INFLATION REPORT / IV

2016

CNB CZECH NATIONAL BANK

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In 1998, the Czech National Bank switched to inflation targeting. In the inflation targeting regime, the central bank's communication with the public plays a significant role. One of the core elements of this communication is the publishing of quarterly Inflation Reports. Section II of the Inflation Report contains a description of the Czech National Bank's new quarterly macroeconomic forecast, and section III presents its assessment of past economic and monetary developments.

The inflation forecast and the assumptions underlying it are published with the aim of making monetary policy as transparent, comprehensible, predictable and therefore credible as possible. The Czech National Bank is convinced that credible monetary policy effectively influences inflation expectations and minimises the costs of maintaining price stability. Maintaining price stability is the Czech National Bank's primary objective.

The forecast for the Czech economy is drawn up by the CNB's Monetary Department. The forecast for inflation at the "monetary policy horizon" (about 12–18 months ahead) is of greatest relevance to the decision-making on the current interest rate settings.

The forecast is the key, but not the only, input to the Bank Board's decision-making. At its meetings during the quarter, the Bank Board discusses the current forecast and the balance of risks and uncertainties surrounding it. The Bank Board's final decision may not correspond to the message of the forecast due to the arrival of new information since the forecast was drawn up and to the possibility of asymmetric assessment of the risks of the forecast and divergent views of some board members on the development of the external environment or the linkages between the various indicators within the Czech economy.

This Inflation Report was approved by the CNB Bank Board on 10 November 2016 and contains the information available as of 21 October 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.

I. SUMMARY

Both headline and monetary policy-relevant inflation increased slightly in 2016 Q3, but stayed well below the CNB's target. The growth of the Czech economy slowed as a result of a temporary drop in investment co-financed from EU funds, and will reach 2.8% in 2016 as a whole. GDP growth will continue to record similar rates in the next two years. On the one hand, growth in investment will resume, but a temporary slowdown in external demand and later also less easy monetary conditions following the discontinuation of the CNB's exchange rate commitment will act in the opposite direction. The continued economic growth will lead to higher wage growth amid an already only slightly decreasing unemployment rate. The growing economy and wages will continue to foster higher domestic costs and hence also higher consumer prices. At the same time, the anti-inflationary effect of import prices will disappear. Both headline and monetary policy-relevant inflation will therefore increase further and slightly exceed the 2% target at the monetary policy horizon. They will then return to the target from above. 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 mid-2017. Consistent with the forecast is an increase in market interest rates thereafter.

The annual rate of growth of the **Czech economy** slowed to 2.6% **in 2016 Q2**, owing mainly to a drop in government and corporate investment co-financed from EU funds. The growth was due chiefly to net exports and to a lesser extent to household consumption. However, the economy will continue to be supported by easy domestic monetary conditions via the weakened koruna and exceptionally low interest rates. Low oil prices and rising external demand are also fostering economic growth. The forecast expects GDP growth to slow marginally further in 2016 Q3.

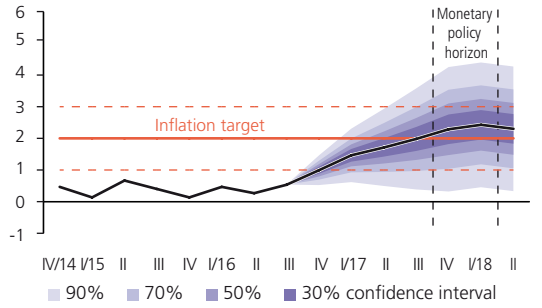
Both **headline and monetary policy-relevant inflation** accelerated slightly on average in **2016 Q3** but stayed well below the CNB's target, or below the lower boundary of the tolerance band around the target (see Charts I.1 and I.2). The increase in consumer prices was again due mainly to adjusted inflation excluding fuels, reflecting growth in the domestic economy and wages. At the same time, the decline in food prices halted and the drop in fuel prices is also fading gradually.

Growth in economic activity in the **effective euro area** will fluctuate around 2% over the entire forecast horizon, although it will dip temporarily below this level next year as a result of the impacts of the future Brexit on economic sentiment. Producer and consumer price inflation in the euro area remains very subdued. However, both producer and consumer prices will rise as a result of the unwinding of the effect of the drop in oil prices and continuing growth of the euro area economy. This will also be fostered by the ECB's easy monetary policy, including quantitative easing, which the forecast assumes will last until March 2017. ECB monetary policy is reflected in the outlook for 3M EURIBOR market interest rates, which is negative until the end of 2018. The Brent crude oil price is expected to rise gradually.

Chart I.1

HEADLINE INFLATION FORECAST

Headline inflation will increase further and slightly exceed the 2% target at the monetary policy horizon
(year on year in %)



According to the **forecast, both headline and monetary policy-relevant inflation** will increase further and slightly exceed the 2% target at the monetary policy horizon (see Charts I.1 and I.2). During 2018, inflation will return to the target from above. Domestic costs will continue to rise apace over the entire forecast horizon due to rising wages and price of capital amid continued growth in economic activity. At the same time, the now fading anti-inflationary effect of import prices, stemming from a fall in industrial producer prices in the euro area, will disappear. These factors will cause adjusted inflation excluding fuels to increase from the start of next year. Food price inflation will also accelerate owing to the evolution of world prices of agricultural commodities and the fading of one-off effects observed last year. Administered prices will be flat overall this year and gradually increase over the next two years. Fuel prices will rebound from their current deep year-on-year decline at the end of this year and then rise in line with world prices of oil.

The forecast expects market **interest rates** to be flat at their current very low level until mid-2017 (see Chart I.3). 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 the second half of 2017, followed by a further modest rise in 2018. The forecast assumes that the **exchange rate** will be used as a monetary policy instrument at CZK 27 to the euro until mid-2017. Sustainable fulfilment of the 2% inflation target, which is a condition for a return to conventional monetary policy, will occur from mid-2017 onwards. 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 against the euro and the repercussions of the ECB's quantitative easing will manifest themselves after the exit from the exchange rate commitment. Renewed – although much slower than in the pre-crisis period – real convergence of the Czech economy to the advanced euro area countries will act in the same direction. According to the forecast, the koruna will thus appreciate against the euro in the second half of 2017. It will also appreciate slightly in 2018.

The growth of the Czech economy will reach 2.8% this year as a whole (see Chart I.4) amid a temporary drop in investment co-financed from EU funds. GDP growth will continue to record similar rates in the next two years. On the one hand, growth in investment will resume, but a temporary slowdown in external demand and later also less easy monetary conditions following the discontinuation of the CNB's exchange rate commitment will act in the opposite direction. The rising economic activity will manifest itself in the **labour market** in faster wage growth amid an already only modest decrease in the unemployment rate.

