real **government final consumption expenditure** surged to 4.4% in 2015 Q3 from 2.3% in the previous quarter. The growth was due mainly to extensive road maintenance and repairs driven by efforts to draw down EU funds. The positive contribution of government consumption to annual GDP growth thus increased to 0.9 percentage point (see Chart III.3.2).

### Investment

Annual growth in **fixed investment** accelerated by a further 0.9 percentage point to 8.3%<sup>26</sup> in 2015 Q3 (see Chart III.3.7).

The high investment activity was dominated<sup>27</sup> by accelerating growth in fixed investment in the **government sector** (of more than 30% in 2015 Q3; see Chart III.3.7). Government investment was channelled to an increased extent into buildings and structures, reflecting continuing efforts to draw down EU structural funds, especially for infrastructure projects (see Chart III.3.8).

The contribution of investment by the **non-financial corporations sector**, which rose by 3% year on year in 2015 Q3, was also significant, despite being somewhat smaller than in the previous quarter. This investment was again channelled into transport equipment and machinery and equipment. Non-financial corporations' view of future demand remains positive according to the CZSO's business survey indicators. The same picture is offered by the latest survey conducted by the CNB and the Confederation of Industry for 2015 Q4, according to which non-financial corporations expect continued growth in investment at both the six-month and twelve-month horizons.

As in the previous quarter, investment by the **household sector** decreased moderately in 2015 Q3 (see Chart III.3.7). Investment in dwellings,<sup>28</sup> which accounts for a significant proportion of the total

<sup>26</sup> According to seasonally adjusted data at constant prices.

<sup>27</sup> According to seasonally unadjusted data at constant prices.

<sup>28</sup> Their annual growth reached only 0.3% in 2015 Q3, compared to 2.3% in the previous quarter.

CHART III.3.4

### DISPOSABLE INCOME

**Faster growth in wages and salaries contributed to the growth in disposable income**

(annual percentage changes; contributions in percentage points; current prices; seasonally unadjusted data)

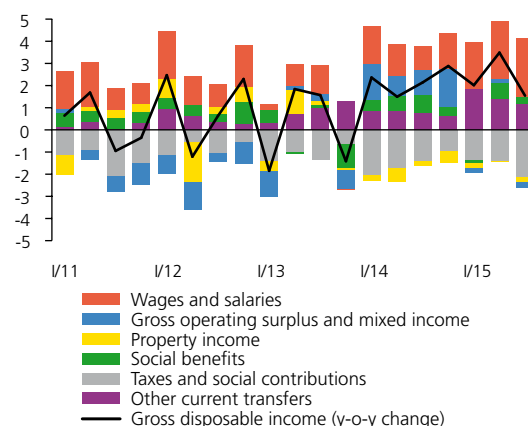


CHART III.3.5

### STRUCTURE OF HOUSEHOLD CONSUMPTION

**Household consumption expenditures continued to increase in all categories**

(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)

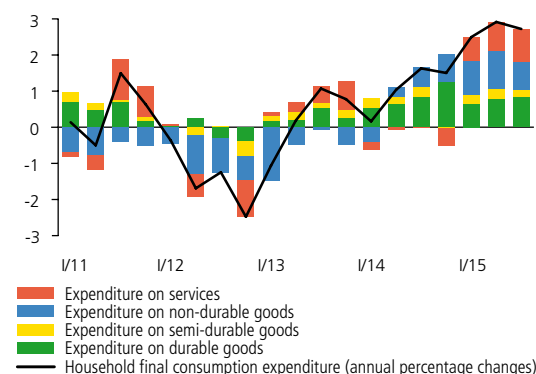


CHART III.3.6

### CONFIDENCE INDICATORS

**Consumer confidence increased to historical highs**

(2005 average = 100)

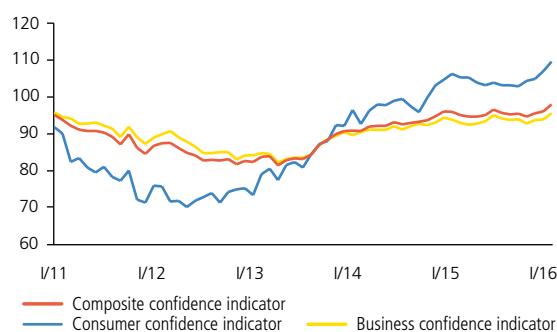


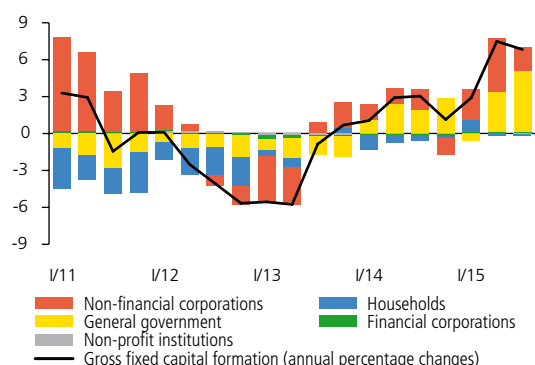


CHART III.3.7

## INVESTMENT BY SECTOR

The buoyant growth in fixed investment in 2015 Q3 was due most of all to general government

(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)



fixed investment of households, stopped rising (see Chart III.3.9). However, some indicators are pointing to possible renewed growth in household investment in dwellings. This is indicated above all by households' confidence in future growth of the economy and employment, which is at its highest-ever levels. Financing conditions for investment in dwellings are still favourable and are being accompanied by continued growth in new mortgage loans (see section III.5.2) and property prices (see section III.5.7). The number of housing starts also continued to increase year on year (by 5.1% in 2015 Q3).

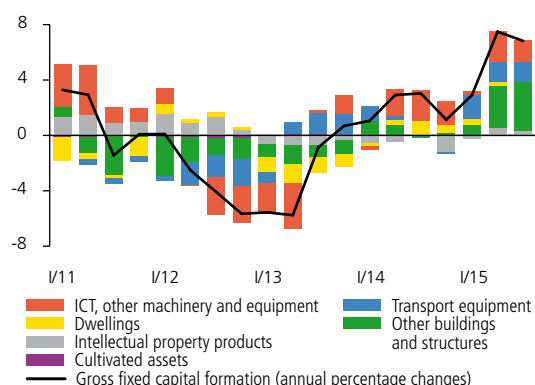
Annual growth in **inventories** contributed significantly to the upswing in economic activity in the first half of 2015, but this contribution decreased considerably in 2015 Q3 (see Chart III.3.2). According to CZSO data, continued growth was recorded for inventories of materials and goods in both the manufacturing and trade sectors.

CHART III.3.8

## FIXED CAPITAL FORMATION

Investment in buildings and structures was the biggest contributor to the growth in fixed capital, but investment in transport equipment and other machinery and equipment also increased

(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)



## III.3.2 Net external demand

**Net exports of goods and services**<sup>29</sup> decreased moderately in year-on-year terms (by CZK 1.6 billion) for the fourth consecutive quarter in 2015 Q3 (see Chart III.3.10), contributing negatively to annual GDP growth again. However, their negative contribution to GDP growth decreased (to 0.1 percentage point) compared to the first half of 2015. As in the previous quarter, the year-on-year decrease in net exports was due to the balance of goods, whose surplus continued to narrow year on year in real terms. However, the drop in the goods surplus was approximately 75% offset by an increase in the services surplus. The year-on-year decrease in net exports was a result of import growth continuing to outpace export growth by almost 1 percentage point (see Chart III.3.10). Total trade turnover accelerated in year-on-year terms.

The increase in the growth rate of **total exports** (to 8.2%) was due to moderately rising growth in external demand in the Czech Republic's major trading partner countries. The faster growth in total exports was aided by faster growth in goods exports (of 8.8%), whereas growth in services exports slowed significantly compared to the previous quarter.

Growth in **total imports** accelerated year on year to roughly the same extent as that in total exports (to 9.1%). The faster growth in total imports was associated mainly with a high import intensity of exports amid continued rapid growth in total domestic demand. The faster growth in total imports was due to strong growth in goods imports (10.8%), whereas services imports recorded a modest decline after six quarters of growth. As for the structure of goods imports, imports for investment and final consumption grew much faster than imports for intermediate consumption.

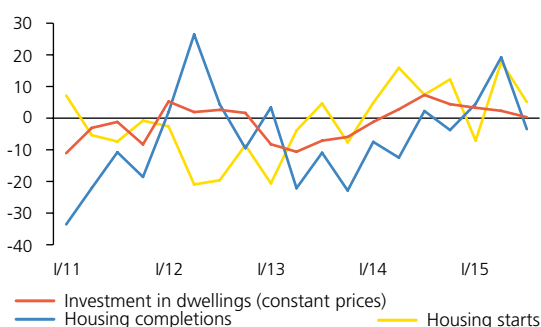
29 At 2010 prices, seasonally adjusted.

CHART III.3.9

## INVESTMENT IN DWELLINGS

Investment in dwellings stopped rising in 2015 Q3, but the number of housing starts continued to increase

(annual percentage changes)





### III.3.3 Output

Annual growth in **gross value added** at basic prices continued to accelerate gradually in 2015 Q3 (see Chart III.3.11). Its annual growth rate reached 4.3%, up by 0.4 percentage point on the previous quarter. In quarter-on-quarter terms, gross value added growth also accelerated (to 1.2%). The favourable trend in value added was supported by rising domestic and external demand.

Within **industry**, the effect of rising demand on output was apparent in manufacturing, where annual gross value added growth accelerated to a sizeable 7.9% in 2015 Q3. With a contribution of 2.1 percentage points, the manufacturing sector accounted for almost half of the overall annual growth in gross value added in the Czech economy (see Chart III.3.11). By contrast, gross value added in mining and energy supply continued to fall, although its negative contribution was insignificant given the small weight of this sector.

**In terms of use**, industrial production for short-term consumption recorded the fastest growth (7.5%), but production for investment also maintained buoyant growth (5.7%) despite slowing somewhat. By contrast, annual growth in production for intermediate consumption slowed by more than 2 percentage points to 3.7%. Growth in production for long-term consumption was broadly flat at the Q2 level (4.3%). The growth in manufacturing output was still quite broad-based, with most of the industries under review contributing to it.<sup>30</sup>

According to the latest available **monthly indicators**, annual real growth in seasonally adjusted industrial production picked up further in October (to 6.3%) but slowed in November (to 3.2%; see Chart III.3.12). Sales from industrial activity increased by 2% in October and November after a surprise decline in September. This was due to a persisting decline in domestic sales, while direct export sales maintained growth of just above 5%. New industrial orders, which primarily indicate future production and sales, rose significantly again in October and November (by 6.5% and 7.2% respectively), following a temporary sharp slowdown in September. Their growth was due predominantly to foreign orders, which grew by about 10% year on year, whereas growth in domestic orders only just exceeded 1% (see Chart III.3.13).

According to the January results of the CZSO's business survey, the number of businesses in industry reporting **insufficient demand as a barrier to growth** decreased slightly further (see Chart III.3.14). After having decreased sharply by 5 percentage points in October, this indicator dropped by a further 0.4 percentage point in January

<sup>30</sup> Production decreased year on year in the following sectors only: manufacture of leather and related products, printing and reproduction of recorded media, manufacture of chemicals and chemical products, manufacture of other transport equipment and repair and installation of machinery and equipment.

CHART III.3.10

#### EXPORTS AND IMPORTS

**Export and import growth rose modestly in 2015 Q3, while net exports continued to decrease moderately in year-on-year terms**  
(annual changes in percentages and CZK billions; constant prices; seasonally adjusted data)

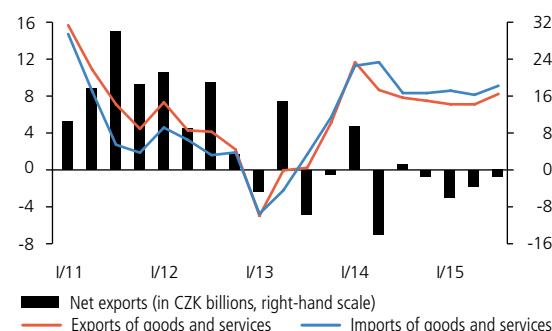


CHART III.3.11

#### CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

**Manufacturing and services contributed in equal measure to the growth in value added**  
(annual percentage changes; contributions in percentage points)

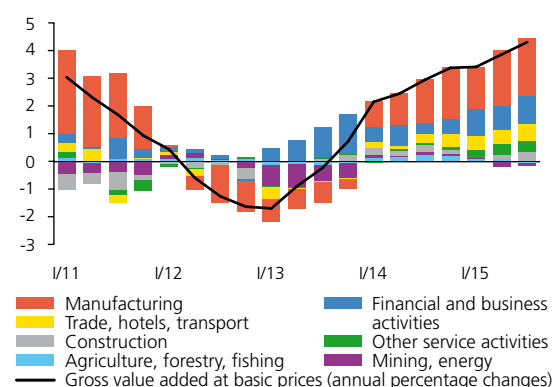


CHART III.3.12

#### INDUSTRIAL PRODUCTION

**Industrial production continued to rise rapidly year on year, and production capacity utilisation remained high**  
(basic index; year 2010 = 100)

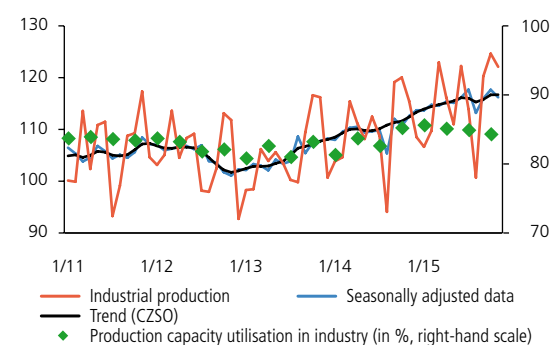
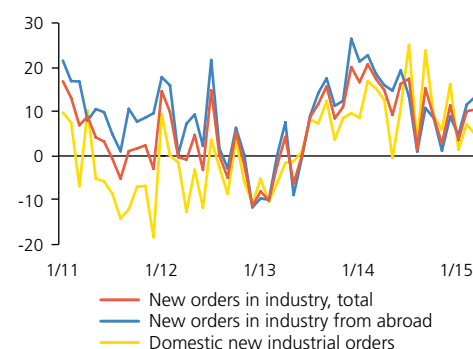


CHART III.3.13

## NEW ORDERS IN INDUSTRY

**Growth in new orders in industry was driven by orders from abroad**

(annual percentage changes)



to its lowest value in more than four years. At the same time, the significance of the barrier to growth in the form of shortages of labour increased, so the proportion of firms not constrained by any barriers was approximately unchanged. At the same time, capacity utilisation both in industry as a whole and in its main component – manufacturing – decreased slightly in January, but remained at a high level.

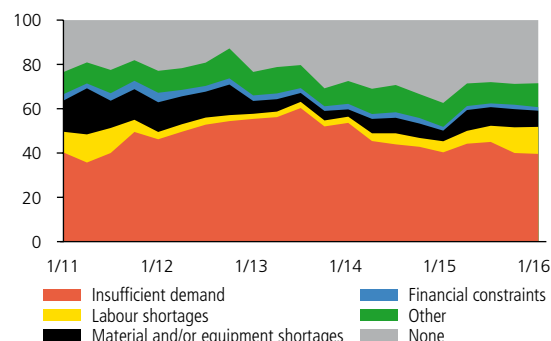
The overall contribution of **trade, hotels and restaurants, transport and other services** to annual gross value added growth at basic prices was the same as that of manufacturing for the third consecutive quarter (2.1 percentage points in 2015 Q3; see Chart III.3.11). As in the previous quarter, the value added growth was due to all sub-sectors of the tertiary sector under review, most notably trade, transport, hotels and restaurants (0.6 percentage point) followed by professional, scientific, technical and administrative activities (0.4 percentage point<sup>31</sup>). This suggested a sizeable pass-through of the accelerating economic growth to branches of services recently.

CHART III.3.14

## BARRIERS TO GROWTH IN INDUSTRY

**The effect of insufficient demand as the main barrier to growth decreased slightly further, but labour shortages simultaneously grew in significance**

(percentages)



The contribution of **construction** to gross value added growth increased in 2015 Q3 (to 0.3 percentage point, with annual growth of 5.5%), mainly due to fast growth in civil engineering output. According to the latest available monthly CZSO data, however, construction output started to decline year on year in October and November. This turnaround was caused by a slump in building construction output and a slowdown in civil engineering output growth from levels above 20% to roughly half that rate. Nevertheless, the number of building permits issued and the approximate value of building notifications increased at the end of 2015.

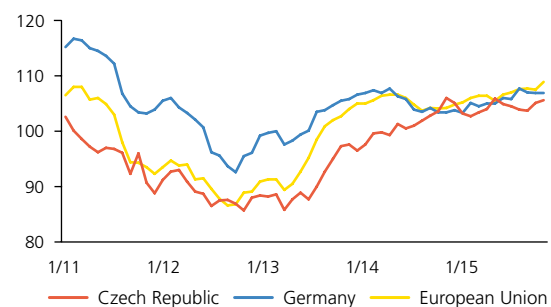
An **international comparison of economic sentiment** (see Chart III.3.15) reveals an increase in the business indicator for the Czech Republic during 2015 Q4. Nevertheless, from a longer-term perspective this indicator has been broadly flat over the past year. In Germany and the EU, by contrast, this indicator has been on a modest growth trend over the past year, although in Germany its growth halted at the end of last year.

CHART III.3.15

## ECONOMIC SENTIMENT

**Economic sentiment increased in the Czech Republic and the EU in 2015 Q4, but was broadly flat in Germany**

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



31 In this sector, value added increased by a substantial 5.2% year on year in 2015 Q2.

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

According to the **Cobb-Douglas production function** calculation, potential output grew by 2.3% year on year in 2015 Q3 (see Chart III.3.16). The strong annual growth in economic activity observed in the first three quarters of 2015 resulted in significant closure of the output gap, which was only slightly negative under this method (-0.4% of potential output; see Chart III.3.17).

Potential output will grow at a broadly stable pace **over the forecast horizon** and the contributions of productivity and capital will increase amid a gradually declining contribution of employment (see Chart III.3.18). According to the production function, the output gap will close further in the coming quarters, turn slightly positive at the end of this year and remain positive throughout 2017.

An alternative estimate using the **HP filter**<sup>32</sup> indicates a slightly higher growth rate of potential output (2.4% in 2015 Q3) than that calculated using the production function. According to this method the output gap has now closed due to the strong GDP growth recorded in the first half of 2015.

The calculation using the **Kalman filter** suggests an even higher annual growth rate of potential output in 2015 Q3 (2.7%). According to this method, the output gap also closed in 2015 Q2.