CHART I.2

MONETARY POLICY-RELEVANT INFLATION FORECAST

Monetary policy-relevant inflation will continue to rise and move slightly above the 2% target at the monetary policy horizon

(year on year in %)

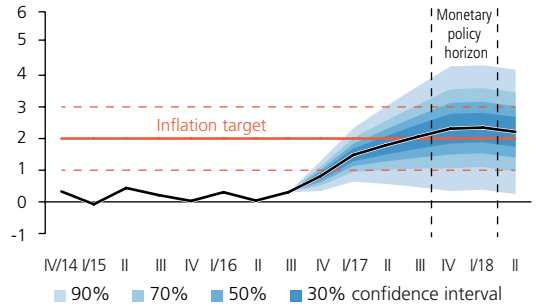


CHART I.3

INTEREST RATE FORECAST

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

(3M PRIBOR in %)

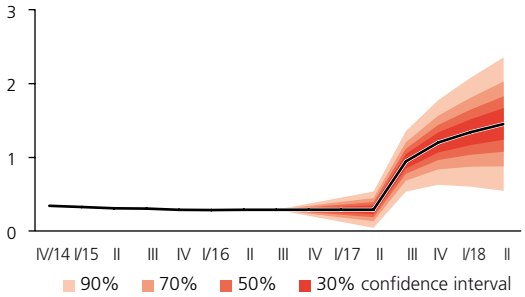
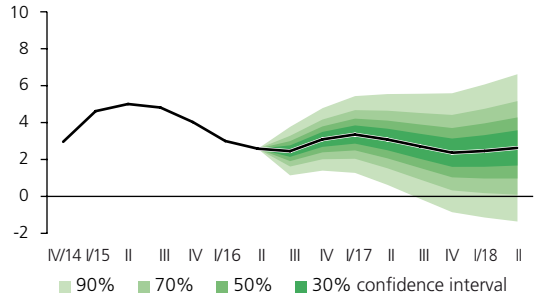


CHART I.4

GDP GROWTH FORECAST

Economic growth will fluctuate close to 3%

(annual percentage changes; seasonally adjusted)



At its monetary policy meeting on 3 November 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 inflation forecast at the monetary policy horizon as being balanced. The uncertainties of the forecast include the speed of return to growth in government and corporate investment, the effect of the election cycle on discretionary government expenditure, the impacts of the outcome of the UK referendum on external demand and the future settings of the monetary conditions of the major central banks. The Bank Board stated again that the CNB would not discontinue the use of the exchange rate as a monetary policy instrument before 2017 Q2. The Bank Board still considers it likely that the commitment will be discontinued in mid-2017.

II. THE FORECAST, ITS CHANGES AND RISKS

II.1 EXTERNAL ASSUMPTIONS OF THE FORECAST

The growth rate of external economic activity will slow next year owing to the impacts of the future Brexit on economic sentiment. External demand will return to growth of about 2% in 2018. The continuing decline in euro area producer prices mainly reflects low energy commodity prices. Producer prices are expected to return to annual growth at the start of next year. Consumer price inflation will go up gradually from very low levels owing to rising demand and the unwinding of the effect of the slump in oil prices, but will stay below 2% until the end of 2018. The outlook for 3M EURIBOR market interest rates reflects the continued easy monetary policy of the ECB and is negative over the entire horizon. This is also contributing to an expected depreciation of the euro against the US dollar until the end of 2017. The outlook for the Brent crude oil price is gradually rising over the forecast horizon.

The outlook for the **effective indicator of euro area GDP** foresees a modest pick-up in economic growth to 2.2% this year (see Chart II.1.1),[1] mainly as a result of favourable developments early this year. Easy monetary conditions and low energy commodity prices are having a positive effect. Economic growth is expected to slow to 1.6% in 2017 and accelerate to almost 2% in 2018. The outlook has thus shifted slightly lower compared to the assumptions of the previous forecast, mainly reflecting a deterioration in economic sentiment indicators connected with the future Brexit.

The **effective indicator of industrial producer prices in the euro area** is expected to fall by 2.7% this year, i.e. by the same amount as in 2015 (see Chart II.1.2), mainly because of a drop in energy commodity prices. Industrial producer prices are expected to return to year-on-year growth at the start of next year as the effect of the commodity price decline unwinds. The recovery in price growth will also be due to year-on-year depreciation of the euro against the dollar. Producer prices are expected to rise by 1.6% on average in 2017 as a whole and by 2.1% in 2018. Compared to the previous forecast, the outlook for this year and the next is 0.2 percentage point higher on average owing to past observed data and a slightly higher oil price outlook.

The subdued evolution of the **effective indicator of consumer prices in the euro area** this year mainly reflects a continuing decline in energy prices for households. In 2016 as a whole, consumer prices are expected to increase by just 0.3% on average (see Chart II.1.3),

1 The outlooks for euro area GDP, PPI and CPI and the dollar-euro exchange rate are based on the October Consensus Forecasts (CF). The outlooks for the 3M EURIBOR and the Brent crude oil price are derived from prices of market contracts as of 10 October 2016. The outlook is indicated by the grey areas in the charts. This convention is used throughout this Report. The differences between the previous and new forecast in the past are due above all to revisions; the weights of individual countries in Czech exports have been updated at the same time.

CHART II.1.1

EFFECTIVE GDP IN THE EURO AREA

Growth in external economic activity will slow temporarily below 2% in 2017 and then increase again

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

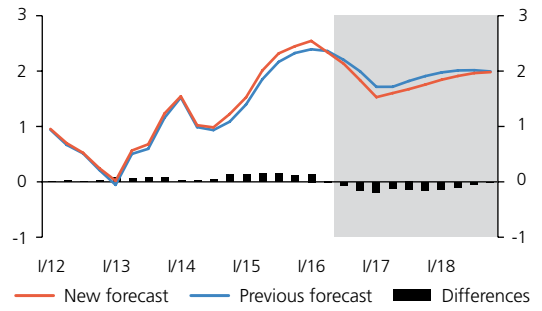


CHART II.1.2

EFFECTIVE PPI IN THE EURO AREA

The decline in industrial producer prices will fade out in early 2017 and producer price inflation will exceed 2% in 2018

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

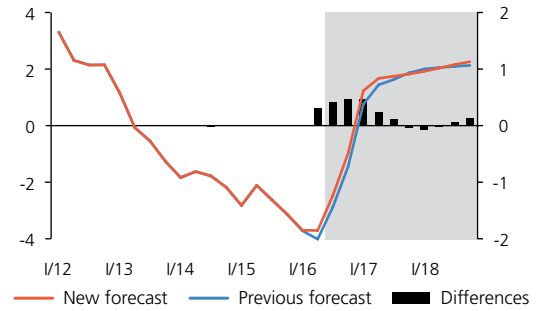


CHART II.1.3

EFFECTIVE CPI IN THE EURO AREA

Consumer price inflation will gradually increase to just below 2%

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

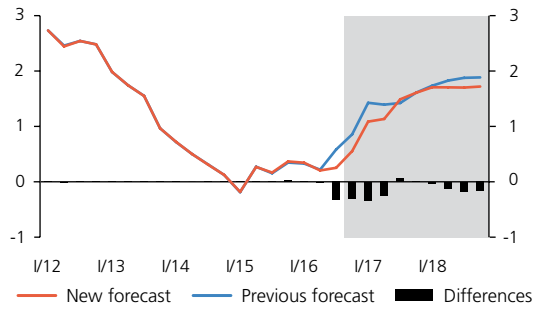


CHART II.1.4

3M EURIBOR

Continued easy monetary policy of the ECB is reflected in an outlook for negative market interest rates in the euro area over the entire forecast horizon
(in %; differences in percentage points – right-hand scale)

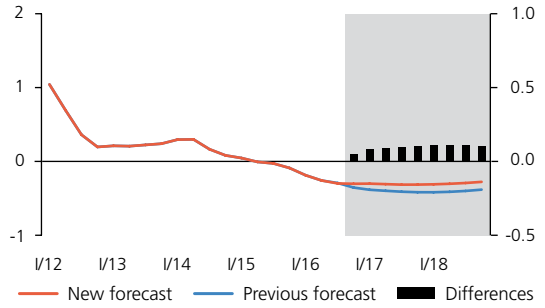


CHART II.1.5

EURO-DOLLAR EXCHANGE RATE

The euro-dollar exchange rate is expected to weaken slightly next year
(USD/EUR; differences in % – right-hand scale)