CHART III.3.16

#### POTENTIAL OUTPUT

The rate of growth of potential output was above 2% in 2015 Q3 according to all the methods used (annual percentage changes)

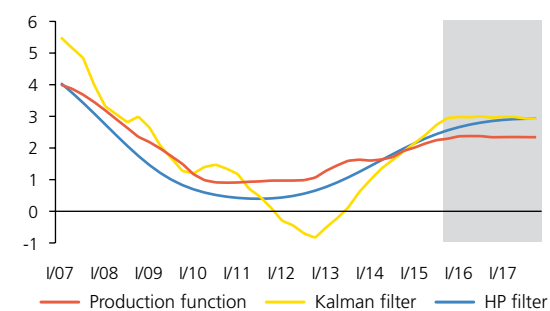


CHART III.3.17

#### OUTPUT GAP

The Czech economy approached its potential output level (% of potential output)

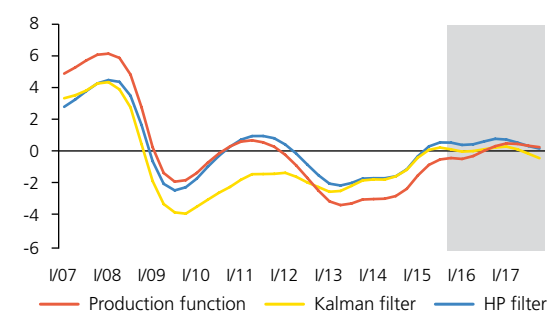
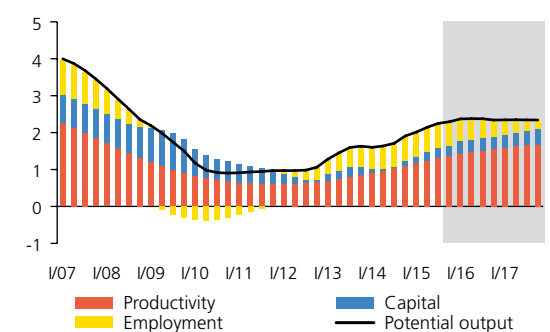


CHART III.3.18

#### CONTRIBUTIONS TO POTENTIAL OUTPUT GROWTH

The contributions of productivity and capital will gradually increase over the forecast horizon (production function baseline variant; annual percentage changes)



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

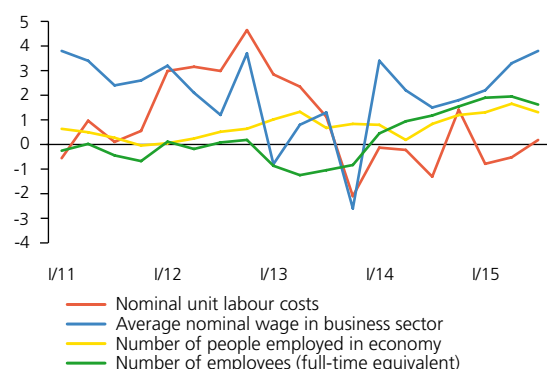
### III.4 THE LABOUR MARKET

The continued strong economic growth was also reflected in the labour market. Total employment and the number of employees converted into full-time equivalents picked up significantly further year on year in 2015 Q3. This, coupled with only a slight increase in the labour force, led to a further decline in the general unemployment rate. The share of unemployed persons declined in 2015 Q4, too. Annual growth in the average wage picked up further in 2015 Q3 due to the situation in the business sector. By contrast, wage growth in the non-business sector slowed. Amid slower annual growth in seasonally unadjusted economic activity, whole-economy labour productivity also increased more slowly than in the previous quarter and unit labour costs edged up for the first time in quite a while.

CHART III.4.1

#### LABOUR MARKET INDICATORS

Total employment and the number of employees converted into full-time equivalents continued to rise, albeit rather more slowly, while nominal unit labour costs edged up (annual percentage changes)



#### III.4.1 Employment and unemployment

The strong rise in **total employment** seen in the previous quarter slowed slightly in 2015 Q3 (to 1.3%; see Chart III.4.1). Employment increased only slightly in quarter-on-quarter terms (by 0.1% when adjusted for seasonal effects). The growth in total employment was due to a higher number of employees, while the number of entrepreneurs continued to decrease year on year.

As in the previous quarter, the **tertiary sector** was the biggest contributor to the year-on-year growth in employment in 2015 Q3 (see Chart III.4.2). The rapid annual growth in employment in this sector (of 1.7%) was associated mainly with an increase in the number of persons employed in market services. Unlike in the previous quarter, however, higher employment in non-market services also made a positive contribution (see Chart III.4.2). As regards market services, the strong growth in employment in wholesale and retail trade continued, and the contribution of professional and scientific activities, which doubled compared to 2015 Q2, was also significant. In both of these branches, the increase in employment was due mainly to women. The renewed annual growth in non-market services was associated with a more moderate decrease in the number of persons employed in education, public administration and defence and health and social care, amid continued growth in employment in the other branches of non-market services.

Employment also rose significantly year on year in the **primary sector**. Given its low weight, however, the contribution of this sector to the growth in total employment was relatively weak.

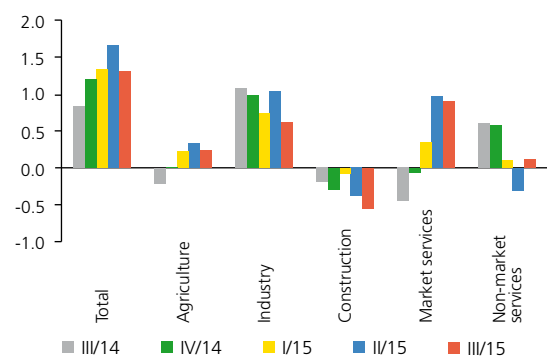
Growth in employment in the **secondary sector** slowed noticeably in 2015 Q3. This was due to both lower growth in employment in industry and a deeper decline in employment in construction. The slower growth in employment in industry mainly reflected more sluggish growth in employment in manufacturing, which, however, remains high. According to the latest data for October and November,

CHART III.4.2

#### EMPLOYMENT BREAKDOWN BY BRANCHES

Market services made the biggest contribution to the growth in employment, while a further reduction in employment in construction acted in the opposite direction

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



the registered number of employees<sup>33</sup> rose further year on year in industry (by 3.6% and 3.7% respectively), while continuing to decrease in construction (by 3.2% and 2.1% respectively).

Despite the still strong growth in economic activity in 2015 Q3, annual growth in the **number of employees converted into full-time equivalents** slowed (to 1.6%; see Chart III.4.3). As in previous quarters, this growth was due mainly to the business sector and, within it, manufacturing, which accounted for roughly half of the growth. Also significant was the contribution of trade, health and social care and administrative and supporting services, where the number of agency workers increased. In the non-business sector, the converted number of employees continued to grow in public administration and defence and in education, whereas in the health and social care sector this indicator has been falling year on year since early 2015. Overall, the growth in the converted number of employees in 2015 Q3 was again driven exclusively by growth in the number of employees amid a further slight shortening of average hours worked per employee. This reflected a year-on-year increase in the number of women working shorter hours, while men have long used shorter hours only to a small extent.

The continued growth in employment resulted in a further decline in the **general unemployment rate**<sup>34</sup> in 2015 Q3 (to 5%; see Chart III.4.4). According to monthly figures, this trend continued into October and November. The **rate of economic activity**<sup>35</sup> is close to a historical high (around 74% after seasonal adjustment). This is largely due to the growing economic activity of women connected with an increase in their retirement age. This factor can be expected to have a major effect in the period ahead.

Like the general unemployment rate, the **share of unemployed persons**<sup>36</sup> (MLSA) decreased in 2015 Q3 (see Chart III.4.4). With the number of available job applicants registered with labour offices continuing to decline and the population in the given age group shrinking slightly, this unemployment indicator decreased further to 6.1% on average in 2015 Q4 (according to seasonally adjusted data).

A long-running improvement in the labour market situation is also indicated by a shift of the **Beveridge curve** in the north-westerly direction. This shift is due to a cyclical decrease in the seasonally adjusted number of registered job applicants coupled with growth in the number of vacancies (see Chart III.4.5).<sup>37</sup>

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

34 In the 15–64 age category. Measured by the ILO methodology (LFS). The data are seasonally adjusted.

35 The rate of economic activity is defined as the ratio of employed and unemployed persons to the population in each age category.

36 The share of unemployed persons is the ratio of available job applicants aged 15–64 to the population of the same age.

37 In December 2015, the number of registered unemployed persons was around 90,000 lower year on year after seasonal adjustment, while the number of vacancies offered via labour offices was about 50,000 higher.

CHART III.4.3

#### NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

Growth in the number of employees was accompanied by a slightly shorter average number of hours worked per employee

(annual percentage changes; contributions in percentage points)

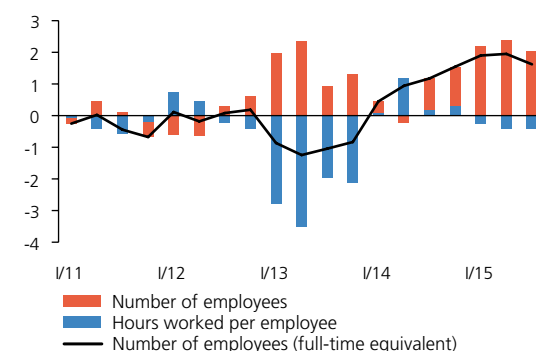


CHART III.4.4

#### UNEMPLOYMENT INDICATORS

The general unemployment rate decreased further and the share of unemployed persons also went down

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



CHART III.4.5

#### BEVERIDGE CURVE

The number of vacancies has been rising steadily and the number of unemployed persons falling since the start of 2014

(seasonally adjusted numbers in thousands; source: MLSA)

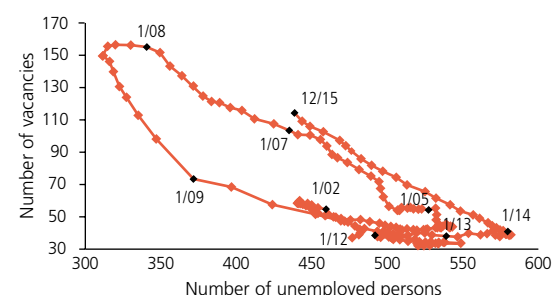


CHART III.4.6

## AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Average wage growth increased in 2015 Q3, while productivity growth was broadly flat  
(annual percentage changes)

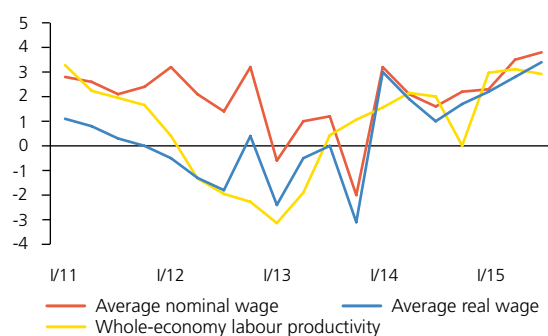


TABLE III.4.1

## WAGES, PRODUCTIVITY, UNIT LABOUR COSTS

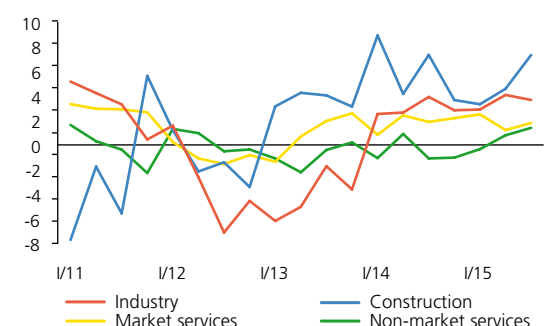
Average wage growth increased in the business sector, while nominal unit labour costs edged up  
(annual percentage changes)

	IV/14	I/15	II/15	III/15
Average wage in Czech Republic				
nominal	2.2	2.3	3.5	3.8
real	1.7	2.2	2.8	3.4
Average wage in business sector				
nominal	1.8	2.2	3.3	3.8
real	1.3	2.1	2.6	3.4
Average wage in non-business sector				
nominal	3.9	3.1	4.3	3.5
real	3.4	3.0	3.6	3.1
Whole-economy labour productivity	0.0	3.0	3.1	2.9
Nominal unit labour costs	1.4	-0.8	-0.5	0.2

CHART III.4.7

## PRODUCTIVITY IN BRANCHES

Labour productivity rose in all the monitored branches  
(annual percentage changes)



## III.4.2 Wages and productivity

Annual **average nominal wage growth** edged up further in 2015 Q3 (to 3.8%; see Chart III.4.6). This was due to a more pronounced rise in the average wage in the business sector, while wages in the non-business sector grew more slowly than in the previous quarter. With annual inflation low, the **average real wage** increased by 3.4% overall (see Table III.4.1).

Annual average wage growth in the **business sector** went up to 3.8% in 2015 Q3 (see Table III.4.1). In real terms, the average wage rose by 3.4%. The services sector accounted for more than half of the growth in the average wage. The contribution of industry remained significant, too. The highest wage growth was recorded for accommodation and food services activities, owing to growth in the minimum wage. Manufacturing saw a slight pick-up in wages; based on the October and November figures, a similar growth rate can be expected for 2015 Q4. Wages were broadly flat in education and decreased further in the energy sector.

Annual average wage growth in the **non-business sector** slowed noticeably in 2015 Q3 (to 3.5%), mainly due to lower wage growth in public administration and defence and, to a lesser extent, in education. By contrast, wages in health care increased noticeably compared to the previous quarter. Owing to low inflation, annual growth in the average real wage in the non-business sector amounted to 3.1% in 2015 Q3 (see Table III.4.1).

Despite slower growth in employment, the slowdown in annual real GDP growth<sup>38</sup> led to more moderate growth in **whole-economy labour productivity**<sup>39</sup> in 2015 Q3. However, labour productivity still grew at a fast pace of 2.9% (see Chart III.4.6). It rose fastest in construction (by more than 7% year on year), where strong growth in value added, due possibly to drawdown of EU funds, was accompanied by a continued decline in employment. Productivity also increased noticeably in industry (by 3.7%; see Chart III.4.7). Growth in **hourly labour productivity** picked up slightly compared to the previous quarter (to 2.3%). This was a result of higher growth in hourly productivity in construction and market services and renewed growth in hourly productivity in non-market services. In industry, conversely, growth in hourly labour productivity slowed.

<sup>38</sup> Labour productivity is calculated on the basis of seasonally unadjusted data from the CZSO's national accounts.

<sup>39</sup> Total whole-economy productivity is calculated as the ratio of GDP to employment (i.e. including the effect of taxes and subsidies on products). Labour productivity in individual sectors is calculated as the ratio of gross value added to employment (i.e. excluding taxes and subsidies on products).

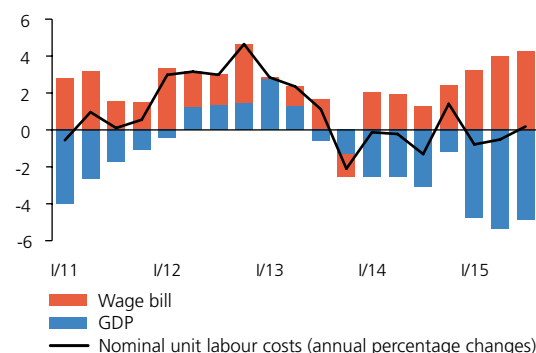
The slower growth in economic activity<sup>40</sup> coupled with only slightly faster growth in the wage bill by comparison with 2015 Q2 was also reflected in renewed annual growth in **nominal unit labour costs** (of 0.2%; see Chart III.4.8). This was a result of continued growth in nominal unit labour costs in services and, on the other hand, only slightly declining nominal unit wage costs in industry. In construction, by contrast, nominal unit wage costs continued to fall sharply.

CHART III.4.8

## UNIT LABOUR COSTS

**The renewed growth in nominal unit labour costs was due to slightly faster growth in the wage bill coupled with slower growth in economic activity**

(contributions in percentage points; annual percentage changes)



40 According to seasonally unadjusted data, which are used for the calculation of the wage cost-output ratio as measured by nominal unit labour costs.



CHART III.5.1

## MONETARY AGGREGATES AND LOANS

Money aggregate growth continued to rise in conditions of strong economic growth  
(annual percentage rates of growth)

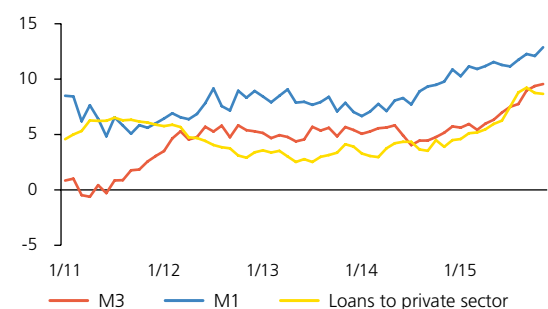


CHART III.5.2

## COMPONENTS OF M3

Economic agents are preferring to hold overnight deposits in an environment of low interest rates  
(annual flows in CZK billions)

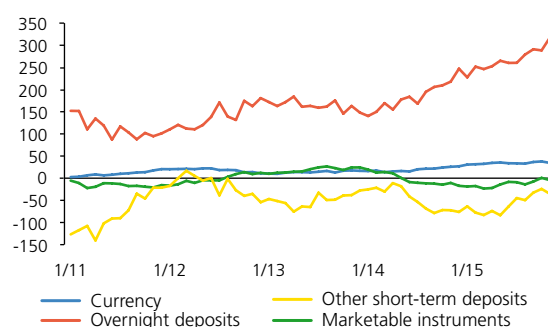
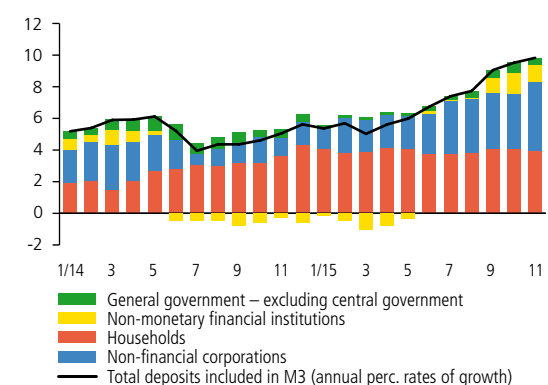


CHART III.5.3

## DEPOSIT STRUCTURE OF M3

The acceleration in M3 growth was fostered primarily by deposits of non-financial corporations at the end of last year  
(contributions in percentage points; annual percentage rates of growth)



## III.5 FINANCIAL AND MONETARY DEVELOPMENTS

Annual M3 growth picked up further in an environment of strong economic growth. The M3 growth was due predominantly to overnight deposits. The money growth reflected an increased rate of growth of loans to the private sector and an inflow of capital from abroad. After having accelerated last year, growth in loans to non-financial corporations slowed somewhat at the end of the year. Loans for house purchase loans continued to record steady growth, accompanied by a rise in residential property prices. The growth rate of consumer credit rose. Growth in the net financial assets of household slowed. At the end of 2015, banks further eased their credit standards for corporate loans and consumer credit, while keeping those for loans to households for house purchase broadly unchanged. Demand for loans rose in all market segments. Client interest rates mostly declined slightly again. Year-on-year growth in the indicators of the financial performance of corporations decreased in 2015 Q3. Interest rates with longer maturities showed similar developments as foreign rates. Government bond yields remained low and were negative for shorter maturities. The koruna appreciated slightly against the euro and depreciated against the dollar in 2015 Q4 in year-on-year terms.

## III.5.1 Money

Growth in the harmonised **M3 money aggregate** continued to accelerate (Box 2 at the end of this section discusses the changeover to the harmonised M3 aggregate as the main monetary indicator). The annual M3 growth rate went up to 9.6% in November (see Chart III.5.1), fluctuating above the euro area level. The money stock grew faster than nominal GDP in 2015 Q3. This was reflected in a year-on-year decline in the velocity of money. As in the euro area, growth in broader money is being fostered predominantly by high M1 growth. The money growth is consistent with the fast economic growth.

In an environment of low interest rates and rapid economic growth, economic agents are preferring to hold **overnight deposits** (see Chart III.5.2). Conversely, other short-term deposits continued to decline. Marketable instruments also decreased.<sup>41</sup> Turning to sectors, the M3 growth was fostered primarily by deposits of non-financial corporations, in line with a continued rise in the acid-test ratio of corporations (see Chart III.5.3). Household deposits also contributed significantly to the money growth, but their growth is broadly stable.

Turning to the **creation of money**, the M3 growth reflects high growth in loans to the private sector (see Chart III.5.1). The latter has recently been accompanied by an increase in net external assets

<sup>41</sup> This was a result of a long-running fall in units/shares of money market funds amid renewed growth in deposits in repo operations with non-monetary financial institutions.

due to client operations and slower growth in deposits accepted by commercial banks from abroad. The inflow of capital due to purchases of domestic koruna government bonds by non-residents also increased.<sup>42</sup>

## BOX 2

### The changeover from national to harmonised monetary statistics

Monetary analyses, which are used as a supplementary tool in economic analyses, include a detailed description of money and credit growth and evaluate its implications for inflation and economic growth. The main variables observed are monetary aggregates and their counterparts in the form of loans, long-term financial liabilities and net external assets of MFIs. Until the end of 2015, most of the data used in the Inflation Report were compliant with national monetary statistics definitions, but at the start of 2016 harmonised **monetary statistics** – compiled in accordance with the methodological guidelines of the E(S)CB – became the main source for monetary data. Accordingly, the main monetary indicator was changed from the previously used national M2 monetary aggregate to the harmonised **M3 monetary aggregate**.

There are three main **reasons** for this decision. M3 is fully harmonised with EU standards, so its use facilitates international comparisons. It is also more “liquid” in its definition than national M2 (see Table 1), as it does not contain long-term time and savings deposits (deposits with maturities of over two years and deposits redeemable at notice of over three months) and, conversely, does contain deposits of local governments and some marketable bond and money market instruments issued by MFIs. It thus enables the transaction motive for holding money to be captured more faithfully over the business cycle. In econometric terms, sufficiently long time series of harmonised aggregates are currently available for analytical and forecasting purposes, so there is nothing to prevent a change to their full use.

The **differences in the definitions** of national M2 and harmonised M3 caused the two aggregates to show different rates of growth in 2006–2011 (see Chart 1). The difference in their growth rates of almost 5 percentage points was a result of differential growth in deposits by maturity, as, unlike deposits with longer agreed maturities, deposits with agreed maturity of

TABLE 1 (BOX)

### COMPARISON OF HARMONISED AND NATIONAL MONETARY STATISTICS

**M3 is fully harmonised with EU standards and its definition better reflects the transaction motive of holding money than national M2**

	Harmonised monetary statistics <sup>a)</sup>	National monetary statistics <sup>b)</sup>
M1	Currency + Overnight deposits	Currency + Overnight deposits
M2	M1 + deposits with agreed maturity up to 2 years + deposits redeemable at notice of up to 3 months	M1 + deposits with agreed maturity + deposits redeemable at notice (all maturities)
M3	M2 + repurchase agreements + money market fund shares + debt securities up to 2 years (issued by MFIs)	Not defined

a) not including central government deposits

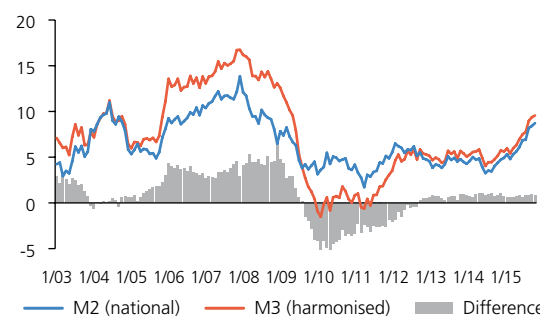
b) not including deposits of general government (i.e. central government, local governments, social insurance funds and health insurance funds)

CHART 1 (BOX)

### M2 AND M3

**The rates of growth of national M2 and harmonised M3 are essentially the same at the moment**

(annual percentage rates of growth; differences in percentage points)

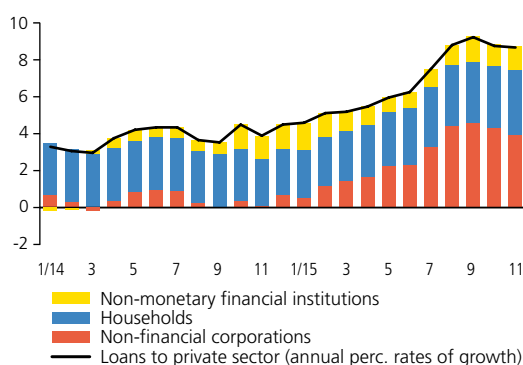


<sup>42</sup> By contrast, residents' investment in foreign securities was lower than in the previous period. Credit to central government and long-term financial liabilities of MFIs decreased in year-on-year terms.

CHART III.5.4

## LOANS TO THE PRIVATE SECTOR

The high growth in loans to the private sector slowed slightly as a result of lower growth in corporate loans  
(contributions in percentage points; annual percentage rates of growth)



up to two years increased in the pre-crisis years and decreased in 2010–2011. In recent years, however, the growth rates of the two aggregates have converged. In November 2015, harmonised M3 rose at an annual rate of 9.6%, as compared to 8.2% for national M2.

## III.5.2 Credit

In 2015 Q4, growth in **loans to the private sector** remained close to its highest level since 2009 in an environment of strong economic growth and easy credit and monetary conditions. Following a previous surge, it slowed slightly to 8.7%, reflecting lower growth in corporate loans (see Chart III.5.4).

According to the bank lending survey, banks further eased their **credit standards** for loans to non-financial corporations and consumer credit in 2015 Q4. The easing of standards was fostered by competition and favourable risk perceptions, which brought about a decline in banks' interest margins. Banks left their credit standards for house purchase loans essentially unchanged for a second consecutive quarter. A small section of the banking market increased average interest margins in the terms and conditions for approving loans for house purchase compared to the previous period.

Annual growth in **loans to non-financial corporations** slowed to around 10% (see Chart III.5.5). The growth was again driven mainly by loans with longer maturities. These investment loans continued to grow at a robust pace, reflecting growth in business investment. Loans to most sectors increased. Growth in investment loans to manufacturing and real estate activities went up in 2015 Q4, while credit growth slowed in most other sectors (see Chart III.5.6). In the manufacturing sector, loans continued to rise in the manufacture of machinery and equipment, basic metals and fabricated metal products, food products and beverages. Growth in koruna loans slowed, while growth in foreign currency loans increased, mainly due to growth in loans to developers. Growth in new corporate loans rose again in November 2015 following a previous decrease (see Chart III.5.7). According to the bank lending survey, demand for financing of fixed investment, mergers and acquisitions, corporate and debt restructuring and inventories and working capital increased in 2015 Q4. Banks expect there to be growth in corporate demand for loans at the start of 2016 as well. The non-performing loan ratio fluctuated close to reduced levels in November 2015 (5.6%).

CHART III.5.5

## LOANS TO NON-FINANCIAL CORPORATIONS

Growth in corporate loans slowed, but remains high as a result of strong growth in long-term investment loans  
(annual percentage rates of growth)

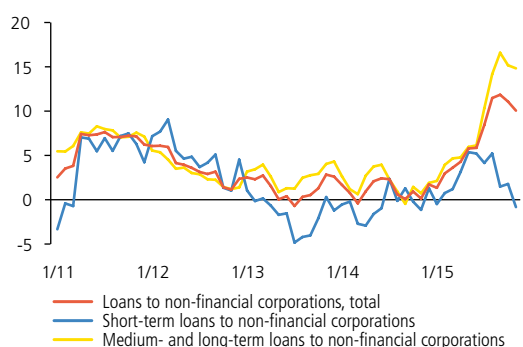
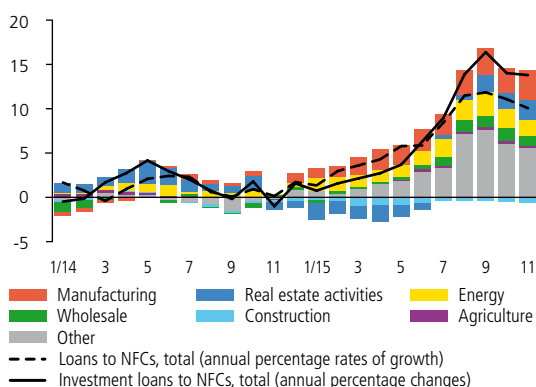


CHART III.5.6

## INVESTMENT LOANS TO NON-FINANCIAL CORPORATIONS

Growth in investment loans went up further in the case of manufacturing and real estate activities, but slowed in most other sectors  
(contributions in percentage points; annual percentage rates of growth; annual percentage changes)



Loans continued to represent the important source of **external financing** of corporations in 2015 Q3. Corporations primarily used loans drawn in the Czech Republic. Loans from abroad declined (by around 10%) and, unlike in the past, corporate financing through bond issues also decreased (by around 7%), with quoted shares following a similar trend. Corporations also obtained external funds

from domestic non-banks, which rose by around 11%. This mainly involved financial leasing. According to financial accounts data, the total debt of non-financial corporations edged up to 57% of GDP in 2015 Q3, following previous decreases (with loans and bonds accounting for 48% and 9% respectively).

The annual growth rate of **loans to households** rose further, reaching almost 7% in November 2015 (see Chart III.5.8). Growth in new loans to households increased to around 32%, the highest level recorded last year. The increase in the loan stock mainly reflected accelerating growth in **loans for house purchase** (of around 8%). Transaction prices of apartments increased, recording year-on-year growth of almost 6% in Prague (see section III.5.7). In 2015 Q4, banks perceived relatively broad-based growth in demand supported by low interest rates, good prospects for the residential property market, improved consumer confidence and a recovery in the labour market. Annual growth in total new loans for house purchase increased in November (see Chart III.5.9).<sup>43</sup> Their faster growth was largely due to new loans. Growth in renegotiation and refinancing of existing loans also edged up, among other things due to increased activity of some smaller banks in this area. Amid low interest rates, last year's monthly volumes of new mortgage loans were the highest in 11 years (see Chart III.5.10). Fincentrum Hypoindex states for December 2015 that the volumes and numbers of new mortgage loans continued to rise at double-digit rates at the end of the year, even though their year-on-year growth fell slightly. According to the bank lending survey, banks expect stable demand in 2016 Q1 amid unchanged credit standards.

The annual growth rate of **consumer credit** rose to almost 3% at the end of 2015 (see Chart III.5.8). Growth in new loans also picked up. According to a survey among banks, household demand for consumer credit rose on the back of improved consumer confidence and increased financing of spending on durable goods. This indicates a slight recovery in households' interest in credit financing of consumption. Banks further eased their credit standards across the board at the end of 2015. They expect there to be growth in demand and a further easing of their credit standards in this segment at the start of this year as well. Conversely, credit from non-banks decreased year on year in 2015 Q3.

**Total household debt** increased further to around 66% of annual aggregate disposable income in 2015 Q3. This reflected higher growth in households' financial liabilities than their aggregate annual gross disposable income. The net interest burden on Czech households (comprising interest expenses and income on bank loans and deposits) decreased.

43 Total new house purchase loans comprise new loans, existing loans refinanced with other banks and other renegotiated loans.

CHART III.5.7

#### NEW LOANS TO NON-FINANCIAL CORPORATIONS

**Growth in new corporate loans rose again in November 2015 following a previous decrease**

(annual percentage changes; interest rate in %)

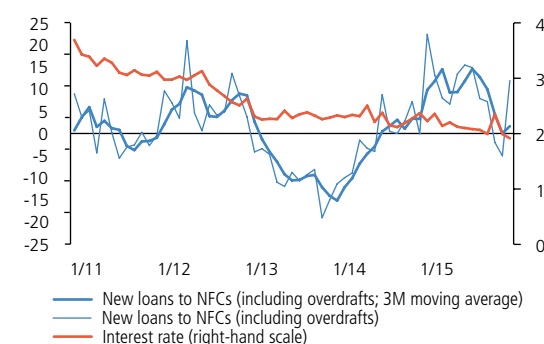


CHART III.5.8

#### LOANS TO HOUSEHOLDS

**Growth in loans to households rose further as a result of accelerating growth in loans for house purchase and a recovery in consumer credit**

(annual percentage rates of growth)

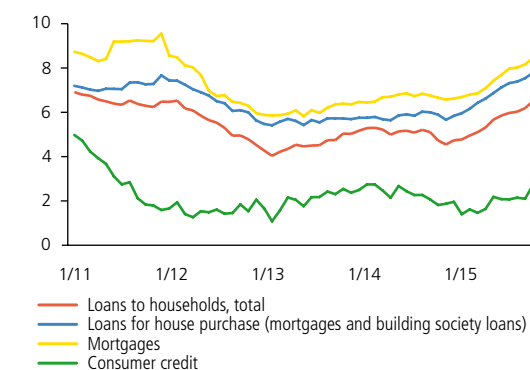


CHART III.5.9

#### NEW LOANS FOR HOUSE PURCHASE

**Growth in total new loans for house purchase increased**

(annual percentage changes, interest rate in %)

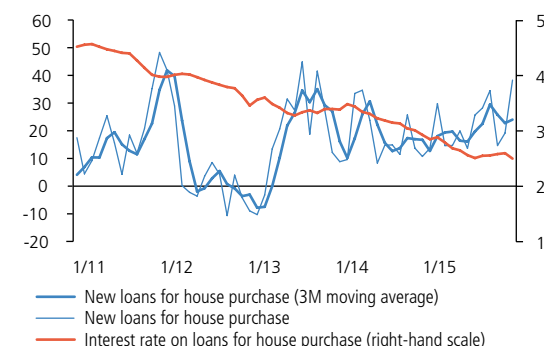


CHART III.5.10

## NEW MORTGAGES

Volumes of new mortgages are at an 11-year high so far in 2015 in an environment of record-low interest rates

(horizontal axis – volumes of new mortgages in CZK billions; vertical axis – interest rates on new mortgages in %)

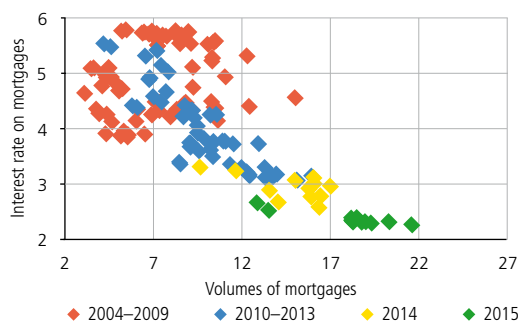
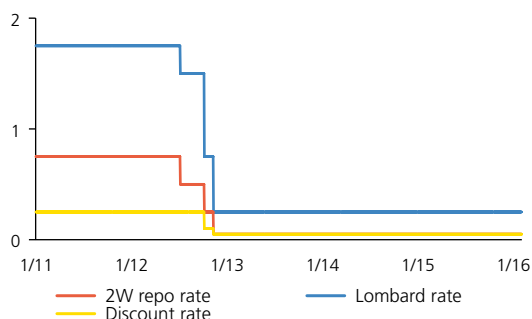


CHART III.5.11

## CNB KEY RATES

The CNB left its key interest rates at technical zero in 2015 Q4 (percentages)



## III.5.3 Interest rates

*Monetary policy interest rates*

The **monetary policy decision-making** of the CNB Bank Board in 2015 Q4 was based on the macroeconomic forecast published in the previous Inflation Report. The forecast assumed that market interest rates would be flat at a very low level and the exchange rate would be used as a monetary policy instrument until the end of 2016. Consistent with the forecast was an increase in interest rates amid gradual appreciation of the koruna in 2017.

**At its November meeting**, the Bank Board decided unanimously to keep **key interest rates** unchanged at their current level, i.e. at technical zero<sup>44</sup> (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. The risks to the previous forecast at the monetary policy horizon were assessed as being balanced. The likelihood that it would be necessary to discontinue the exchange rate commitment earlier than assumed in the forecast was decreasing over time. In this situation, the Bank Board discussed extending the duration of the exchange rate commitment. It agreed that its discontinuation would probably shift to around the end of 2016.

At its **meeting in December**, the Bank Board again decided unanimously to leave key interest rates unchanged. At the same time, it confirmed the above exchange rate commitment. The balance of risks to the previous inflation forecast at the monetary policy horizon was assessed as being broadly balanced. The Bank Board's previous repeated statements that the CNB would not discontinue the use of the exchange rate as a monetary policy instrument before the second half of 2016 remained valid. At the same time, the Bank Board stated again that the likely timing of the discontinuation of the exchange rate commitment was around the end of 2016.

At its monetary policy meeting on 4 February 2016, 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. A need to maintain expansionary monetary conditions at least to the current extent persists. The Bank Board assessed the risks to the forecast at the monetary policy horizon as being broadly balanced. The evolution of oil prices, which have recently seen

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

marked fluctuations, is a significant source of uncertainty in both directions. The Bank Board states that the Czech National Bank will not discontinue the use of the exchange rate as a monetary policy instrument before 2017. The Bank Board considers it likely that the commitment will be discontinued in the first half of next year.

### Financial market interest rates

**PRIBOR rates** remained at historical lows at all maturities in 2015 Q4 (see Chart III.5.12). They thus reflected the setting of the CNB's key interest rates at technical zero. The average 3M PRIBOR remained stable at 0.3% in line with the assumption of the previous forecast. The money market premium, as measured by the spread between the 3M PRIBOR and the 2W repo rate, remained at just below 0.3 percentage point.