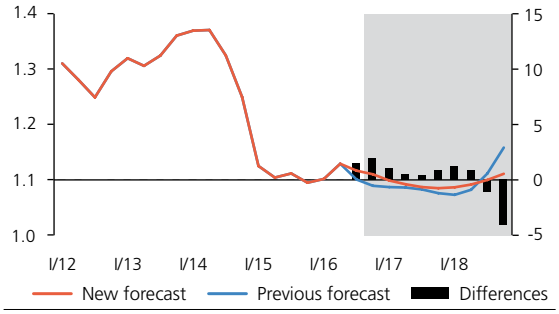
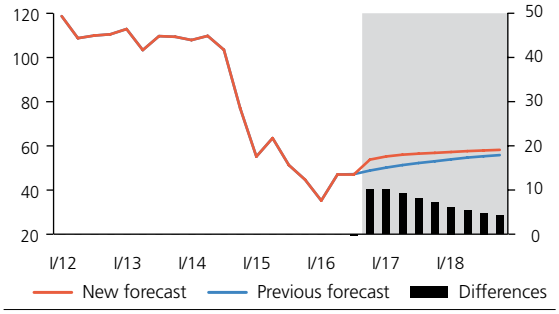


CHART II.1.6

PRICE OF BRENT CRUDE OIL

The market outlook for the crude oil price expects a gradual rise
(USD/barrel; differences in % – right-hand scale)



i.e. by roughly the same amount as last year. Consumer prices are projected to go up on average by 1.3% next year as the effect of low energy prices gradually unwinds and by 1.7% in 2018. This means slightly lower figures over the entire prediction horizon compared to the previous forecast.

3M EURIBOR market interest rates should be negative around -0.3%[2] over the entire forecast horizon (see Chart II.1.4). Their outlook reflects subdued inflation in the euro area and the continued easy monetary policy of the ECB. The market outlook has shifted slightly higher compared to the previous forecast. This outlook is in line with the expectations of the analysts surveyed in the October CF, who also expect the 3M EURIBOR to be -0.3% at both the 3-month and 12-month horizons.

The outlook for the **euro-dollar exchange rate** foresees the euro fluctuating close to USD 1.1 to the euro. The euro is expected to depreciate slightly next year, but a modest appreciation is predicted for 2018 (see Chart II.1.5). Compared to the previous forecast, this represents a shift towards a stronger euro over most of the forecast horizon (except in 2018 H2). Brexit-related uncertainty and its impacts on the euro area economy, which could lead to a further easing of ECB monetary policy, are a risk towards more significant depreciation of the euro. On the other hand, the Fed is expected to increase rates this year; if it leaves them unchanged, this could be reflected in a weakening of the dollar.

The market outlook for the **Brent crude oil price** expects a gradual rise from the initial level of just above USD 50 a barrel to about USD 58 a barrel at the end of 2018 (see Chart II.1.6). Compared to the previous forecast, the outlook is roughly USD 3 a barrel higher, owing mainly to the major oil producers' October agreement to curb extraction; however, final agreement is not expected to be reached until the November meeting of the OPEC countries and Russia. An increase in the estimate of demand for oil, especially in the USA and India, also contributed to this shift. The analysts surveyed in the October CF expect the Brent crude oil price to be around USD 53 a barrel at the 12-month horizon, i.e. USD 3 a barrel lower than the market outlook.

2 As in the previous forecasts, this prediction takes into account the ECB's asset purchase programme (at least until March 2017) through expert adjustments using shadow interest rates. These rates are about 1.25 percentage points more negative than the market rate outlook.

II.2 THE FORECAST

Both headline and monetary policy-relevant inflation accelerated modestly in 2016 Q3 but stayed well below the lower boundary of the tolerance band around the CNB's target. Inflation will continue to rise and will slightly exceed the 2% target at the monetary policy horizon. During 2018, it will return to the target from above. The domestic economy will continue to foster higher costs and hence also higher consumer prices via rising wages and price of capital. The anti-inflationary effect of import prices, which has already started to weaken, will gradually disappear. Real GDP growth will slow to 2.8% this year because of a decline in gross capital formation due to a fall in government and corporate investment co-financed from EU funds. On the other hand, the economy continues to be supported by still easy monetary conditions, low commodity prices and external demand. GDP growth will stay slightly below 3% on average in the following two years. The continued economic growth will manifest itself in the labour market in faster wage growth and an already only modest decrease in the unemployment rate. 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 mid-2017. Consistent with the forecast is an increase in interest rates thereafter.

Annual **headline inflation** accelerated modestly to 0.5% in 2016 Q3 and will continue to rise in the period ahead. This will be due partly to a continuing unwinding of the anti-inflationary effect of import prices and increasing inflation pressures from the domestic economy, stemming mainly from rising wages. Headline inflation will slightly exceed the 2% inflation target at the monetary policy horizon (see Chart II.2.1), due in part to renewed growth in administered prices. Sustainable fulfilment of the target in the future is a condition for an exit from the CNB's exchange rate commitment, which the forecast assumes will occur in mid-2017. In 2018, inflation will return to the target from above in an environment of a gradually strengthening exchange rate and rising interest rates.

Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, was 0.3% on average in 2016 Q3. It thus stayed well below the CNB's 2% target, or below the lower boundary of the tolerance band around the target. Over the forecast horizon, it will differ only marginally from headline inflation. The assumed overall impact of indirect tax changes is slightly positive for this year and 2018 but marginally negative for 2017. Monetary policy-relevant inflation will thus be slightly below headline inflation this year and in 2018 and slightly above it in 2017 (see Chart II.2.1). It, too, will therefore slightly exceed the target at the monetary policy horizon.

The contribution of changes to **indirect taxes** to annual headline inflation was 0.2 percentage point in 2016 Q3, owing to a harmonisation adjustment made to excise duty on cigarettes and tobacco in January 2016. The forecast assumes further increases in

CHART II.2.1

HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

Both headline and monetary policy-relevant inflation will rise further and slightly exceed the 2% target at the monetary policy horizon

(year on year in %)

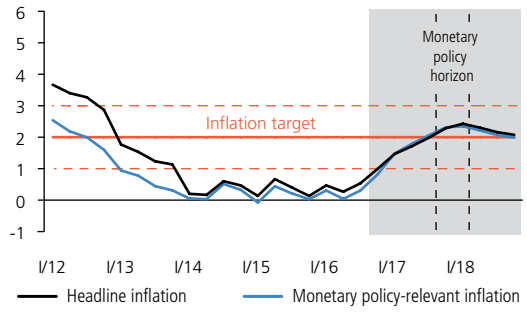


CHART II.2.2

ADMINISTERED PRICES

Administered prices will be almost unchanged on average this year and will rise steadily after the fall in natural gas prices fades out

(annual percentage changes; contributions in percentage points)

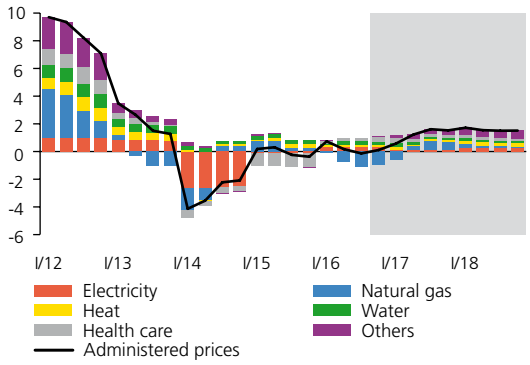


TABLE II.2.1

FORECAST OF ADMINISTRATIVE EFFECTS

All the main components of administered prices will rise as from next year

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

	2015 actual		2016 forecast		2017 forecast		2018 forecast	
Administered prices – total[a)]	0.0	0.00	0.2	0.04	1.2	0.21	1.6	0.26
of which (main changes):								
electricity	-0.4	-0.01	1.2	0.06	0.4	0.02	1.0	0.05
natural gas	3.1	0.08	-4.5	-0.13	1.1	0.03	0.8	0.02
heat	1.9	0.03	1.0	0.02	1.2	0.03	2.0	0.04
water	3.4	0.03	1.4	0.01	2.0	0.02	2.0	0.02
health care	-17.0	-0.15	3.8	0.04	3.9	0.04	3.3	0.04
First-round impacts of indirect tax changes in non-administered prices		0.21		0.20		-0.02		0.09