**FRA derivative rates** briefly dipped by as much as 0.15 percentage point in early December. This meant a shift close to zero at longer maturities (FRA 6\*9, FRA 9\*12). The drop was due to speculation about the possible introduction of negative monetary policy rates by the CNB if the ECB were to cut its deposit rate further below zero. However, this expectation did not materialise and domestic FRA rates (along with euro FRA rates) corrected back to their initial levels after the ECB's meeting on 3 December 2015. FRA rates have remained unchanged overall since early October. The market outlook for 3M rates according to end-January FRA quotations thus implies a minor decrease in the 3M PRIBOR at the one-year horizon. This is broadly in line with expectations of stable monetary policy interest rates at least until the same date and a negligible decline in the money market premium. The expected market rates are thus slightly below the interest rate path expected in the new CNB forecast over the entire horizon (see section II).

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 (due to opposite monetary policy developments in these economies) amid interest rate stability in the Czech Republic. The differentials vis-à-vis euro rates increased marginally, while those vis-à-vis the dollar became more negative (see Chart III.5.13). The 3M PRIBOR-3M EURIBOR differential was 0.4 percentage point on average in 2015 Q4 and was at the same level at the end of January.

Domestic **interest rates with longer maturities** moved in line with foreign rates. They dropped at first, responding mainly to the expected extension of the ECB's asset purchase programme and the reduction of the deposit rate to a more negative level. However, the market assessed the measures announced by the ECB at the start of December as disappointing and interest rates went up again. A turnaround towards lower rates occurred in early January, when financial markets saw a global sell-off of risky assets. This was a response to published data confirming an economic slowdown in China. The global market response also included a depreciation of the renminbi, a stock market

CHART III.5.12

### MARKET INTEREST RATES

Money market interest rates stayed at historical lows, while rates with longer maturities were volatile but ultimately almost unchanged compared to the start of October (percentages)

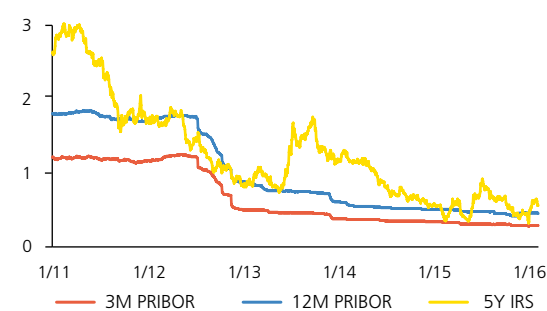


CHART III.5.13

### INTEREST RATE DIFFERENTIALS

Interest rate differentials vis-à-vis the euro increased marginally, while those vis-à-vis the dollar became more negative (percentage points)

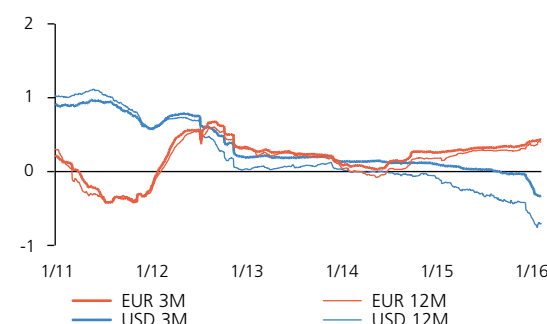




CHART III.5.14

## GOVERNMENT BOND YIELD CURVE

The government bond yield curve was negative at shorter maturities (percentages)

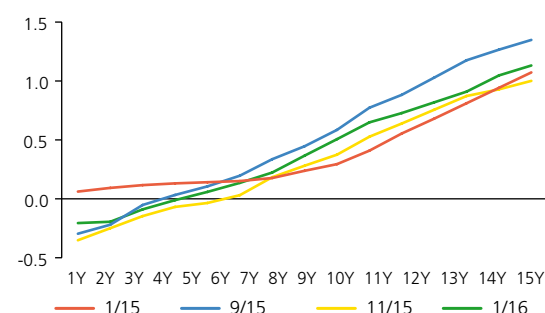


CHART III.5.15

## CLIENT INTEREST RATES IN THE CZECH REPUBLIC AND THE EURO AREA

Interest rates on loans to non-financial corporations and loans to households for house purchase edged down again in the Czech Republic, while those in the euro area stabilised at low levels (cost of borrowing indicators; new business; percentages)

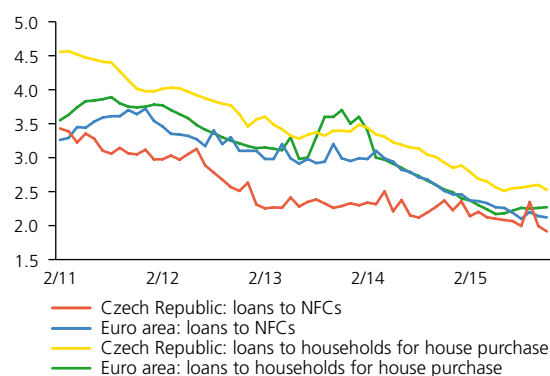
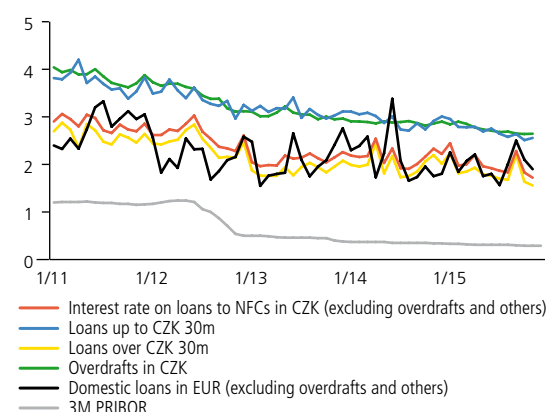


CHART III.5.16

## INTEREST RATES ON LOANS TO CORPORATIONS

Interest rates on domestic koruna and euro loans to corporations fell slightly (new business; percentages)



crash and a further decline in oil prices below USD 30 a barrel. Turning to domestic factors, IRS rates and bond yields (especially at shorter maturities) continued to be affected by high koruna liquidity in the banking sector due to foreign exchange interventions and the conversion of euros from EU funds by general government via the CNB. As a result, domestic IRS rates changed only negligibly compared to the start of October (see Chart III.5.12). The situation was similar for government bond yields in the secondary market. The government bond yield curve thus remained at negative levels at its shorter end (see Chart III.5.14).

Nine auctions of fixed coupon bonds and one auction of variable coupon bonds were held on the primary **government bond market** in 2015 Q4. The total volume of bonds issued was CZK 58 billion.<sup>45</sup> Demand exceeded supply in almost all the auctions; the average bid-to-cover ratio was 1.5. Another nine auctions totalling CZK 51 billion were held in January 2016.<sup>46</sup> The Ministry of Finance, evidently wanting to take advantage of favourable market conditions, sold bonds at shorter maturities with a negative yield. Negative average yields of as much as -0.35% were achieved for bonds with residual maturities of between two and five years. Demand from foreign investors remained high in the auctions; they accounted for almost half of the take-up of domestic government bonds. The share of non-residents in total holdings of medium- and long-term government bonds thus increased to around 20% at the end of 2015.<sup>47</sup>

**Client interest rates**

**Client interest rates** on new loans in nominal terms stood close to record-low levels in 2015 Q4. The rates dropped again slightly in November (see Chart III.5.15), mainly reflecting strong competition and favourable risk perceptions. At the same time, the ten-year government bond yield fell slightly and stayed at 0.5% in December. Two-year and five-year bond yields turned more negative. Rates on corporate loans and loans to households for house purchase have fallen by 0.3 percentage point since the start of 2015. Deposit rates stayed at 0.6% on average in nominal terms. Following a previous decline, rates on new loans in the euro area stabilised, remaining lower than in the Czech Republic, especially in the case of loans to households.<sup>48</sup>

The **interest rate on loans to non-financial corporations** edged down further, fluctuating just below 2% in nominal terms (see Chart III.5.16). The one-off swing observed for large loans of over CZK 30 million in September was therefore reversed. Rates with longer fixations have been showing

<sup>45</sup> The total volume of bonds issued in 2015 reached CZK 180.4 billion, the upper limit envisaged by the Czech Republic's Funding and Debt Management Strategy for 2015.

<sup>46</sup> The strategy for this year foresees issues of medium- and long-term government bonds amounting to at least CZK 150 billion.

<sup>47</sup> The share of non-residents in total holdings of medium- and long-term government bonds has stood at around 14% on average in recent years.

<sup>48</sup> The interest rate on loans for house purchase includes the rate on building society loans in addition to the rate on mortgage loans and corresponds methodologically to total costs as expressed by the cost-of-borrowing indicator.



the largest decreases in the long run, but short-term rates have also been declining recently. The share of new loans with longer rate fixations stabilised at 23%, although new loans with rates fixed for up to one year still accounted for the largest share. The rate on small loans was 2.6%, while that on large loans dropped slightly to 1.6%. The spread between these rates is close to the long-term average. The rate on new domestic euro-denominated loans (1.9%) is similar to that on koruna loans.

The **interest rate on loans to households for house purchase** declined slightly again, to 2.5% (2.3% for mortgages). The rate on loans with short rate fixations edged down. The rate on loans with rates fixed for over one year and up to five years, which account for 65% of all new loans for house purchase, remained at 2.4%, the lowest of all the fixation periods (see Chart III.5.17). The share of new loans for house purchase with rates fixed for over five years has recently stabilised at almost one-third. The rate on loans for house purchase reflected strong competition between banks and the price of bank funding sources. The spread between short-term client and market rates stood at the lowest levels seen in the last few years. According to Fincentrum Hypoindex, the mortgage rate decreased somewhat further in December 2015.

The **interest rate on consumer credit** continued to fall sharply, following the trend observed since the start of 2015 (see Chart III.5.17). It has been benefiting from increased competition among banks and non-banks and by more favourable risk perceptions regarding the economic situation and the creditworthiness of clients.<sup>49</sup>

**Real client interest rates**<sup>50</sup> went down slightly amid a slight rise in expected inflation and a modest decrease in nominal rates. Real rates on new loans averaged 0.7% in November (see Chart III.5.18). The real interest rate on corporate loans was close to zero, while that on house purchase loans for households was 0.8%. Real rates on time deposits remained negative close to -1%.

### III.5.4 The exchange rate

The average **exchange rate of the koruna against the euro** was CZK 27.05 in 2015 Q4 (see Chart III.5.19). This represents a year-on-year appreciation of the koruna of 2.1%. The exchange rate strengthened only marginally in quarter-on-quarter terms (by 0.1%). The koruna fluctuated within a narrow range around CZK 27.1 to the euro during October and remained just above the exchange rate commitment of CZK 27 to the euro for the rest of the quarter. It stayed at this level during January 2016.

49 However, the rate on consumer credit in the Czech Republic remains above that in the euro area, where it stands at around 6%.

50 Ex ante real interest rates: nominal interest rates are deflated by the consumer price inflation expected by financial market analysts at the one-year horizon.

CHART III.5.17

#### INTEREST RATES ON LOANS TO HOUSEHOLDS

**Interest rates on loans to households for house purchase and for consumption fell slightly again in 2015 Q4**  
(new business; percentages)

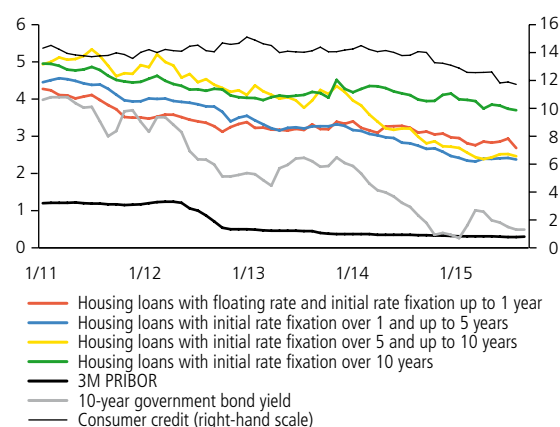


CHART III.5.18

#### EX ANTE REAL RATES

**Ex ante real interest rates on new loans went down slightly**  
(percentages)

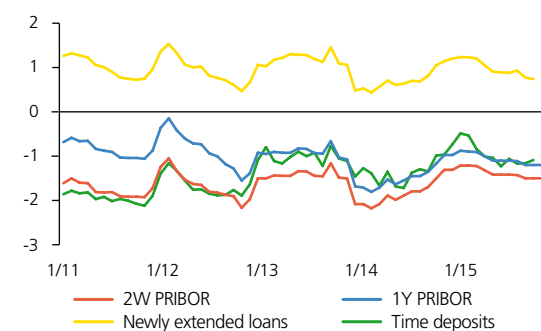


CHART III.5.19

#### CZK/EUR AND CZK/USD EXCHANGE RATES

**The koruna stabilised against the euro slightly above the exchange rate commitment level in 2015 Q4**

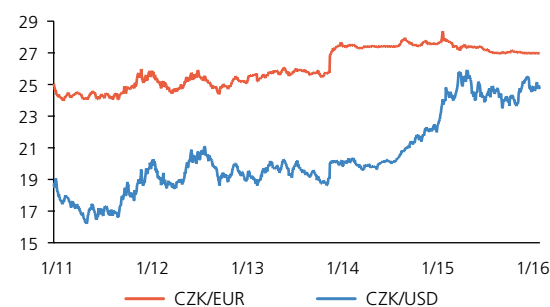


CHART III.5.20

## KEY FINANCIAL INDICATORS

**Growth in the main financial indicators of non-financial corporations slowed in 2015 Q3**  
(annual percentage changes)

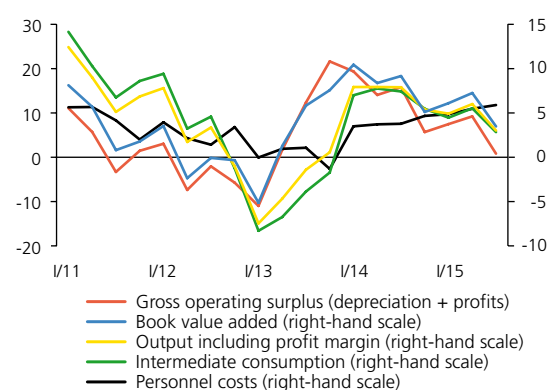


TABLE III.5.1

## PERFORMANCE INDICATORS OF NON-FINANCIAL CORPORATIONS

**The material cost-output ratio fell further, while the personnel cost-output rose for the first time in a long time**

	2014 Q3 CZK billions	2015 Q3 CZK billions	Annual percentage changes
Sales	1,950.1	2,017.0	3.4
Output including profit margin	1,471.2	1,515.5	3.0
Intermediate consumption	1,066.0	1,096.2	2.8
Book value added	405.2	419.3	3.5
Personnel costs	212.7	225.3	5.9
Gross operating surplus	192.4	194.0	0.8
	%	%	Annual changes in pp
Material cost-output ratio	72.5	72.3	-0.2
Ratio of book value added to output	27.5	27.7	0.2
Personnel cost-output ratio	14.5	14.9	0.4
Ratio of personnel costs to value added	52.5	53.7	1.2
Ratio of gross operating surplus to value added	47.4	46.3	-1.2

The **confirmation of the credibility of the CNB's exchange rate commitment** using foreign exchange interventions and monetary policy communication in 2015 Q3 reduced the pressure from the financial markets to break through the level of CZK 27 to the euro in October. The koruna thus fluctuated around CZK 27.1 to the euro with no need for the CNB to intervene. In early November, however, the ECB's announcement that the euro area monetary conditions would require further easing put renewed appreciation pressure on the koruna and led to renewed interventions by the CNB to defend its exchange rate commitment.

The average **exchange rate of the koruna against the dollar** was CZK 24.7 in 2015 Q4. This represents a year-on-year depreciation of 11.8% and a quarter-on-quarter depreciation of 1.5%. The koruna-dollar exchange rate during 2015 Q4 was affected predominantly by financial market expectations of changes in the monetary policies of the ECB and the Fed, and subsequently by the degree to which those expectations materialised. This gave rise to sizeable short-term fluctuations between CZK 23.5 and CZK 25.5 to the dollar, but the longer-term tendency of gradual appreciation of the dollar remained visible. Shortly after mid-January the koruna was fluctuating around CZK 24.8 to the dollar.

In 2015 Q4, the situation on **world financial markets** calmed significantly overall following sharp exchange rate fluctuations in the previous quarter. However, the gradual appreciation trend of the dollar continued and, conversely, the Russian rouble started to depreciate significantly. Some currencies (most notably the Australian dollar and the New Zealand dollar) succeeded in reversing their previous weakening. Substantial appreciation of the US dollar, the Japanese yen and the Swiss franc is apparent from the whole-year perspective (a strengthening of more than 10% against the currencies of EU countries except the British pound). Some currencies of major emerging economies weakened much more sharply against these currencies than the euro did (for example, the Russian, Turkish and South African currencies lost between 20% and 30%, while the Brazilian real shed roughly one-third of its value).

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

The **financial results** of non-financial corporations with 50 employees or more<sup>51</sup> recorded slower annual growth (see Chart III.5.20). Compared to the previous quarter, growth in gross operating surplus saw a sharp year-on-year slowdown (from 9.2% to 0.8%) due to slower growth in sales and output amid continuing acceleration of personnel costs (see Table III.5.1).

<sup>51</sup> The segment of corporations with 50 employees or more consisted of more than 9,000 non-financial corporations at the end of 2015 Q3.

The **material cost-output ratio**<sup>52</sup> fell slightly year on year, although less so than in the previous two quarters. Its decline was due to a year-long drop in prices of imported inputs, in particular energy and non-energy commodities. By contrast, the **personnel cost-output ratio**<sup>53</sup> started rising after a prolonged period of decline. This was due to slower growth in output and accelerating average wages coupled with unchanged growth in the number of persons employed in the monitored corporations (see Table III.5.1).

**From the sectoral perspective**, the weaker financial results in 2015 Q3 were mainly due to manufacturing, which recorded a moderation of output growth and a year-on-year decline in operating profit after a long period of growth (see Chart III.5.21). Operating profit continued to decrease in the electricity, gas and water supply industry.

Data for the narrower **segment of large corporations** (with 250 employees or more)<sup>54</sup> indicate similar trends in the main financial indicators in 2015 Q3 as in the larger segment of corporations. Annual output growth decreased for large corporations as well (from 7.5% to 4.5%). In the case of gross operating surplus, a year-on-year drop of 1.3% could even be observed, whereas in Q2 the gross operating surplus of large corporations had increased by 8.9%. The drop in gross operating surplus was caused in part by stronger growth in personnel costs (compared to the broader segment of corporations), which in this case was due not only to a rising average wage, but also to an increase in the number of persons employed. In contrast to the broader category of corporations, a rise in the material cost-output ratio also played a role.