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 as a result of continuing wage growth and the unwinding of anti-inflationary external effects

(year on year in %)

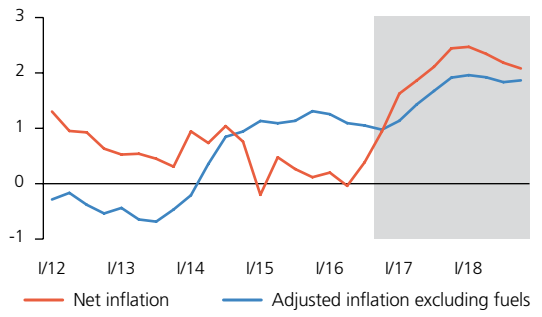
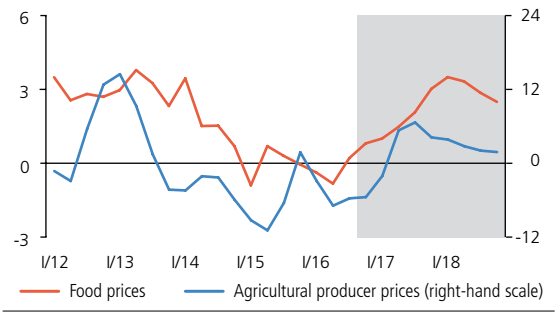


CHART II.2.4

FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

Food price inflation will accelerate due to the evolution of agricultural commodity prices and the fading of one-off anti-inflationary effects observed last year

(annual percentage changes)



excise duty on tobacco products at the start of 2017 and 2018 with an estimated impact on headline inflation of 0.1 percentage point in both cases. The forecast also incorporates a decrease in the VAT rate for restaurants and other catering facilities (excluding alcoholic beverages) from the current 21% to a reduced 15% rate with an estimated first-round effect on headline inflation of -0.15 percentage point. This change will take effect on 1 December 2016.

Administered prices fell slightly year on year in 2016 Q3. This was due to a decrease in gas prices for households introduced by major suppliers. The forecast expects administered prices to rise moderately until the end of this year, with the decrease in gas prices being broadly offset by growth in other items. As regards electricity and heat prices for households, the forecast predicts continued price growth of just above 1% this year. Water supply and sewerage collection charges and prices of other services will rise even faster. Overall, administered prices will thus be almost unchanged in 2016 (see Chart II.2.2). Next year, they will rise by 1.2% on average. This will be due to renewed growth in natural gas prices owing to expected growth in prices on world markets amid still slightly positive contributions from all other major administered items (see Table II.2.1). Administered prices will rise by 1.6% on average in 2018.

Annual **net inflation** increased to 0.4% on average in 2016 Q3 (see Chart II.2.3). This was due to an unwinding of the decline in food prices and a moderation of the drop in fuel prices. In the period ahead, the forecast expects a further rapid increase in net inflation connected with strengthening cost pressures from the labour market and recovering growth in foreign producer prices and prices of energy and agricultural commodities. As from mid-2017, net inflation will fluctuate above 2%. In 2018, it will return to this level from above as a result of exchange rate appreciation following the assumed exit from the use of the exchange rate as a monetary policy instrument.

Annual **adjusted inflation excluding fuels** remained stable in 2016 Q3, averaging 1.1%. Growth in non-tradables prices accelerated somewhat during Q3, while growth in tradables prices moderated slightly. Adjusted inflation excluding fuels will remain at similar levels until the end of this year, but it will start to rise gradually in 2017 (see Chart II.2.3). In the second half of the year it will thus reach the 2% level, where it will stay in 2018. Its pick-up will be due to continuing inflation pressures from the domestic economy amid rapid wage growth and to a renewed increase in producer prices in the euro area. These factors will be only partly offset by the expected appreciation of the koruna following the exit from the CNB's exchange rate commitment.

Food prices increased by 0.2% year on year in 2016 Q3. This was a result of the gradually fading deep year-on-year declines in meat and milk product prices caused by the retaliatory embargo on imports of selected foodstuffs into Russia together with the lifting of milk quotas in the EU last year. These factors will disappear in the next few

months and the effect of modest growth in agricultural commodity prices and the continuing inflationary effect of the domestic economy will then prevail. Year-on-year growth in food prices should therefore gradually accelerate towards 3% next year (see Chart II.2.4). The forecast expects slightly higher growth rates at the start of 2018, but food price inflation will then go down again.

Fuel prices continued to fall year on year in 2016 Q3, although the decline gradually slowed (to 7.3% in September; see Chart II.2.5). Fuel prices thus continued to reflect the year-on-year decline in prices of Brent crude oil and petrol on foreign markets. According to available indicators,[3] fuel prices were higher in October than in the previous months. Their deep year-on-year decline will thus moderate further during 2016 Q4 and fuel prices should show a slight year-on-year rise at the end of this year. Annual growth in fuel prices should be strong at the beginning of 2017 due to annual growth in global oil and petrol prices (mainly as a result of base effects), but weaken later. Fuel prices will increase by 1.6% on average in 2018.

Domestic money market **interest rates** remained at historical lows in 2016 Q3. The forecast expects short-term market interest rates to be flat at their current very low level until mid-2017. 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 the second half of 2017 followed by a further modest rise in 2018 (see Chart II.2.6). However, the speed of this rise in the forecast does not reflect additional monetary policy considerations, as in reality it can be expected that the exchange rate commitment will be terminated first and only some time later will rates gradually go up.

The **exchange rate of the koruna against the euro** remained very close to the exchange rate commitment of CZK 27 to the euro in 2016 Q3. The forecast assumes that the exchange rate will be used as a monetary policy instrument until mid-2017 and will remain at this level in this period. Sustainable fulfilment of the 2% inflation target, which is a condition for a return to conventional monetary policy, will occur from mid-2017 onwards. 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 against the euro[4] and the repercussions of the ECB's quantitative easing, which the forecast

CHART II.2.5

FUEL PRICES AND THE OIL PRICE

Fuel prices will start to rise sharply year on year in line with world prices of oil
(annual percentage changes)

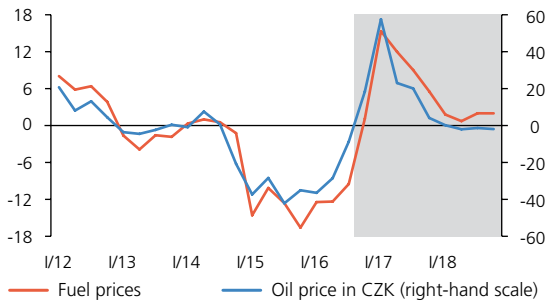
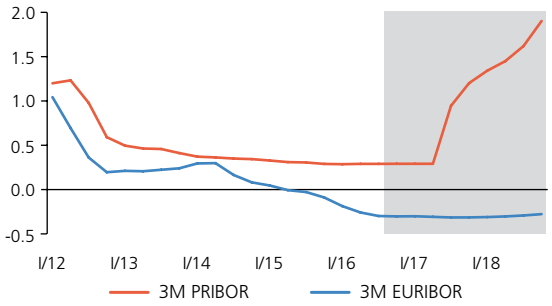


CHART II.2.6

INTEREST RATE FORECAST

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



3 CCS payment cards portal data and the CZSO's weekly surveys of fuel prices.

4 However, the forecast routinely attaches only a partial 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.

assumes will last until March 2017, will manifest themselves after the exit from the exchange rate commitment. Renewed – although much slower than in the pre-crisis period – real convergence of the Czech economy to the advanced euro area countries will act in the same direction. According to the forecast, the koruna will thus appreciate against the euro in the second half of 2017.[5] It will also appreciate slightly in 2018, roughly at its assumed equilibrium rate (1.5% a year in real terms). In light of the CF outlook for a slightly depreciating euro against the dollar (see section II.1), this implies depreciation of the koruna-dollar exchange rate until mid-2017. The koruna will subsequently appreciate against the dollar. This appreciation will be supported in 2018 by the assumed slight appreciation of the euro against the dollar.