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

Annual growth in the **financial liabilities of non-financial corporations** resumed in 2015 Q3 following a short interruption, but reached only 0.6% (see Chart III.5.22). The contribution of loans and shares and other equity excluding quoted shares to this increase was positive. By contrast, debt securities, quoted shares and other accounts payable recorded negative contributions. Annual growth in the **financial assets of non-financial corporations** rose to 3.8% in Q3. This was primarily due to currency and deposits, shares and loans. On the other hand, other accounts receivable and securities declined year on year. The overall negative net financial position of corporations has thus been decreasing continuously since 2013 Q4.

52 The material cost-output ratio is defined as the ratio of intermediate consumption to output.

53 The personnel cost-output ratio is defined as the ratio of personnel costs to output.

54 The segment of corporations with 250 employees or more consisted of more than 1,700 non-financial corporations at the end of 2015 Q3.

CHART III.5.21

#### OPERATING PROFIT BY SECTOR

The sharp fall in growth in operating profit was due to manufacturing, whose contribution was negative for the first time in eight quarters

(annual percentage changes; contributions in percentage points)

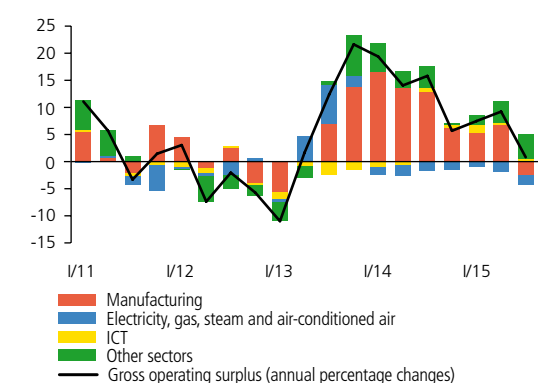


CHART III.5.22

#### FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

Loans and shares and other equity excluding quoted shares contributed to the renewed growth in corporate financial liabilities in 2015 Q3

(annual percentage changes; contributions in percentage points)

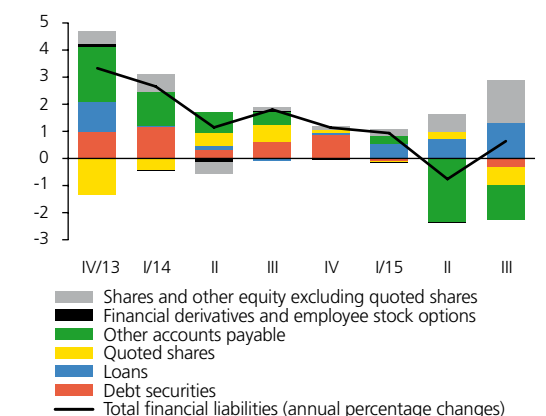
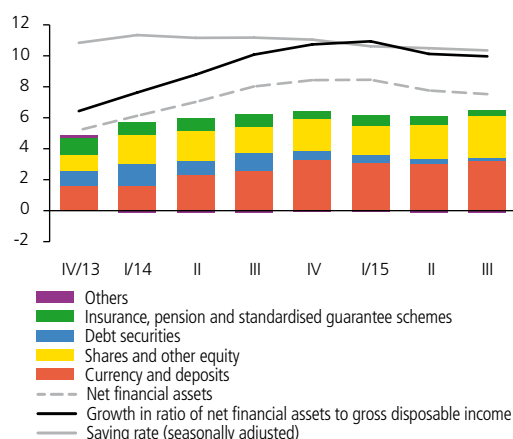


CHART III.5.23

## STRUCTURE OF HOUSEHOLD FINANCIAL ASSETS

**Growth in the net financial assets of households slowed slightly, owing to faster growth in their financial liabilities**

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



The main **trends in the balance sheets** of non-financial corporations are reflected in their financial indicators. The acid-test ratio of corporations<sup>55</sup> has been rising continuously since 2013, reaching 237% in 2015 Q3. Corporate solvency<sup>56</sup> edged up to 119%, while the market-based financing ratio<sup>57</sup> declined to 9.4% in both year-on-year and quarter-on-quarter terms, mainly because of stagnant issuing activity.

Annual growth in the **net financial assets of households** slowed slightly to 7.5% in 2015 Q3, owing to faster growth in their financial liabilities. The year-on-year increase in net financial assets accounted for 10% of the annual gross disposable income of households; this strong growth has been going on since 2014 Q3 (see Chart III.5.23). Growth in gross financial assets went up slightly to 6.4%. This was mainly due to currency, deposits and shares and other equity. The growth in shares and other equity was due primarily to investment in investment fund shares and units. Their increasing popularity was also indirectly boosted by the termination of issuance of government saving bonds. Annual growth in the **financial liabilities of households** increased by 1.7 percentage points to 4% compared to the previous quarter as a result of buoyant growth in long-term loans.

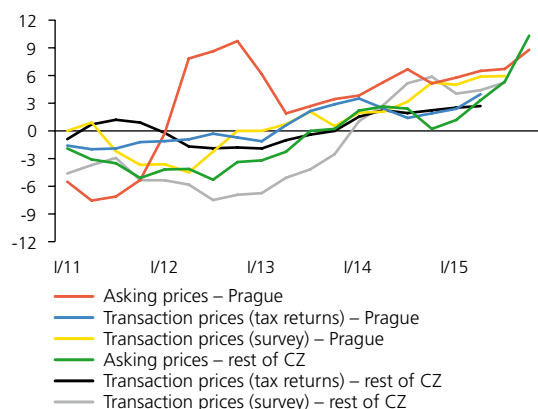
## III.5.7 The property market

CHART III.5.24

## TRANSACTION AND ASKING PRICES OF APARTMENTS

**Growth in prices in Prague and the rest of the Czech Republic equalised and accelerated in 2015**

(annual percentage changes)



According to CZSO data, the rate of growth of **asking prices of apartments** increased further in 2015 Q4 (see Chart III.5.24). In Prague, it accelerated to 8.8% year on year. In the rest of the Czech Republic, where prices had previously been rising more moderately, it reached 10.3% year on year.

Growth in **transaction prices of apartments** also picked up pace (see Chart III.5.24). According to CZSO survey estimates available for 2015 Q3, growth in prices of older apartments rose slightly to 5.9% in Prague and 5.3% in the rest of the Czech Republic. Robust growth is confirmed by CZSO estimates from tax returns, which are considered to be the most representative source of data on transaction prices. In 2015 Q2, they recorded growth of 4% in Prague and 2.7% in the rest of the Czech Republic.<sup>58</sup> Newly available estimates of transaction prices from these sources confirm that the cumulative increase in these prices from the cyclical trough has been moderate so far. The differences between growth in transaction and asking prices discussed in detail in Inflation Report IV/2015 thus persist.

<sup>55</sup> A ratio with currency in circulation, transferable deposits, short-term debt securities and short-term loans provided as the numerator and short-term debt securities issued and short-term loans accepted as the denominator.

<sup>56</sup> The ratio of total financial assets to liabilities excluding shares and other equity.

<sup>57</sup> The ratio of the sum of bonds and quoted shares issued to total liabilities.

<sup>58</sup> The data update included upward revisions of earlier estimates of these prices, in particular during 2014 outside Prague.

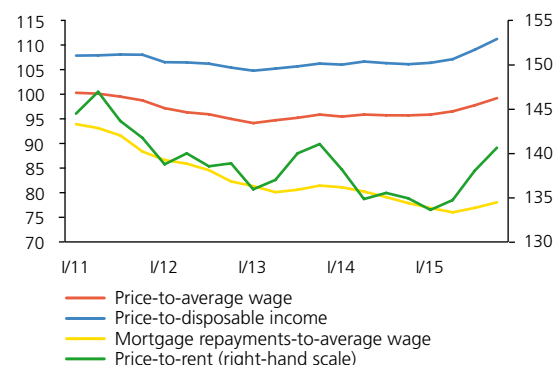
According to estimates, the growth in apartment prices in 2015 Q4 was reflected in a deterioration of the **indicators of housing affordability and apartment purchase profitability** (see Chart III.5.25). The estimates point to growth in the price-to-average wage ratio and the price-to-disposable income ratio<sup>59</sup> of 3.7% and 4.8% year on year respectively. According to IRI data, the price-to-rent ratio also increased (by 4.2% year on year). The mortgage repayments-to-average wage ratio<sup>60</sup> was unchanged year on year.

CHART III.5.25

## APARTMENT PRICE SUSTAINABILITY INDICATORS

**The affordability and profitability of buying an apartment deteriorated slightly during 2015**

(average for 2000–2007 = 100<sup>a)</sup>; source: CZSO, CNB, Institute for Regional Information)



a) For the mortgage repayments-to-average wage ratio 2004–2007 = 100 due to limited availability of data on interest rates on new loans for house purchase.

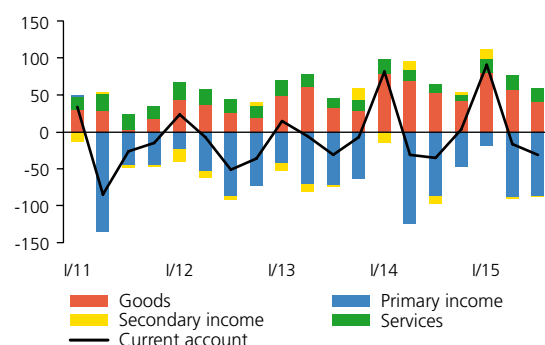
<sup>59</sup> To calculate these indicators, apartment prices are approximated by tax return and survey-based transaction prices and by asking prices, depending on availability.

<sup>60</sup> A mortgage with fixed parameters of an LTV of 65% and a maturity of 20 years was considered in the calculation of this indicator. The data available for the first two months of the quarter were taken as the interest rates on new loans for house purchase in 2015 Q4.

CHART III.6.1

## CURRENT ACCOUNT

The current account deficit reflected the primary income deficit, but declined year on year in 2015 Q3  
(CZK billions)



## III.6 THE BALANCE OF PAYMENTS

The balance of payments in 2015 Q3 was characterised by a high primary income deficit, linked mainly with direct investment income in the form of dividends paid to non-residents. However, roughly two-thirds of its effect on the current account was offset by a goods and services surplus, which nevertheless narrowed slightly year on year owing to the goods balance. The largest financial account item was a sizeable rise in reserve assets. It was the counterpart of a net inflow of other investment, linked with a change in the position of the banking sector vis-à-vis non-residents, and of portfolio investment.

## III.6.1 The current account

As in the previous quarter, the **current account** recorded a deficit in 2015 Q3, this time of CZK 29.3 billion. However, this represented a year-on-year decrease of CZK 4 billion due to favourable developments in secondary income and services (see Chart III.6.1). The ratio of the annual moving current account balance to GDP reached 1.2%, rising slightly compared to the previous quarter.

The **goods** surplus declined for the second consecutive quarter in 2015 Q3 (by CZK 12 billion to CZK 39.4 billion). The fall in the goods surplus was associated mainly with developments in real terms, whereas the effect of price developments was only marginal. Annual growth in nominal trade turnover slowed compared to the previous quarter (by more than 2 percentage points to 5.5%). A growing shortfall in exports to Russia (of more than CZK 10 billion) and appreciation of the koruna against the euro caused annual nominal export growth to slow to 4.5% despite a further modest increase in euro area demand. Nominal growth in goods imports also moderated visibly (to 6.6%), mainly because of a deeper drop in oil and gas prices and generally only modest growth in imports for intermediate consumption connected with the slowdown in exports. However, these factors were partly offset by continued rapid growth in total domestic demand and a weakening of the koruna against the dollar. Turning to the commodity structure, a moderation of the surplus on machinery and transport equipment was the biggest contributor to the year-on-year decline in the overall trade surplus (see Chart III.6.2). The year-on-year goods surplus continued to follow a downward trend during 2015 Q4, falling by a further CZK 5 billion in October–November.

The goods and services surplus was also due to a CZK 19.9 billion surplus on **services** (see Chart III.6.3), which increased further in year-on-year terms, specifically by almost CZK 8 billion in Q3. As in the first half of the year, all four component balances contributed to the surplus. Manufacturing and repair services in the processing category recorded the largest surplus (CZK 7.9 billion). However, the annual growth in the overall surplus was mostly due to other services, which switched from deficit to slight surplus on account of higher credits and lower debits.

CHART III.6.2

## EXTERNAL GOODS TRADE BY SITC

The year-on-year decrease in the mineral fuels deficit was outweighed by a decline in the surplus on machinery and a widening of the deficit on chemicals in 2015 Q3  
(Q3 of relevant year in CZK billions; national concept)

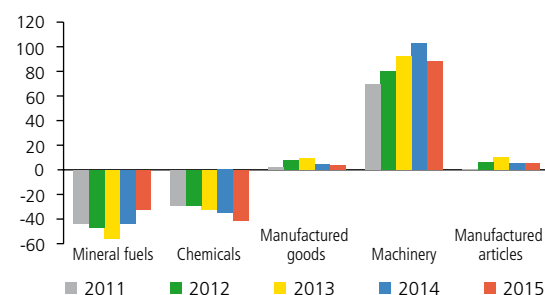
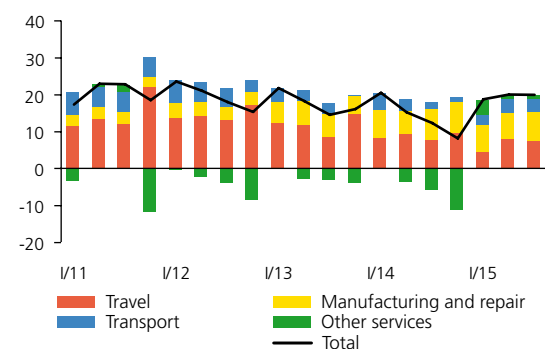


CHART III.6.3

## SERVICES

All four sub-balances again contributed to the services surplus in 2015 Q3  
(CZK billions)



In contrast to the goods and services surplus, **primary income** ended in a large deficit of CZK 86.6 billion, almost unchanged compared to a year earlier. The largest component of the overall balance was again an investment income deficit of CZK 98.3 billion (see Chart III.6.4). This deficit was due almost solely to a direct investment income deficit related above all to income in the form of dividends paid to non-residents. Portfolio investment income also recorded a slight deficit associated with dividends on shares and interest on bonds paid to non-residents. By contrast, surpluses on compensation of employees and on other primary income, including part of the net income from the EU budget, were the biggest contributors to the moderation of the overall primary income deficit.

**Secondary income** recorded a modest deficit (CZK 2 billion), which narrowed by more than CZK 8 billion year on year. Its main component was net income on current international cooperation, which exceeded CZK 7 billion. As in the previous quarter, however, it was outweighed by deficits on the other components, above all VAT- and GNI-based payments to the EU budget. Net drawdown of funds from the EU budget recorded under secondary income totalled CZK 4 billion, up by more than CZK 8 billion year on year amid a switch from deficit to surplus. The year-on-year decrease in the secondary income deficit was therefore linked mainly with higher income from the EU budget.

### III.6.2 The capital account

Following high surpluses in 2015 H1, the **capital account** surplus narrowed to CZK 7.9 billion in Q3. Drawdown of funds from the EU budget (CZK 7 billion) was again the largest component of the capital account and the main contributor to the annual growth in the overall surplus.

### III.6.3 The financial account

The **financial account** ended Q3 in moderate net borrowing from abroad (a net inflow) of CZK 2 billion. Rapid growth in reserve assets and a net outflow of direct investment were only slightly outweighed by a total net inflow of portfolio and other investment and by the balance on settlement of financial derivatives (see Chart III.6.5).

Following one and a half years of net inflow, **direct investment** recorded net lending abroad (a net outflow) of CZK 14 billion in 2015 Q3 (see Chart III.6.6). It was characterised in this quarter by relatively strong growth in Czech investment abroad (over CZK 37 billion), related mainly to lending in debt instruments. Outflows recorded for shares and other equity and reinvestment of earnings also contributed, albeit to a much smaller extent. The inflow of foreign investment into the Czech Republic was due most of all to reinvestment of earnings. It was also fostered by an inflow under shares and other equity, whereas repayments of accepted loans were dominant within debt

CHART III.6.4

#### PRIMARY INCOME

The primary income deficit was almost unchanged in both year-on-year and quarter-on-quarter terms in 2015 Q3 (CZK billions)

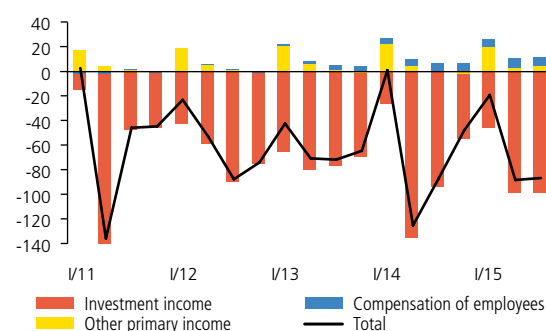


CHART III.6.5

#### FINANCIAL ACCOUNT

Growth in reserve assets was the largest item on the financial account in 2015 Q3 (CZK billions)

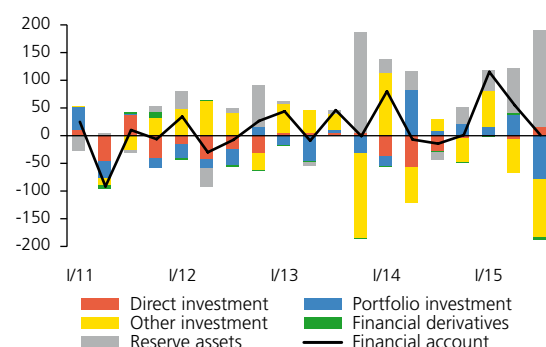


CHART III.6.6

#### DIRECT INVESTMENT

A net outflow of debt instruments was the sole contributor to the net outflow of direct investment in 2015 Q3 (CZK billions)

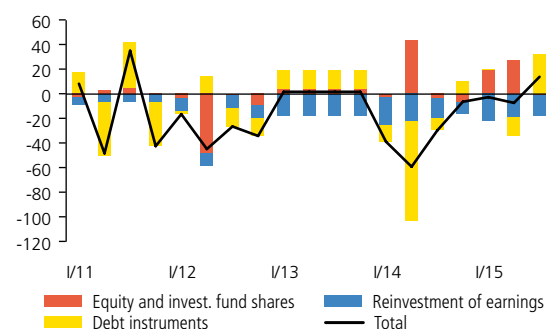
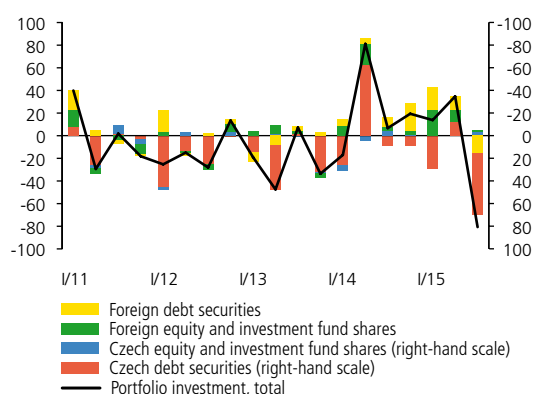




CHART III.6.7

## PORTFOLIO INVESTMENT

**Portfolio investment recorded a net inflow in 2015 Q3, primarily due to purchases of Czech bonds by non-residents**  
(CZK billions)



instruments. A year-on-year change in the direct investment balance (of almost CZK 44 billion) from a net inflow to a net outflow was related mainly to changes in credit relations.