Growth in **nominal marginal costs in the consumer goods sector** has been increasing since the start of 2016, as the deflationary effect of import prices has gradually been dissipating amid a broadly stable contribution of domestic cost pressures (see Chart II.2.7). Estimated growth in export-specific technology, linked to different productivity growth in tradables and non-tradables (the Balassa-Samuelson effect; see Box 2 in IR III/2016), has been contributing to the growth in total costs for two years now. The overall upward cost pressures on consumer prices will rise quickly until mid-2017. Accelerating growth in domestic wages and, in particular, renewed growth in foreign producer prices will thus be apparent. Given a stable exchange rate of the koruna, the anti-inflationary effect of import prices will thus moderate further and will disappear in the first half of next year. Appreciation of the koruna and continued growth in euro area producer prices will act in opposite directions from the second half of 2017, i.e. after the assumed exit from the use of the exchange rate as a monetary policy instrument. Import prices will thus have a slight anti-inflationary effect again in the short term and intermediate goods price inflation will also fall back from its previous high levels. Growth in the total costs of the consumer sector will return to 2% in 2018, amid a renewed slightly inflationary effect of import prices.

Nominal marginal costs in the intermediate goods sector recorded a slight upswing in growth in 2016 Q3 (see Chart II.2.8). This was due mainly to continued growth in nominal wages in the business sector. The price of capital also continued to make a positive contribution to the growth in marginal costs, reflecting continuing growth in overall economic activity and external demand. Growth in domestic nominal costs will accelerate until the start of 2017, partly aided by an increase in the minimum wage in January 2017. Later on, however, it will slow due to an expected slowdown in foreign demand and appreciation of the koruna in the second half of 2017.

CHART II.2.7

COSTS IN THE CONSUMER SECTOR

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

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

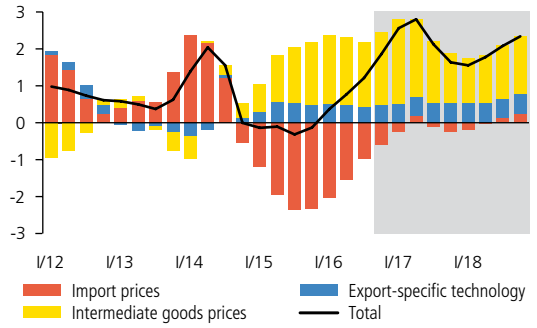
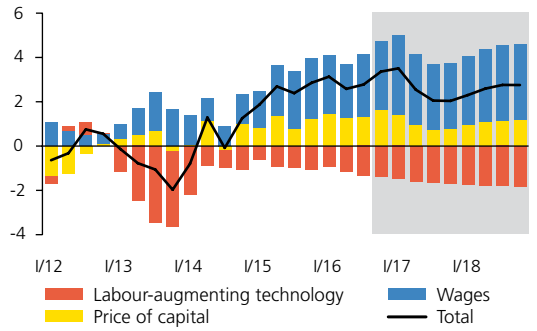


CHART II.2.8

COSTS IN THE INTERMEDIATE GOODS SECTOR

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

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



5 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 positive contributions of the price of capital and, to a lesser extent, wages will therefore decrease amid a renewed upswing in growth in labour productivity. The growth rate of domestic costs will stabilise at just above 2% in 2018.

The gap in **profit mark-ups in the consumer goods sector** closed in mid-2015. It then started to open up again into negative values, with growth in costs (stemming mainly from wage increases and recently also the unwinding of the significantly anti-inflationary effect of import prices) outpacing inflation. The gap in profit mark-ups will start to close again in mid-2017 (see Chart II.2.9) due to appreciation of the koruna, rising inflation and temporarily slackening growth in domestic costs.

Annual growth in **whole-economy labour productivity** will slow temporarily in 2016 Q3. Fluctuating in a range of 2%–3%, it will reflect annual GDP growth in 2017–2018 coupled with an only gradual and steady increase in employment.

The average nominal **wage in the business sector** rose by 4% year on year (seasonally adjusted) in 2016 Q2. The forecast expects wage growth to increase gradually in the second half of the year (see Chart II.2.10). The average nominal wage in the business sector will thus go up by 4.2% in 2016 as a whole. Wage growth will continue to pick up to 5% in 2017 on the back of a gradual return of inflation to the target, solid growth in economic activity, an increasing shortage of available labour force and a further increase in the minimum wage.[6] Wage growth will also be close to this assumed long-run equilibrium level in 2018. The real wage in the business sector will increase by 3.7% this year and slow to 3.1% and 2.7% in 2017 and 2018 respectively due to higher inflation.

The forecast also expects faster wage growth in the **non-business sector** in the second half of this year (see Chart II.2.10). This reflects a September increase in teachers' pay and a November increase in the salaries of other public sector employees. Overall, annual wage growth in this sector will slightly exceed 4% this year. The forecast predicts that wages will accelerate to just above 5% next year. In addition to the government's current plans, this reflects expected positive developments in government finances and an assumption that the wage increase in the non-business sector will again be brought forward to autumn 2017. In 2018, wage growth in the non-business sector will slow to 4% on average.

Real GDP growth slowed to 2.6% year on year **in 2016 Q2**. All components of demand except fixed investment made positive contributions to this growth, with net exports being the main driver

6 The minimum wage is to be raised from CZK 9,900 to CZK 11,000 in January 2017. This will foster an increase in average wage growth in the business sector of around 0.3 percentage point.

CHART II.2.9

GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

The gap in profit mark-ups will turn more negative and then start to close in mid-2017
(percentages)

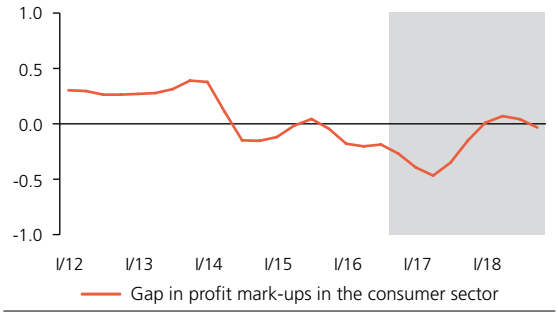


CHART II.2.10

AVERAGE NOMINAL WAGE

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

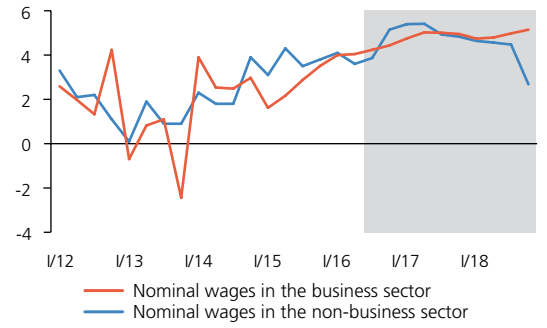


CHART II.2.11

ANNUAL GDP GROWTH STRUCTURE

Household consumption will be a stable contributor to GDP growth, whereas the contribution of investment will be negative this year
(annual percentage changes; contributions in percentage points; seasonally adjusted)