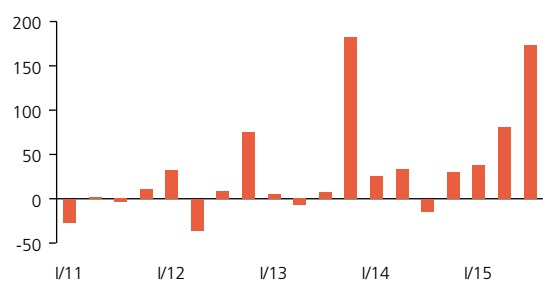
Following five quarters of net outflows, **portfolio investment** recorded net borrowing from abroad (a net inflow) of CZK 80.7 billion in Q3 (see Chart III.6.7). The biggest transactions were purchases of Czech koruna government bonds by non-residents linked with speculation on a future strengthening of the koruna. The year-on-year change in portfolio investment flows, exceeding CZK 87 billion, was also affected most strongly by purchases of domestic debt securities. Despite a modest decline in holdings of domestic equity and investment fund shares and units, purchases of Czech securities by foreign investors exceeded CZK 66 billion. By contrast, sales dominated trading in foreign securities by Czech investors. They were related exclusively to a decrease in holdings of foreign bonds, whereas in the case of equity and investment fund shares purchases slightly outweighed sales.

Settlement of **financial derivatives and employee stock options** also led to moderate net borrowing from abroad (a net inflow) totalling CZK 4.6 billion, up by almost CZK 4 billion on a year earlier.

CHART III.6.8

## RESERVE ASSETS

**Reserve assets increased again in 2015 Q3, due above all to the CNB's foreign exchange interventions**  
(changes in CZK billions)



**Other investment** recorded sizeable net borrowing from abroad (a net inflow) of CZK 104.1 billion. This was due solely to a net inflow of more than CZK 108 billion in the banking sector including the CNB. The inflow was associated chiefly with an increase in short-term deposits accepted from abroad, which to a large extent was the counterpart to the rise in the CNB's international reserves. The corporate sector saw a modest net outflow linked with growth in short-term deposits abroad. General government also recorded marginal net lending abroad. The marked year-on-year change in other investment flows (CZK 125 billion) was due chiefly to a change in the short-term position of the banking sector.

As in the previous three quarters, **reserve assets** increased in 2015 Q3. Their growth reached CZK 173.4 billion, due above all to the CNB's foreign exchange interventions (see Chart III.6.8).

### III.7 THE EXTERNAL ENVIRONMENT

The annual rate of growth of the euro area economy was unchanged in 2015 Q3. As in the previous quarters, the growth was driven chiefly by household consumption. The economy was stimulated by the ECB's easy monetary policy and a decline in energy prices. Annual economic growth in the USA slowed somewhat. It is being supported mainly by domestic demand, as exports are being dampened by a strong dollar. Euro area inflation is close to zero, whereas US inflation has now started to diverge from this level. Inflation is expected to increase in 2016, more so in the USA. The euro is expected to weaken slightly against the dollar at the one-year horizon. The drop in oil prices accelerated significantly in early 2016.

#### III.7.1 The euro area

Annual growth in euro area **GDP** was flat at 1.6% in 2015 Q3. However, this is the highest annual figure since 2011 (see Chart III.7.1). Economic growth slowed slightly again in quarter-on-quarter terms (to 0.3%). As in the previous quarters, household consumption, which rose by 1.7% year on year, was the main driver of growth. The contributions of the other GDP components except change in inventories were also positive. The previous four quarters had seen similar developments. Turning to individual countries, Ireland and Slovakia recorded the highest growth rates. By contrast, economic activity declined in Greece and Finland in Q3 in year-on-year terms. During 2015 Q4, the annual growth rate of real retail sales, which fell for the third consecutive month in month-on-month terms, moderated in November. Industrial production recorded a similar trend, pointing to a rather weak economic recovery. The unemployment rate edged down further to 10.5% in November.

The **forecasts of the monitored institutions** expect euro area economic growth to accelerate slightly in 2016 and remain at a similar level in 2017 (see Chart III.7.2). The high PMI in manufacturing in December suggests an improvement in industrial production in the months ahead. Low prices of oil and other energy and the ECB's easy monetary policy, which is fostering a weaker exchange rate of the euro against the dollar, should continue to boost the economy.

**HICP inflation** in the euro area was zero in 2015. However, it is expected to recover gradually in the next two years (see Chart III.7.2). Owing to falling energy prices, annual consumer price inflation reached just 0.2% in December. Inflation excluding energy and food prices was flat at 0.9%. Industrial producer prices declined by 3.2% year on year for the third consecutive month in November (see Chart III.7.3).

At its January meeting, the **ECB** made no changes to its monetary policy stance adopted in December, when it eased monetary policy. More specifically, in December it extended the duration of the bond purchase programme at least until March 2017 and slightly lowered

CHART III.7.1

#### GDP IN THE EURO AREA

**Household consumption was again the main component of GDP growth in 2015 Q3**

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

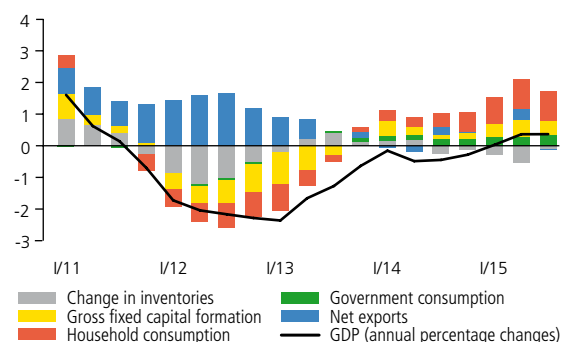
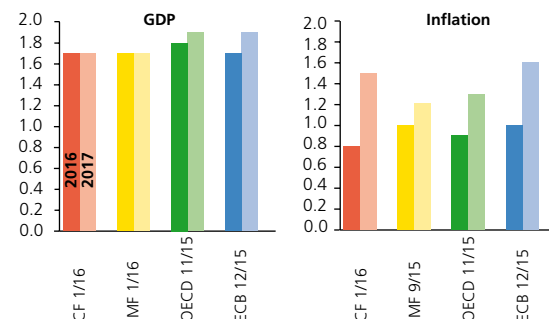


CHART III.7.2

#### EURO AREA GDP AND INFLATION OUTLOOKS

**Euro area GDP growth is expected to reach 1.7% in 2016, while inflation is expected to pick up gradually**

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



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

CHART III.7.3

#### INFLATION AND PRODUCER PRICES IN THE EURO AREA

**Owing to falling energy prices, inflation reached very low levels, while industrial producer prices declined sharply year on year**  
(annual percentage changes; source: Datastream)

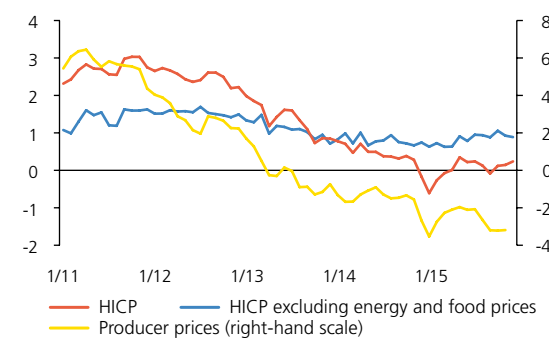


CHART III.7.4

## GDP IN GERMANY

**Annual GDP growth increased further in 2015 Q3, mainly due to strong growth in household and government consumption and an increase in fixed investment growth**

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

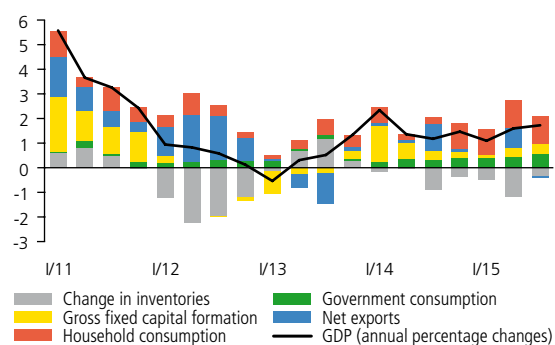
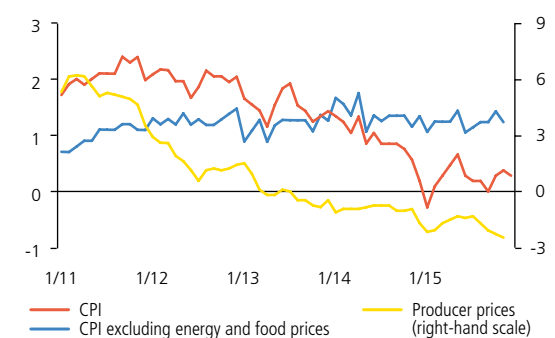


CHART III.7.5

## INFLATION AND PRODUCER PRICES IN GERMANY

**Inflation fell by 0.1 percentage point to 0.3% in December, while the decline in industrial producer prices deepened**

(annual percentage changes; source: Datastream)



the deposit rate to -0.3%. The ECB also announced in December that it would reinvest the proceeds of maturing bonds and start buying municipal bonds. The 3M EURIBOR edged down again and remains at negative levels, where it should stay until the end of 2017 according to market outlooks. Annual M3 growth reached 5.1% in November.

In 2015 Q3, annual **economic growth in Germany** increased by 0.1 percentage point to 1.7%, but the quarter-on-quarter growth rate fell to the same extent (to 0.3%). Annual economic growth was dampened by a decrease in net exports and inventories. By contrast, strong growth in household and government consumption<sup>61</sup> and fixed investment supported economic growth (see Chart III.7.4). The rate of economic growth expected in Q4 should not exceed the Q3 level. Annual industrial production growth weakened almost to zero in October and November (following strong increases in the previous two quarters) and retail turnover growth slowed sharply. According to both the Federal Statistical Office's flash estimate and the January CF, the German economy grew by 1.7% in 2015 as a whole. The growth was fostered mainly by favourable developments in both household and government consumption, which outweighed a decrease in external demand stemming from the economic slowdown in China and other emerging economies. Employment rose to its highest level since reunification at the end of last year, while unemployment showed a record decline and the state budget recorded a surplus of EUR 12 billion for the year as a whole (despite additional immigration-related expenditure). Overall, 2015 can be regarded as a successful year for the German economy.

CF expects economic growth to accelerate slightly to 1.8% in **2016**, as do the Bundesbank and the German government. However, the analysts' favourable outlook is not very consistent with the evolution of most leading indicators in January.

**Inflation in Germany** fell by 0.1 percentage point to 0.3% in December, mainly because of falling energy, transport and food prices (see Chart III.7.5). In 2015 as a whole, consumer price inflation reached a record low of 0.2%, but the January CF expects it to pick up pace to 1.1% in 2016 and increase further to 1.6% in 2017.

**Economic growth in Slovakia** remained strong in 2015 Q3. Annual GDP growth rose by 0.2 percentage point to 3.5%. The quarterly growth rate stayed at 0.9%, thanks mainly to an upswing in domestic demand. The favourable economic developments were reflected in a year-on-year increase in employment of 2.2% and a drop in the unemployment rate to 10.8%. The January EECF slightly increased its estimate for Slovak economic growth in 2015 as a whole to 3.3%. Slovakia should maintain roughly the same pace of growth in 2016.

<sup>61</sup> The strong growth in government expenditure was due above all to expenditure related to the inflow of refugees into Germany.

**Deflation in Slovakia** deepened by 0.1 percentage point to -0.5% year on year in December, mainly because of a sharper decline in energy and food prices. In 2015 as a whole, consumer prices dropped by 0.3%. According to the NBS, inflation should turn positive again at the start of this year as a result of the unwinding of the effect of the drop in oil prices and an expected increase in food and services prices. EECF expects inflation to average 0.8% in Slovakia in 2016.

### III.7.2 The United States

**GDP growth in the USA** slowed for the third consecutive quarter in 2015 Q3 (to 2.1%; see Chart III.7.6). The financial situation of firms continued to be adversely affected by the strong dollar, lower external demand and in some sectors also low oil prices. Household consumption thus remained the main driver of growth. The impact of government consumption remained low and the contribution of net exports to the economic growth was negative for the fourth consecutive quarter.

Data for **2015 Q4** suggest continued expansion of the US economy, although the growth is expected to slow further. Annual growth in industrial production turned negative in late 2015, especially in the energy sector. The PMI leading indicator has even been suggesting a contraction in manufacturing since November. Retail sales growth also fell below 2% year on year at the close of the year, although consumer confidence indicators are still pointing to a positive outlook for household consumption. The labour market situation is also favourable, as unemployment remained at a record low of 5% during 2015 Q4. The US non-farm payrolls rose by more than expected in December (by 292,000), while the figures for the previous two months were revised upwards by 50,000.

GDP growth is estimated at 2.4% for **2015** as a whole and should stay at that level in 2016 according to the January CF and the new Fed forecast (see Chart III.7.7). In its January forecast, the IMF predicts growth of 2.6% in both 2016 and 2017. Inflation slowed to 0.1% in 2015 on account of the drop in oil prices. Inflation pressures are expected to rise again in 2016. The January CF expects inflation to stand at 1.5%, i.e. 0.1 percentage point below the Fed forecast.

Annual consumer price **inflation** diverged from zero at the close of the year, reaching 0.4% in November. Inflation excluding energy and food prices was not hit by the fall in fuel prices during the year and annual growth in this index accelerated to 2% in November. The year-on-year decline in producer prices moderated in November (see Chart III.7.8).

At its December meeting, the **Fed** decided to increase the target range for its key rate by 25 basis points to 0.25%–0.50%. The Fed's official statement mentioned the substantial improvement on the labour market, which should continue given the still accommodative

CHART III.7.6

#### GDP IN THE USA

**The rate of growth of the US economy slowed further in year-on-year comparison in 2015 Q3**

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

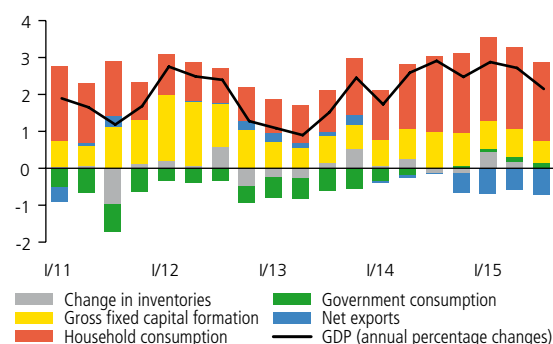
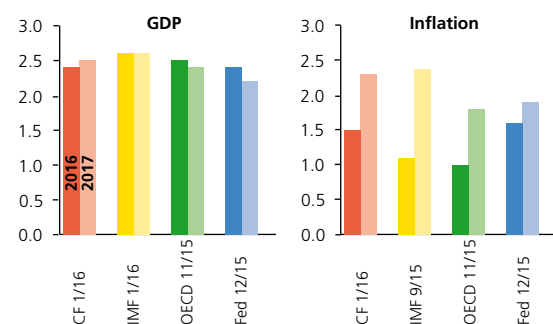


CHART III.7.7

#### US GDP AND INFLATION OUTLOOKS

**Rapid GDP growth and a rise in inflation pressures are expected in 2016**

(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 started to go up and the decline in producer prices moderated at the close of the year**

(annual percentage changes; source: Datastream)

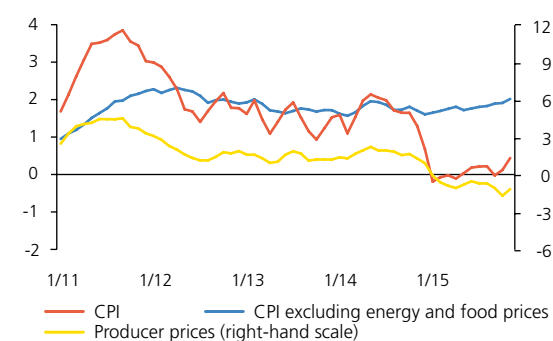
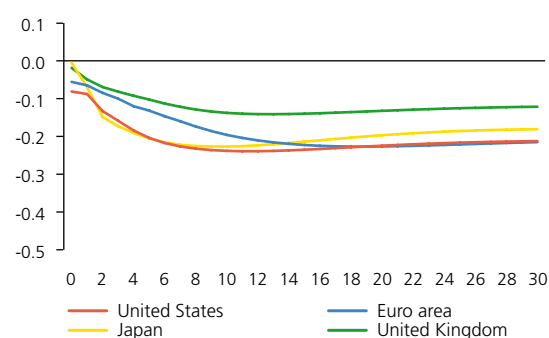


CHART 1 (BOX)

**IMPACT OF A 1% NEGATIVE SHOCK TO CHINESE GDP ON ADVANCED ECONOMIES**

A Chinese economic slowdown has a similar effect on developed economies in the long run, with an elasticity in the range of 0.1%–0.2% (percentages)

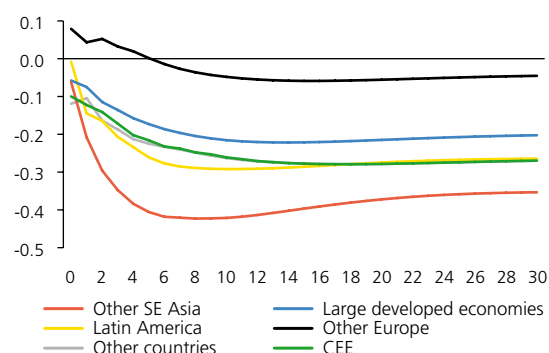


Note: Quarters are shown on the x-axis.

CHART 2 (BOX)

**IMPACT OF A 1% NEGATIVE SHOCK TO CHINESE GDP ON REGIONS OF THE WORLD**

Other SE Asian countries are naturally hit hardest by a shock to the Chinese economy; the impact on the Central European region is rather stronger than that on large developed economies (percentages)



Note: Quarters are shown on the x-axis. Regions are weighted aggregates with weights based on GDP in PPP. Large developed economies = euro area, USA, Japan and UK; Rest of SE Asia = Indonesia, South Korea, etc.; CEE = Poland, Hungary, Czech Republic, Slovakia; Latin America = Brazil, Argentina, etc.; Rest of Europe = Sweden, Switzerland, etc.; Other countries = Russia, South Africa, India, etc.

monetary conditions. The Fed also believes that inflation will rise to its 2% objective over the medium term. The first rate increase is the start of a cycle of gradual monetary policy tightening, which will continue depending on current developments. However, neither market outlooks nor a survey among CF panellists expect the Fed to take any further action in the near future.

**BOX 3****The impact of the Chinese economic slowdown on the world economy and commodity prices**

Data on the Chinese economic slowdown are causing concern about its potential extent and its global consequences. This box aims to outline the possible impact of the Chinese economic slowdown on the world economy. A permanent negative shock to Chinese GDP of 1% was simulated using the **GVAR model**.<sup>62</sup> The results reveal that most advanced countries react very similarly to the shock, with an elasticity in the range of 0.1% and 0.2% (see Chart 1). For example, the estimated long-term elasticity of euro area economic activity to a shock to Chinese GDP is 0.2%.<sup>63</sup>

The impacts of the same 1% shock on output in other regions are shown in Chart 2. The strongest reaction is naturally visible for China's trading partners in Southeast Asia (-0.4% in the long run), in particular South Korea and Indonesia. By contrast, the smallest reaction, aside from the large advanced economies discussed above, is observed for European countries outside the euro area (Sweden, Switzerland, etc.).

The results for Central and Eastern Europe (CEE) point to a slightly stronger reaction to a shock to China's output (-0.27% given a shock of 1%) compared to the euro area, mainly because CEE economies are more open. On average, the reaction is comparable to that in the other countries category (where India is affected most strongly). Latin American economies are hit harder by the shock than Central European countries in the short run, but the subsequent long-run impact is similar.

A weakening of Chinese economic growth should also give rise to lower commodity prices (see Chart 3). According to the model estimates, the simulated shock causes oil prices to fall by almost 3%, while the long-run decline in metal prices is almost 1%.

<sup>62</sup> The GVAR model is used as an alternative to the NiGEM global macroeconomic model. It works with quarterly data for 30 major world economies in 1995–2014. For each country, it contains data on inflation, nominal short-term and long-term interest rates, real GDP, the stock index, loans and the exchange rate against the US dollar. The model also includes prices of oil and metals. More details on the GVAR model are available, for example, in Global Economic Outlook 1/2015.

<sup>63</sup> This means that, for example, a sharp decrease in the growth rate of the Chinese economy of 4 percentage points (from 7% to 3%) would cause the euro area to slow by 0.8 percentage point (from 2% to 1.2%).

**Overall**, the simulations suggest that the expected Chinese economic slowdown will have an adverse effect on global economic growth, the extent of which will depend on the intensity of the Chinese slowdown and on the specific trade links between economies. The impact on advanced countries is likely to be smaller than that on emerging countries. The blow will be softened by a decrease in world commodity prices, which represents a favourable supply-side shock for commodity importers.

### 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** has been weakening visibly since about mid-October (see Chart III.7.9). It responded particularly strongly to the ECB's October meeting, at which Mario Draghi hinted at the possibility of a further monetary policy easing. This materialised in early December, when the ECB cut its deposit interest rate to -0.30% and extended the duration and scope of its bond purchase programme. However, the easing was more modest than had generally been expected, and the euro reacted by appreciating sharply. In the rest of the year, the exchange rate of the euro showed mixed trends against other currencies.

Against the **US dollar**, the euro remained relatively stable until the end of the year. It reacted to the December increase in US key interest rates by weakening only slightly and soon corrected again.

The euro has been appreciating markedly against the **British pound** since early December due to a slowdown of the British economy. Monetary policy is not expected to be tightened in the UK before 2016 H2.

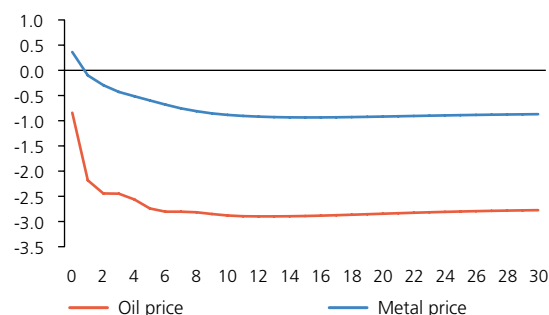
By contrast, the euro has been weakening against the **Japanese yen** since December. The Japanese economy avoided technical recession in Q3, but its results are not very strong. The government therefore adopted further fiscal stimulus measures, which should total about EUR 25 billion this year. Nevertheless, Japan is considered a "safe haven" in the region, which is causing the yen to appreciate.

The euro weakened slightly against the dollar in the first half of January **2016**, but then returned to the levels recorded at the start of the month. It continued to appreciate vis-à-vis the pound, but depreciated sharply against the yen in early January.<sup>64</sup> According to the January CF, the euro will depreciate by 2.8% against the dollar (to USD 1.06) and by 7% against the pound at the one-year horizon. On the other hand, it is expected to appreciate by 3.5% against the yen.

CHART 3 (BOX)

#### IMPACT OF A 1% NEGATIVE SHOCK TO CHINESE GDP ON COMMODITY PRICES

**The simulated shock causes oil prices to fall by almost 3%, while the long-run decline in metal prices is almost 1% (percentages)**



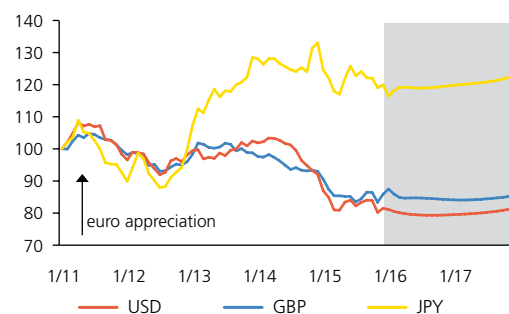
Note: Quarters are shown on the x-axis. The metal price is proxied by the IMF metals index.

CHART III.7.9

#### EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

**The euro reacted to the divergence in monetary policy by depreciating against the dollar in 2015 Q4**

(January 2011 = 100; source: Datastream; outlook from Consensus Forecasts; CNB calculation)



64 The Japanese yen appreciated in reaction to turbulence on China's financial markets.



CHART III.7.10

## OIL AND NATURAL GAS PRICES IN USD

The price of Brent crude oil declined below USD 30 a barrel in mid-January and is expected to rise only gradually until the end of 2017

(oil in USD/barrel; natural gas [Russian in Germany] in USD/1,000 m<sup>3</sup> – right-hand scale; source: IMF, Bloomberg, CNB calculation)

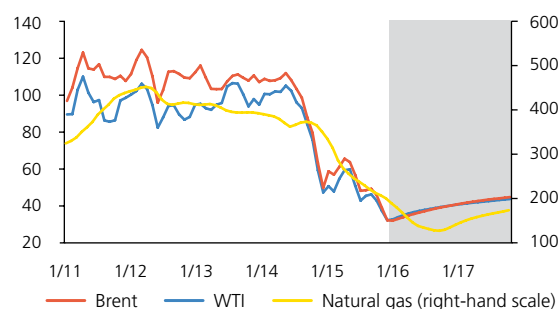
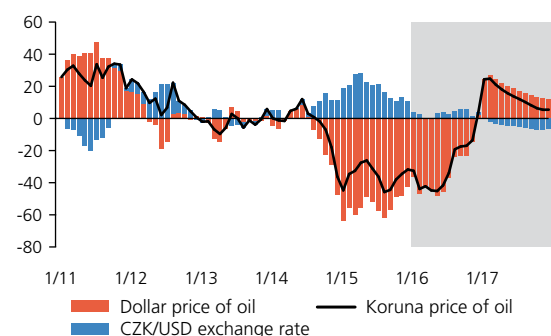


CHART III.7.11

## DECOMPOSITION OF KORUNA OIL PRICE GROWTH

The koruna price of oil will fall year on year until the end of this year, while the dampening effect of the koruna-dollar exchange rate on this decline will decrease significantly

(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)



## III.7.4 Prices of oil and other commodities

The **price of Brent crude oil** declined for most of 2015 Q4 (see Chart III.7.10), driven down by persisting excess supply on the market (and therefore rising global oil stocks) accompanied by a sharply appreciating dollar in October and November. Only infrequent short-term corrections occurred, for example following news of a decline in the US rig count. The price decrease accelerated in the first half of December after OPEC showed no willingness to support oil prices at its meeting and, by contrast, set no production limits for the first time in several decades (on account of uncertainty regarding expected extraction growth in Iran). The Brent price approached USD 37 a barrel in mid-December and stayed at this level until the end of 2015. It returned to the downward trend at the start of the new year, falling below USD 30 a barrel in mid-January, where it last was in February 2004. This was mainly due to turbulence on the Chinese stock market and the weakening of the renminbi, as well as to an expected increase in oil exports from Iran following the lifting of sanctions.<sup>65</sup>

The decline in the **koruna price of oil** this year will be dampened significantly less than in the past by year-on-year depreciation of the koruna-dollar exchange rate (see Chart III.7.11). In 2017, the exchange rate effect will partly offset the expected annual increase in the dollar price of oil.

The **Brent-WTI spread** recorded an unexpected change. WTI crude oil had traded at a discount of USD 5 a barrel on average for most of 2015, but this spread started to narrow during December 2015 (owing to relatively free storage capacity in the USA compared to the rest of the world) and fell almost to zero following the lifting of the ban on crude oil exports from the USA.<sup>66</sup> Market outlooks expect Brent and WTI prices to follow an almost identical path over their entire horizons, whereas the EIA predicts a discount for WTI crude oil of USD 2 and USD 3 a barrel in 2016 and 2017 respectively.

The EIA estimates that **global oil stocks** rose by 1.9 million barrels a day on average in 2015. This pace is expected to fall to an average of 0.7 million barrels a day this year. The first decline in global stocks is not expected until 2017 Q3, when a sufficiently strong decrease in oil extraction will occur in North America and elsewhere as a result of the current marked reduction in investment in extraction. However, stronger growth in oil prices cannot be expected, as shale extraction would soon start increasing again in the USA if prices rose to USD 50–60 a barrel.

<sup>65</sup> According to local sources, the increase in Iranian oil exports could be around 500,000 barrels a day as from January and a million barrels a day within half a year. The IEA is also expecting exports to rise, albeit to a smaller extent (by 300,000 barrels a day by the end of 2016 Q1).

<sup>66</sup> From a fundamental perspective, the lifting of the ban on US crude oil exports has no impact and will merely lead to a change in oil flows and increased imports of light oil into the USA.



The market **forecast for Brent crude oil prices** based on the 11 January futures curve shifted significantly downwards again over the entire horizon and continues to foresee only a gradual rise (to around USD 40 and USD 45 a barrel at the end of 2016 and 2017 respectively). The January EIA forecast also decreased markedly, but it is still about USD 4 and USD 7 a barrel above the market curve in 2016 and 2017 respectively. The January CF forecast is even higher, expecting the price of Brent crude oil to increase to almost USD 50 a barrel at the one-year horizon. Given the expected rapid growth in oil supplies from Iran, unlimited extraction in other OPEC countries, the current resilience of shale extraction in the USA and record-high global stocks of oil, the short-term risks to oil prices are generally on the downside, especially if the Chinese economy slows more sharply. Prices would increase faster only if extraction in the USA decreased more sharply or a greater conflict erupted in the Middle East.

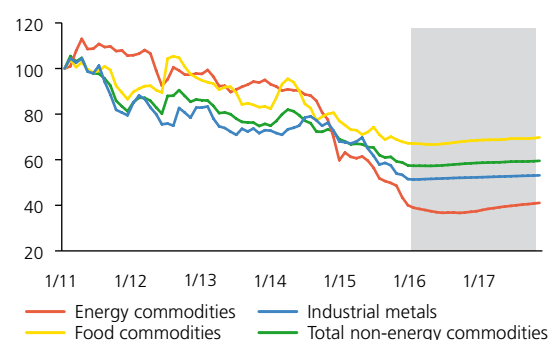
The **downward trend in the non-energy commodity price index**, which started in May 2014, continued into the last two months of 2015 and the first half of January 2016 (see Chart III.7.12). Prices of most industrial metals went down further, under pressure from a deteriorating outlook for manufacturing in China and the USA. Despite falling investment, excess production capacity persists and corporations have been unwilling to cut production so far (with the exception of aluminium). Prices of basic metals are also being kept under pressure by a strong dollar and a weakening renminbi, which is boosting the competitiveness of Chinese producers. Prices of iron ore also decreased sharply amid falling global demand for steel. Following temporary growth in October, the agricultural product price index returned to its downward trend, with most crops still recording high global stocks. Based on market outlooks, commodity prices can be expected to stabilise, although there are risks on both sides. The risks to metal prices are balanced, while the risks to agricultural commodity prices are mostly on the upside (in the event of negative news regarding future harvests).

CHART III.7.12

## COMMODITY PRICES

**The overall non-energy commodity price index started falling again in November 2015, as did its components; the outlook expects prices to stabilise**

(January 2011 = 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).

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AEIS	Average Earnings Information System	IMF	International Monetary Fund
CF	Consensus Forecasts	IRS	interest rate swap
CNB	Czech National Bank	JPY	Japanese yen
CPI	consumer price index	KZAM	employment classification (used up to 2011)
CZK	Czech koruna	LFS	Labour Force Survey
CZ-ISCO	employment classification (used since 2011)	LIBOR	London Interbank Offered Rate
CZSO	Czech Statistical Office	LTV	loan to value
ECB	European Central Bank	M1, M2, M3	monetary aggregates
EEA	European Economic Area	MFIs	monetary financial institutions
EIA	Environmental Impact Assessment	MLSA	Ministry of Labour and Social Affairs
EIA	U.S. Energy Information Administration	MRD	Ministry for Regional Development
ESA	European System of Accounts	NAIRU	non-accelerating inflation rate of unemployment
ESCB	European System of Central Banks	NBS	National Bank of Slovakia
EU	European Union	NFCs	non-financial corporations
EUR	euro	OECD	Organisation for Economic Co- operation and Development
EURIBOR	Euro Interbank Offered Rate	OPEC	Organization of the Petroleum Exporting Countries
FDI	foreign direct investment	PMI	Purchasing Managers Index
Fed	US central bank	pp	percentage points
FMIE	Financial Market Inflation Expectations	PPI	producer price index
FRA	forward rate agreement	PRIBOR	Prague Interbank Offered Rate
GBP	pound sterling	(1W, 1M, 1Y)	(one-week, one-month, one-year)
GDP	gross domestic product	repo rate	repurchase agreement rate
GNP	gross national product	USD	US dollar
GVA	gross value added	VAT	value added tax
HICP	harmonised index of consumer prices	WTI	West Texas Intermediate
HP filter	Hodrick-Prescott filter		
ILO	International Labour Organization		

The pass-through of VAT to food prices at the end of 2011	(Box)	I/2012
Extraordinary revision of the quarterly national accounts	(Box)	I/2012
An analysis of the impacts of fiscal measures in the Czech Republic in 2001–2011	(Box)	I/2012
Revision of the consumer basket	(Box)	II/2012
Factors affecting retail fuel prices	(Box)	II/2012
The Bank Lending Survey	(Box)	III/2012
The CZK/USD exchange rate at a time of uncertainty	(Box)	III/2012
Easy monetary policy and commodity prices	(Box)	III/2012
The household saving rate	(Box)	IV/2012
Consumption and money savings by household income group	(Box)	IV/2012
The share of reinvested earnings in total FDI income	(Box)	IV/2012
Revision of the quarterly national accounts	(Box)	I/2013
Consumption, savings and debt burden of household income groups in 2012	(Box)	III/2013
The announced reduction of quantitative easing in the USA and its effect on yield curves	(Box)	III/2013
Using the exchange rate as an instrument to ease the monetary conditions	(Box)	IV/2013
New steady-state settings in the g3 model	(Box)	IV/2013
Comparison of corporate investment and employment from the perspective of ownership and reinvestment	(Box)	IV/2013
The impact of the growth in unconventional gas extraction on global prices of energy commodities	(Box)	IV/2013
Effects of the weakened exchange rate on consumer prices (input-output analysis)	(Box)	I/2014
Evolution and structure of shorter working hours	(Box)	II/2014
The Czech Republic's trade relations with Ukraine and Russia	(Box)	II/2014
The life cycle of foreign direct investment and its impact on the balance of payments	(Box)	III/2014
Assessment of the economic situation one year after the exchange rate commitment was adopted	(Box)	IV/2014
Revision of the national accounts following the switch to ESA 2010	(Box)	IV/2014
The impacts of the military and political crisis in Ukraine on the Czech Republic	(Box)	IV/2014
Wage growth structure in the business sector	(Box)	I/2015
Future oil supply on world markets with regard to extraction profitability in different oil plays given falling oil prices	(Box)	I/2015
Median inflation	(Box)	II/2015
Labour market developments from the perspective of the NAIRU and the cyclicity of the unemployment rate and wages	(Box)	II/2015
The monetary conditions index for the Czech Republic	(Box)	II/2015



<b>The monetary conditions index for the euro area</b>	(Box)	II/2015
<b>The pass-through of the koruna-dollar exchange rate to prices of tradable goods</b>	(Box)	III/2015
<b>The equilibrium koruna-euro exchange rate</b>	(Box)	III/2015
<b>The German economy and the dollar-euro exchange rate</b>	(Box)	III/2015
<b>Employment of foreign and agency workers and their effect on the employment statistics</b>	(Box)	IV/2015
<b>Public procurement data as a leading indicator of public investment</b>	(Box)	I/2016
<b>The changeover from national to harmonised monetary statistics</b>	(Box)	I/2016
<b>The impact of the Chinese economic slowdown on the world economy and commodity prices</b>	(Box)	I/2016

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](http://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 consists 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.