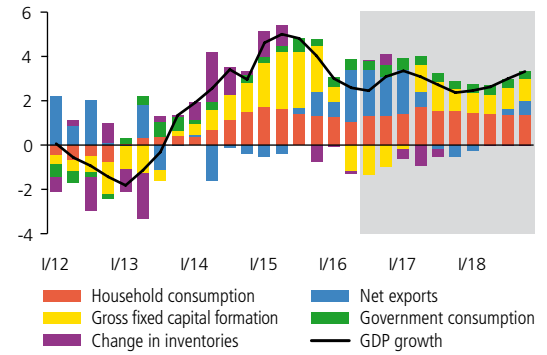


CHART II.2.12

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

The high growth in the converted number of employees will slow amid an increasing shortage of available labour force
(annual percentage changes; contributions in percentage points)

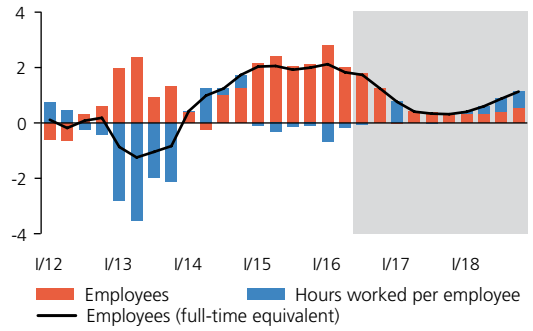


CHART II.2.13

LABOUR MARKET FORECAST

Total employment will continue to rise, 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)

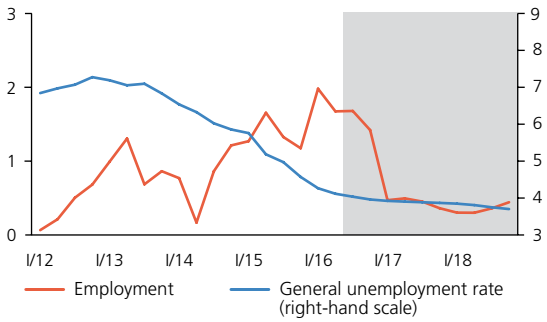
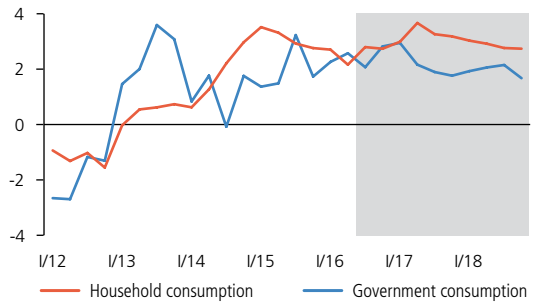


CHART II.2.14

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption will outpace government consumption
(annual percentage changes; seasonally adjusted)



(see Chart II.2.11). **GDP growth** will slow to 2.8% **in 2016**, mainly because of a decline in gross capital formation due to a fall in government investment and a decline in corporate fixed investment as a result of only gradual drawdown of EU funds in the new programme period. The other components of demand, most notably net exports, will make positive contributions to GDP growth.

GDP growth will pick up slightly to 2.9% **in 2017**, mainly because of still robust household consumption and renewed growth in fixed investment connected with a gradual recovery in both its government and private components. A more marked pick-up in growth will be counteracted by slower growth in external demand in 2017 H1 due to the future Brexit and less easy monetary conditions in 2017 H2 after the assumed exit from the CNB's exchange rate commitment. All components of demand except inventories will make positive contributions to growth. GDP will remain at the same level on average **in 2018** as in the previous year.

Year-on-year growth in the **number of employees converted into full-time equivalents** will gradually slacken in the coming quarters. The converted number of employees will rise almost exclusively through a further rise in the number of employees. As from early 2018, growth in average hours worked will contribute to faster growth in the converted number of employees owing to a growing shortage of suitable labour force (see Chart II.2.12). The forecast also expects annual growth in **total employment** to slow. This slowdown will be visible mainly at the start of next year, reflecting an already limited supply of available labour force in addition to the unwinding of the effect of the surge in employment observed in early 2016. Growth in total employment will pick up again slightly in the second half of 2018 owing to a subsequent slight increase in growth in economic activity (see Chart II.2.13).

The seasonally adjusted **general unemployment rate** will decrease only gradually over the rest of this year. In addition to slowing growth in employment, this reflects a further rise in the labour force. This indicator will be slightly below 4% over the next two years (see Chart II.2.13). The forecast expects similar developments for the seasonally adjusted **share of unemployed persons, as determined by the MLSA**, which will drop from the current 5.4% to 4.9% at the end of 2018, assuming a continued slight decline in the population aged 15–64.

Year-on-year growth in real **household consumption** slowed significantly to 2.2% in 2016 Q2 (see Chart II.2.14). Given the continued stable growth in real wages and employment and persisting high consumer confidence (see section III.3) and the accelerating growth in consumer credit (see section III.5), this was probably caused largely by the adjustment for the above-average number of working days in the quarter. Growth in household consumption continued to be fostered by all its components in terms of kind, and most of all by short-term consumption. According to the forecast,

year-on-year growth in household consumption rose again to just below 3% in Q3 and will stay at these levels at the end of the year. Household consumption will thus increase by 2.6% on average this year. Its significant contribution to annual growth in economic activity will increase further in 2017 and 2018, with growth in household consumption reaching 3.3% and 2.9% respectively. In addition to a stable contribution of wages and salaries, this will be due to income of entrepreneurs to an increased extent.

Growth in **gross nominal disposable income** edged up in 2016 Q2 (by 0.4 percentage point to 2.9%), with a decrease in the negative contribution of current taxes and social benefits outweighing slower growth in wages and salaries (see Chart II.2.15). Year-on-year growth in disposable income will strengthen further over the forecast horizon, reaching 5.5% at the end of 2018, due to expected renewed growth in income of entrepreneurs and property income. The contribution of wages and salaries will be constantly high, with accelerating growth in the average wage being roughly offset by slower growth in employment.

The seasonally adjusted **household saving rate** remained just below 12% in 2016 Q2. Over the forecast horizon, the saving rate will gradually decline to levels of around 11.5%, amid only slightly faster annual growth in nominal household consumption than gross nominal disposable income (see Chart II.2.16).

Annual growth in real **government consumption** picked up slightly to 2.6% in 2016 Q2. The forecast expects annual growth in real government consumption to slow slightly on average in the second half of 2016 (see Chart II.2.14); government consumption will increase by 2.4% in 2016 as a whole. The forecast expects slightly lower, but still strongly positive growth in government consumption in the next two years. It will be affected mainly by an expected sizeable increase in compensation of government employees and health care expenditure.

Gross capital formation started to decrease year on year in 2016 Q2 (see Chart II.2.17). This was due mainly to a deepening decline in government investment financed from EU funds. Owing to an only gradual start to the drawdown of EU funds in the new programme period, the forecast expects the contribution of gross capital formation to annual GDP growth to remain negative in the coming quarters. However, private investment also recorded muted growth compared to last year, especially in the non-financial corporations sector, which is also affected by drawdown of EU funds (for details see Box 1 in section III.3). However, the forecast expects it to start rising again in the second half of this year (see Chart II.2.18). Consequently, gross capital formation will drop by 2.3% overall in 2016 as a whole. As government investment starts to rise again, total investment growth will recover to 1.7% in 2017 and pick up further in 2018.