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

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

**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.

**Loan-to-value ratio (LTV):** The ratio of the amount of a loan to the value of the property securing the financing.

**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										
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>DEMAND AND SUPPLY</b>												
<i>Gross domestic product</i>												
GDP	CZK bn, constant p. of 2010, seas. adjusted	3,958.1	4,058.6	3,867.8	3,950.6	4,028.6	3,995.4	3,974.1	4,052.8	<b>4,242.5</b>	<b>4,358.6</b>	<b>4,489.6</b>
GDP	%, y-o-y, real terms, seas. adjusted	5.5	2.5	-4.7	2.1	2.0	-0.8	-0.5	2.0	<b>4.7</b>	<b>2.7</b>	<b>3.0</b>
Household consumption	%, y-o-y, real terms, seas. adjusted	4.1	2.8	-0.6	0.9	0.3	-1.5	0.7	1.5	<b>2.9</b>	<b>3.3</b>	<b>2.9</b>
Government consumption	%, y-o-y, real terms, seas. adjusted	0.4	1.1	3.0	0.4	-3.0	-1.8	2.3	1.8	<b>3.2</b>	<b>2.9</b>	<b>1.7</b>
Gross capital formation	%, y-o-y, real terms, seas. adjusted	14.3	0.9	-17.8	4.2	1.9	-3.9	-5.1	4.4	<b>12.1</b>	<b>-1.9</b>	<b>5.4</b>
Gross fixed capital formation	%, y-o-y, real terms, seas. adjusted	13.5	2.2	-9.8	0.9	1.1	-3.0	-2.8	2.0	<b>8.2</b>	<b>0.3</b>	<b>4.7</b>
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	11.0	3.8	-9.5	14.4	9.3	4.5	0.0	8.9	<b>7.6</b>	<b>7.9</b>	<b>7.5</b>
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	12.8	2.8	-10.7	14.5	6.7	2.8	0.1	9.9	<b>8.8</b>	<b>7.1</b>	<b>8.3</b>
Net exports	CZK bn, constant p. of 2010, seas. adjusted	60.3	86.9	108.1	121.8	198.4	251.0	250.4	245.6	<b>228.3</b>	<b>274.1</b>	<b>264.4</b>
<i>Coincidence indicators</i>												
Industrial production	%, y-o-y, real terms	10.6	-1.8	-13.6	8.6	5.9	-0.8	-0.1	5.0	-	-	-
Construction output	%, y-o-y, real terms	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	10.0	2.7	-4.7	1.5	1.7	-1.1	1.2	5.5	-	-	-
<b>PRICES</b>												
<i>Main price indicators</i>												
Inflation rate	%, end-of-period	2.8	6.4	1.1	1.5	1.9	3.3	1.4	0.4	0.3	-	-
Consumer Price Index	%, y-o-y, average	2.8	6.4	1.1	1.5	1.9	3.3	1.4	0.4	0.3	<b>1.0</b>	<b>2.1</b>
Regulated prices (18.70%)*	%, y-o-y, average	4.9	15.6	8.4	2.6	4.7	8.6	2.2	-3.0	0.0	<b>-0.2</b>	<b>1.1</b>
Net inflation (81.30%)*	%, y-o-y, average	1.5	2.4	-0.9	0.0	1.3	1.0	0.5	0.9	0.2	<b>0.9</b>	<b>2.2</b>
Food prices (including alcoholic beverages and tobacco) (24.58%)*	%, y-o-y, average	3.8	3.0	-0.9	0.9	3.9	2.9	3.1	1.8	0.0	<b>1.6</b>	<b>2.9</b>
Adjusted inflation excluding fuels (53.32%)*	%, y-o-y, average	0.5	2.0	0.0	-1.2	-0.7	-0.3	-0.5	0.5	1.2	<b>1.6</b>	<b>1.8</b>
Fuel prices (3.39%)*	%, y-o-y, average	-0.1	4.3	-11.1	12.8	9.9	6.0	-2.1	0.2	-13.5	<b>-9.3</b>	<b>4.5</b>
Monetary policy inflation (excluding tax changes)	%, y-o-y, average	1.9	4.3	0.9	0.4	1.9	2.1	0.6	0.2	0.2	<b>0.8</b>	<b>2.0</b>
GDP deflator	%, y-o-y, seas. adjusted	3.5	2.0	2.6	-1.4	-0.2	1.4	1.4	2.5	<b>0.9</b>	<b>1.5</b>	<b>1.4</b>
<i>Partial price indicators</i>												
Industrial producer prices	%, y-o-y, average	4.1	4.5	-3.1	1.2	5.6	2.1	0.8	-0.8	-3.2	<b>-1.9</b>	<b>1.3</b>
Agricultural prices	%, y-o-y, average	16.5	9.3	-24.9	7.1	22.1	3.3	5.0	4.7	-6.7	<b>1.9</b>	<b>2.2</b>
Construction work prices	%, y-o-y, average	3.9	4.5	1.2	-0.2	-0.5	-0.7	-1.1	0.5	1.2	-	-
Brent crude oil	%, y-o-y, average	9.9	35.4	-36.5	28.4	38.2	0.7	-2.6	-8.5	-46.1	<b>-33.1</b>	<b>19.1</b>
<b>LABOUR MARKET</b>												
Average monthly wage	%, y-o-y, nominal terms	7.2	7.8	3.3	2.2	2.5	2.5	-0.1	2.3	<b>3.5</b>	<b>4.7</b>	<b>4.7</b>
Average monthly wage	%, y-o-y, real terms	4.3	1.4	2.3	0.7	0.6	-0.8	-1.5	1.9	<b>3.1</b>	<b>3.8</b>	<b>2.6</b>
Number of employees	%, y-o-y	1.8	1.6	-2.2	-2.2	0.0	-0.1	1.6	0.6	<b>2.1</b>	<b>1.0</b>	<b>0.5</b>
Unit labour costs	%, y-o-y	2.6	4.7	3.0	-1.7	0.3	3.5	1.0	0.0	<b>-0.4</b>	<b>2.3</b>	<b>1.7</b>
Unit labour costs in industry	%, y-o-y	3.4	-1.7	3.3	-6.2	0.7	5.5	4.9	-1.9	-	-	-
Aggregate labour productivity	%, y-o-y	3.4	0.5	-3.1	3.4	2.2	-1.3	-0.8	1.4	<b>3.3</b>	<b>1.9</b>	<b>2.6</b>
ILO general unemployment rate	%, average, age 15–64	5.4	4.4	6.7	7.4	6.8	7.0	7.1	6.2	<b>5.2</b>	<b>4.5</b>	<b>4.4</b>
Share of unemployed persons (MLSA)	%, average	4.9	4.1	6.2	7.0	6.7	6.8	7.7	7.7	6.5	<b>5.7</b>	<b>5.5</b>
<b>PUBLIC FINANCE</b>												
Public finance deficit (ESA 2010)	CZK bn, current p.	-26.6	-84.6	-216.2	-174.5	-110.1	-160.0	-51.0	-83.0	<b>-58.7</b>	<b>-23.8</b>	<b>0.0</b>
Public finance deficit / GDP**	%, nominal terms	-0.7	-2.1	-5.5	-4.4	-2.7	-4.0	-1.3	-1.9	<b>-1.3</b>	<b>-0.5</b>	<b>0.0</b>
Public debt (ESA 2010)	CZK bn, current p.	1065.5	1150.7	1335.7	1508.5	1606.5	1806.0	1841.9	1821.3	<b>1849.8</b>	<b>1860.2</b>	<b>1879.2</b>
Public debt / GDP**	%, nominal terms	27.8	28.7	34.1	38.2	39.9	44.7	45.2	42.7	<b>41.2</b>	<b>39.7</b>	<b>38.4</b>
<b>EXTERNAL RELATIONS</b>												
<i>Current account</i>												
Trade balance	CZK bn, current p.	10.4	-4.4	65.0	40.4	75.5	123.8	167.0	238.9	<b>210.0</b>	<b>275.0</b>	<b>280.0</b>
Trade balance / GDP	%, nominal terms	0.3	-0.1	1.7	1.0	1.9	3.1	4.1	5.6	<b>4.7</b>	<b>5.9</b>	<b>5.7</b>
Balance of services	CZK bn, current p.	88.1	89.3	81.9	78.5	81.3	77.6	70.4	55.9	<b>75.0</b>	<b>80.0</b>	<b>85.0</b>
Current account	CZK bn, current p.	-164.5	-75.3	-89.2	-141.8	-84.8	-63.3	-21.8	26.1	<b>45.0</b>	<b>95.0</b>	<b>70.0</b>
Current account / GDP	%, nominal terms	-4.3	-1.9	-2.3	-3.6	-2.1	-1.6	-0.5	0.6	<b>1.0</b>	<b>2.0</b>	<b>1.4</b>
<i>Foreign direct investment</i>												
Direct investment	CZK bn, current p.	-179.1	-36.3	-37.7	-95.0	-46.8	-121.3	7.4	-133.6	<b>0.0</b>	<b>-70.0</b>	<b>-70.0</b>
<i>Exchange rates</i>												
CZK/USD	average	20.3	17.1	19.1	19.1	17.7	19.6	19.6	20.8	24.6	-	-
CZK/EUR	average	27.8	25.0	26.5	25.3	24.6	25.1	26.0	27.5	27.3	-	-
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-2.2	-12.6	5.3	-4.6	-2.1	1.5	3.5	6.0	-1.1	-	-
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-3.7	-8.6	4.6	-4.1	-3.1	2.6	2.3	4.8	-0.4	-	-
<i>Foreign trade prices</i>												
Prices of exports of goods	%, y-o-y, average	1.3	-4.6	0.2	-1.0	1.7	2.9	1.2	3.5	<b>-1.7</b>	<b>-1.2</b>	<b>-0.7</b>
Prices of imports of goods	%, y-o-y, average	-1.0	-3.3	-3.5	2.0	4.3	4.2	-0.2	1.9	<b>-1.9</b>	<b>-3.1</b>	<b>0.0</b>
<b>MONEY AND INTEREST RATES</b>												
M3	%, y-o-y, average	15.0	14.2	6.5	0.2	1.0	5.1	5.1	5.1	<b>7.4</b>	<b>9.3</b>	<b>8.1</b>
2W repo rate	%, end-of-period, CNB forec. = avg.	3.50	2.25	1.00	0.75	0.75	0.05	0.05	0.05	0.05	<b>0.05</b>	<b>0.70</b>
3M PRIBOR	%, average	3.1	4.0	2.2	1.3	1.2	1.0	0.5	0.4	0.3	<b>0.3</b>	<b>0.9</b>

\* in brackets are constant weights in actual consumer basket

\*\* CNB calculation

- data are not available / forecasted / released

data in bold = CNB forecast



2013				2014				2015				2016				2017			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
984.0	989.3	993.4	1,007.4	1,005.2	1,010.4	1,016.6	1,020.7	1,046.1	1,056.9	1,064.6	1,075.0	1,072.3	1,084.5	1,096.8	1,105.0	1,115.6	1,119.5	1,124.2	1,130.3
-2.1	-1.2	-0.3	1.4	2.2	2.1	2.3	1.3	4.1	4.6	4.7	5.3	2.5	2.6	3.0	2.8	4.0	3.2	2.5	2.3
-0.2	0.4	1.1	1.5	1.1	1.3	1.5	2.0	2.8	3.0	3.0	2.8	2.6	2.9	3.8	3.9	3.6	3.3	2.7	2.3
1.1	1.4	3.4	3.5	1.4	2.5	0.6	2.7	2.6	2.3	4.4	3.6	3.4	3.8	2.4	1.9	2.5	1.9	1.4	0.9
-6.9	-12.0	-1.8	0.7	1.7	10.7	5.7	0.1	11.4	11.9	10.1	15.0	0.8	-4.2	-0.7	-3.3	5.4	6.2	5.3	4.7
-3.9	-5.3	-2.5	0.8	0.7	2.9	2.7	1.9	3.0	7.4	8.3	14.0	4.5	0.0	0.6	-3.4	5.1	5.7	4.5	3.5
-5.0	-0.1	0.2	5.1	11.7	8.7	7.8	7.5	7.1	7.1	8.2	7.9	5.9	8.2	9.0	8.6	9.5	7.8	6.5	6.3
-4.8	-2.2	1.7	5.7	11.3	11.7	8.3	8.3	8.6	8.1	9.1	9.2	5.9	6.6	8.5	7.4	9.8	9.0	7.6	7.1
58.5	71.4	60.7	59.8	67.8	57.5	61.9	58.3	61.8	53.9	60.4	52.2	65.9	71.0	70.0	67.2	69.4	66.4	64.5	64.2
-5.9	-2.8	3.7	5.0	6.9	6.0	4.0	3.2	4.8	5.3	4.0	-	-	-	-	-	-	-	-	-
-11.2	-11.7	-3.9	-3.1	13.3	5.6	2.9	0.7	7.7	10.0	6.2	-	-	-	-	-	-	-	-	-
-2.7	0.4	2.9	3.8	7.0	4.7	5.7	4.7	7.9	8.3	5.9	-	-	-	-	-	-	-	-	-
2.8	2.3	1.8	1.4	1.0	0.7	0.5	0.4	0.3	0.5	0.4	0.3	-	-	-	-	-	-	-	-
1.8	1.5	1.2	1.1	0.2	0.2	0.6	0.5	0.1	0.7	0.4	0.1	0.8	0.5	0.9	1.6	2.0	2.1	2.2	2.1
3.5	2.6	1.5	1.3	-4.1	-3.5	-2.2	-2.1	0.2	0.3	-0.2	-0.4	0.0	-0.3	-0.4	-0.2	0.7	1.1	1.3	1.3
0.6	0.6	0.5	0.3	1.0	0.7	1.0	0.8	-0.2	0.5	0.3	0.1	0.8	0.4	0.8	1.7	2.0	2.2	2.3	2.2
3.0	3.8	3.3	2.4	3.5	1.5	1.5	0.7	-0.9	0.7	0.3	0.0	0.6	0.8	1.6	3.2	2.7	3.0	3.1	2.9
-0.4	-0.6	-0.7	-0.4	-0.2	0.4	0.8	0.9	1.1	1.1	1.1	1.3	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.8
-1.5	-3.8	-1.4	-1.7	0.3	1.0	0.5	-1.2	-14.6	-10.1	-12.6	-16.6	-10.9	-12.8	-11.1	-2.4	2.9	4.8	5.3	4.9
0.9	0.8	0.4	0.3	0.1	0.0	0.5	0.3	-0.1	0.4	0.2	0.0	0.6	0.3	0.7	1.4	1.8	2.0	2.1	2.0
1.3	1.1	1.2	1.9	2.2	2.8	2.9	2.1	1.3	0.7	0.4	1.0	0.9	1.4	1.8	2.0	0.6	1.1	1.9	2.1
1.2	0.5	0.7	0.8	-0.7	-0.2	-0.1	-1.9	-3.3	-2.3	-3.6	-3.5	-2.5	-3.3	-1.8	0.0	1.1	1.4	1.4	1.3
14.5	9.3	1.5	-4.3	-4.4	-2.1	-2.3	-6.0	-9.3	-10.9	-6.5	1.8	0.1	1.9	4.1	2.1	2.3	2.5	2.1	1.7
-1.0	-1.3	-1.3	-0.8	-0.3	0.5	0.7	0.9	1.0	1.3	1.4	1.3	-	-	-	-	-	-	-	-
-4.6	-4.3	0.3	-0.7	-4.2	6.2	-5.7	-29.5	-48.9	-42.1	-50.6	-41.6	-40.9	-45.1	-26.9	-11.4	4.1	18.2	25.9	25.4
-0.6	1.0	1.2	-2.0	3.2	2.1	1.6	2.2	2.3	3.5	3.8	4.3	4.6	4.8	4.8	4.8	4.9	4.8	4.7	4.5
-2.4	-0.5	0.0	-3.1	3.0	1.9	1.0	1.7	2.2	2.8	3.4	4.1	3.8	4.2	4.0	3.2	2.9	2.7	2.5	2.5
2.0	2.4	0.9	1.3	0.4	-0.2	1.0	1.2	2.2	2.4	2.0	1.7	1.2	1.1	0.9	0.9	0.6	0.5	0.4	0.3
2.8	2.3	1.1	-2.1	-0.1	-0.2	-1.3	1.4	-0.8	-0.5	0.2	-0.7	2.2	2.4	2.2	2.4	1.0	1.5	2.1	2.2
6.0	6.1	4.1	3.4	-0.9	-1.4	-3.6	-1.9	-0.3	-1.0	-0.1	-	-	-	-	-	-	-	-	-
-3.1	-1.9	0.4	1.1	1.6	2.1	2.0	0.0	3.0	3.1	2.9	4.3	1.6	1.8	2.1	2.0	3.4	2.8	2.2	2.1
7.5	6.8	7.0	6.8	6.9	6.1	6.0	5.8	6.1	5.0	4.9	4.7	4.8	4.4	4.4	4.4	4.6	4.3	4.4	4.4
8.0	7.5	7.5	7.8	8.5	7.6	7.4	7.2	7.5	6.4	6.2	6.0	6.4	5.6	5.4	5.5	6.1	5.3	5.3	5.4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48.4	59.7	31.7	27.3	77.4	68.2	51.7	41.6	79.4	56.8	39.4	34.4	89.0	73.0	56.0	57.0	90.0	74.0	58.0	58.0
5.1	5.9	3.1	2.5	7.9	6.4	4.7	3.7	7.7	5.1	3.5	2.9	8.3	6.2	4.7	4.6	8.0	6.1	4.6	4.4
21.7	18.2	14.5	16.0	20.4	15.2	12.2	8.1	18.7	20.0	19.9	16.5	20.0	20.0	20.0	20.0	22.0	21.0	21.0	21.0
16.5	-4.0	-29.1	-5.2	83.6	-29.2	-33.3	5.0	92.7	-14.6	-29.3	-3.8	104.0	-7.0	-24.0	22.0	97.0	-15.0	-31.0	19.0
1.8	-0.4	-2.8	-0.5	8.5	-2.7	-3.0	0.5	8.9	-1.3	-2.6	-0.3	9.7	-0.6	-2.0	1.8	8.6	-1.2	-2.5	1.5
1.9	1.9	1.9	1.9	-38.7	-59.0	-29.7	-6.3	-2.5	-7.2	14.0	-	-	-	-	-	-	-	-	-
19.4	19.8	19.5	19.6	20.0	20.0	20.9	22.1	24.5	24.8	24.3	24.7	-	-	-	-	-	-	-	-
25.6	25.8	25.9	26.7	27.4	27.4	27.6	27.6	27.6	27.4	27.1	27.1	-	-	-	-	-	-	-	-
2.2	2.5	3.4	5.9	7.9	6.7	6.6	3.2	0.4	-0.7	-2.2	-1.9	-	-	-	-	-	-	-	-
1.8	1.7	1.8	3.9	6.1	4.8	5.1	3.2	1.1	0.0	-1.0	-1.6	-	-	-	-	-	-	-	-
0.9	0.6	0.4	2.9	4.1	3.4	4.7	2.0	-0.5	-0.5	-2.7	-3.1	-2.8	-2.4	-0.3	0.9	-0.2	-0.7	-0.8	-0.9
-0.3	-0.7	-0.9	1.0	2.4	1.3	2.9	1.2	-1.5	0.0	-2.5	-3.6	-4.1	-4.9	-2.6	-0.7	0.1	0.1	0.0	-0.1
4.9	4.7	5.6	5.2	5.3	5.5	4.4	5.1	5.7	6.5	8.1	9.3	10.0	9.9	9.1	8.4	8.3	8.4	8.1	7.5
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	0.55	0.75	0.76	0.75
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	0.8	1.0	1.0	1.0

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