CHART II.2.15

NOMINAL DISPOSABLE INCOME

Disposable income growth will accelerate on the back of higher growth in income of entrepreneurs and property income amid stable growth in wages and salaries
(annual percentage changes; contributions in percentage points)

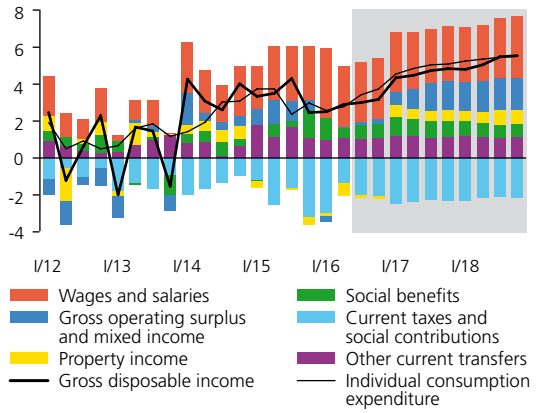


CHART II.2.16

HOUSEHOLD SAVING RATE

The household saving rate will decline slightly
(percentages)

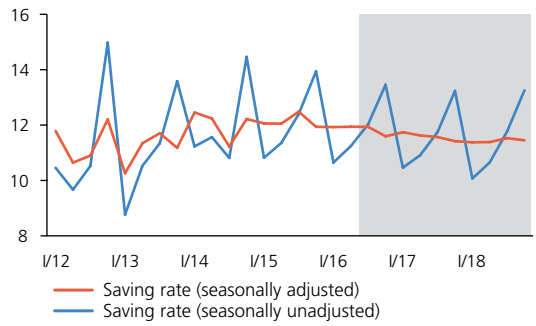


CHART II.2.17

GROSS CAPITAL FORMATION

Gross capital formation will fall this year, mainly due to a drop in investment co-financed from EU funds, but will rise at a stable rate over the next two years
(annual percentage changes; seasonally adjusted)

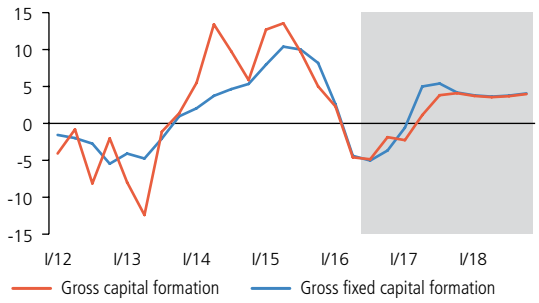


CHART II.2.18

INVESTMENT DECOMPOSITION

The decline in investment this year is due to only gradual drawdown of European funds in both the government and private sector

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

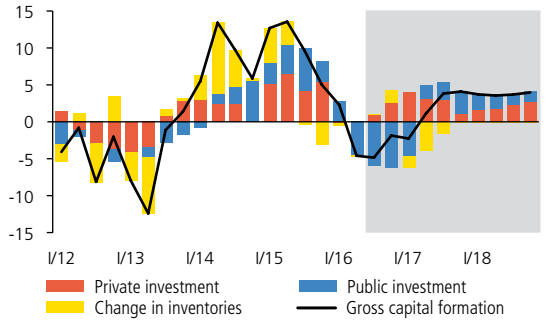


CHART II.2.19

REAL EXPORTS AND IMPORTS

Exports will rise at a relatively stable pace, while imports will accelerate next year due to a recovery in domestic demand

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

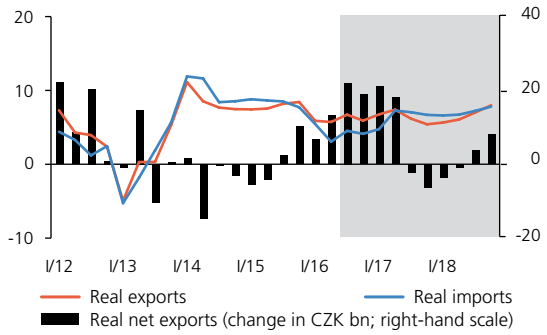


TABLE II.2.2

FORECASTS OF SELECTED VARIABLES

Real disposable income will continue to rise amid accelerating wage growth and continued growth in labour productivity

(annual percentage changes unless otherwise indicated)

	2015 actual	2016 forecast	2017 forecast	2018 forecast
Real gross disposable income of households	3.3	2.4	2.5	2.6
Total employment	1.4	1.7	0.4	0.4
Unemployment rate (in per cent)[a]	5.1	4.1	3.9	3.8
Labour productivity	3.1	1.3	2.4	2.5
Average nominal wage	2.7	4.2	5.0	4.8
Average nominal wage in business sector	2.5	4.3	4.9	4.9
Average real wage	2.4	3.7	3.1	2.5
Current account balance (ratio to GDP in per cent)	0.9	2.4	1.5	1.4
M3	7.3	9.2	8.1	6.4

a) ILO methodology, 15–64 years

Annual growth in real **exports of goods and services** slowed somewhat to 5.7% in 2016 Q2 (see Chart II.2.19). This growth rate is relatively subdued compared to the positive GDP growth recorded in the effective euro area in the first half of the year, as total imports to the euro area showed fairly insignificant growth. On the one hand, the forecast expects GDP growth in the effective euro area to slow temporarily due to the impacts of the future Brexit on economic sentiment, while on the other its import intensity will return to higher levels. Export growth will thus accelerate slightly overall until mid-2017 and then slow temporarily due to appreciation of the exchange rate following the exit from the exchange rate commitment. Exports of goods and services will thus grow by 6.4% in 2017 and 6.7% in 2018 in full-year terms.

Real annual growth in **imports of goods and services** also slowed in 2016 Q2 (to 3.1%), reflecting lower export growth and a decline in total investment. The forecast expects annual import growth to accelerate only slightly in 2016 H2, due to gradually increasing growth in exports and a pick-up in household consumption. As investment activity will remain subdued until the end of 2016, imports of goods and services will rise by only 4.3% overall. Growth in imports will be significantly higher in 2017 and 2018 (at 6.4% and 7.1% respectively), reflecting a recovery in annual investment growth, taking their import intensity into account.

The contribution of **net exports** to annual GDP growth was distinctly positive in 2016 Q2 (2.4 percentage points). The forecast expects the contributions of net exports to be slightly lower but still strongly positive in the rest of this year, due mainly to subdued growth in import-intensive private investment. Net exports will make an overall contribution of 1.7 percentage points to annual GDP growth in 2016 as a whole. In the next two years, the positive contribution of net exports will be considerably lower (at 0.5 and 0.2 percentage point respectively) amid a recovery in investment.

According to preliminary data, the **balance of payments** recorded a current account surplus of 0.9% of GDP in 2015. According to the forecast, the current account surplus will amount to 2.4% of GDP in 2016 and will fall below 2% in the following two years (see Table II.2.3).

The forecasted increase in the **current account** surplus **in 2016** mainly reflects a sharp rise in the goods and services surplus linked with a slowdown in aggregate domestic demand growth and a continued favourable effect of low energy commodity prices. A further decrease in exports to Russia and the economies tied to it will have the opposite effect on the goods balance. To a lesser extent, the expected increase in the current account surplus will also be due to growth in the surplus on services (in particular a sharp rise in the transport surplus). On the other hand, the current account surplus will be moderated by a widening of the primary income deficit (a rise in non-residents' direct investment income and a drop

in the other primary income surplus due to a decline in net interest income) and the secondary income deficit (a year-on-year drop in income from the EU).

The **current account** surplus will decrease significantly **in 2017** compared to this year. This decrease will be fostered by a drop in the trade surplus (a combination of slower growth in external demand,[7] faster growth in domestic demand, appreciation of the koruna after the exit from the CNB's exchange rate commitment and a predicted year-on-year increase in energy commodity prices) and an increase in the primary income deficit (due solely to a rise in the direct investment income deficit). To a lesser extent, the deterioration of the current account will also be due to a shift in the secondary income balance to a larger deficit associated with an expected further decrease in net drawdown of EU funds. The services surplus will be unchanged compared to 2016.

The forecast for the **current account for 2018** expects the trade surplus to rise again (mainly due to a recovery in external demand). At the same time, net drawdown of funds under secondary income will increase slightly (higher net drawdown of EU funds). The improvement in these two component balances will outweigh the expected deterioration in the primary income balance (a further increase in the direct investment income deficit). The predicted services surplus remains at the level of the previous two years.

The forecast expects a large decrease in the **capital account** surplus in 2016 compared to last year. This is associated with the winding down of payments from EU funds for the 2007–2013 programme period. A further marked decline in 2017 will reflect the only gradual start of drawdown of funds from the new programme period; drawdown will accelerate again in 2018.

Direct investment flows are seeing a reversal this year, with a modest net outflow being replaced by a significant net inflow. This is because the extraordinary factors that affected direct investment in 2015 (a one-off outflow of residents' capital abroad and a drop in equity in major domestic subsidiaries owned by non-residents) will disappear. The direct investment balance will simultaneously be significantly affected in the inflow direction in 2016 by one-off financial operations in a major domestic company, which is reducing its foreign assets, and by accounting operations in another major company, which is increasing its borrowing. The net inflow will also be due to a new investment of more than CZK 20 billion by Nexen in the Czech Republic (in 2016 and 2017). However, the forecast predicts that direct investment in the Czech Republic will still primarily take the form of reinvested earnings. The aforementioned financial operations

7 One of the likely factors will be a weakening of the pound and an expected downswing in investment activity in the UK, which may lead to a drop in the current high trade surplus with the UK; this may also affect the services balance, in particular tourism and transport.

Table II.2.3

BALANCE OF PAYMENTS FORECAST

A record current account surplus will be achieved this year, mainly as a result of a rising goods surplus; the current account surplus will subsequently decrease

(CZK billions)

	2015 actual	2016 forecast	2017 forecast	2018 forecast
A. CURRENT ACCOUNT	41.4	115.0	75.0	70.0
Goods	210.7	280.0	265.0	270.0
Services	75.0	90.0	90.0	90.0
Primary income	-243.5	-250.0	-270.0	-285.0
Secondary income	-0.9	-5.0	-10.0	-5.0
B. CAPITAL ACCOUNT	106.1	60.0	20.0	35.0
C. FINANCIAL ACCOUNT[a)]	193.8	215.0	-28.0	52.0
Direct investment	26.6	-120.0	-50.0	-50.0
Portfolio investment	-164.1	-165.0	-125.0	-40.0
Financial derivatives	-4.8			
Other investment	-15.2	140.0	75.0	50.0
Reserve assets	351.3	360.0	72.0	92.0

a) forecast excluding operations of banking sector and financial derivatives

will unwind in 2017 and the net inflow of foreign direct investment will decrease. According to the forecast, its volume will be the same in 2018 (a modest increase in the reinvested earnings surplus will offset the unwinding of the effect of the Nexen investment).[8]

The **portfolio investment** figures were significantly affected in 2015 (to an extent of almost CZK 140 billion) by accounting operations of the banking sector related to the calculation of contributions to the newly established Resolution Fund.[9] Portfolio investment will be affected on the liability side this year mainly by non-residents' continuing interest in government koruna bonds coupled with issuance activity by the Czech Ministry of Finance, which is taking advantage of the current interest rates to cut the cost of government debt financing. The forecast also contains a large issue of bonds to finance the modernisation of telecommunications infrastructure. Owing to previous developments on world stock markets, the forecast also expects a decrease in residents' interest in foreign stocks and a resulting moderation of the overall outflow of capital abroad on the asset side. Non-residents' interest in domestic government bonds will probably persist next year.

With regard to **other investment** (excluding banking sector operations), the forecast predicts a record-high net outflow of capital from the corporate sector in the form of growth in residents' deposits abroad, repayments of existing loans accepted from non-residents and new loans to non-residents. This outflow is expected to moderate gradually in the years ahead owing to expected gradual growth in investment activity in the Czech Republic.

The forecast for **reserve assets** includes expected returns on international reserves, a surplus vis-à-vis the EU (drawdown of EU funds from the previous programme period and the only gradual start of the new programmes) and the inflow into the reserves stemming from the foreign exchange interventions made so far in defence of the CNB's exchange rate commitment.

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

Favourable economic developments **in 2016** will lead to a decrease in the general government deficit to 0.3% of GDP. On the expenditure side, this decrease is aided by a drop in debt service costs resulting from a further reduction in the effective interest rate on government

Table II.2.4

FISCAL FORECAST

A continuing decline in the public finance deficit will culminate in a government budget surplus in 2018
(% of nominal GDP)

	2015 actual	2016 forec.	2017 forec.	2018 forec.
Government revenue	41.3	40.5	41.3	41.5
Government expenditure	42.0	40.7	41.3	41.1
of which: interest payments	1.1	0.9	0.8	0.7
GOVERNMENT BUDGET BALANCE	-0.6	-0.3	0.0	0.4
of which:				
primary balance[a)]	0.4	0.7	0.8	1.1
one-off measures[b)]	-0.1	0.1	0.1	0.1
ADJUSTED BUDGET BALANCE[c)]	-0.6	-0.4	-0.1	0.3
Cyclical component (ESCB method)[d)]	-0.2	0.2	0.2	0.0
Structural balance (ESCB method)[d)]	-0.4	-0.6	-0.3	0.3
Fiscal stance in pp (ESCB method)[e)]	0.3	-0.1	0.3	0.5
Cyclical component (EC method)[d)]	-0.1	0.0	0.1	0.2
Structural balance (EC method)[d)]	-0.4	-0.4	-0.2	0.1
Fiscal stance in pp (EC method)[e)]	0.1	0.1	0.2	0.3
Government debt	40.3	39.0	37.9	36.2

a) government budget balance minus interest payments
b) This item consists of expected revenue from sales of emission permits, expenditure on the (New) Green Savings Programme, revenue from the sale of frequency bands to mobile operators, and in 2015 the impact of the extension of the lease of supersonic fighter aircraft and non-recurring revenue to the Deposit Insurance Fund in bankruptcy proceedings and completed lawsuits.
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)

8 In October 2016, an agreement was signed with General Electric on the first new major investment in equity capital since investment incentives in the Czech Republic were reduced below the level in the other Central European countries in 2014. The total investment will amount to almost CZK 10 billion and involve the development and production of small aircraft engines.

9 The method used to calculate the contributions has not changed, so the forecast predicts that the said operations will remain unchanged in size in 2016–2018. However, it cannot be ruled out that they will increase above and beyond the transactions already executed.

debt owing to financial market developments and positive perceptions of the Czech Republic. An expected marked decrease in government investment owing to the end of the previous programme period for European funds and the only gradual start of the new one is also making itself felt this year. However, the total general government balance will only be affected by the related drop in expenditure on co-financing European projects from national sources.[10] Counteracting this is an increase in subsidies for renewable resources, an extraordinary benefit payment to pensioners, higher transfers of own resources to the EU budget and the bringing-forward of the increase in public sector wages. The general government revenue side is being bolstered this year by a further increase in excise duty on tobacco products, a rise in the rate of tax on lotteries and other similar games and additional revenues from the introduction of VAT control statements.[11] Fiscal policy will have a significantly restrictive effect overall this year, making a contribution to economic growth of around -0.7 percentage point (see Table II.2.5), primarily due to the aforementioned decrease in government investment co-financed from EU funds.

In **2017**, a balanced general government budget can be expected, due mainly to continued favourable economic growth. Moreover, the revenue side is expected to be positively affected by the introduction of electronic sales registration[12] and a further increase in excise duty on tobacco products. Counteracting this will be the transfer of restaurant services to a reduced VAT rate related to electronic sales registration and an increase in the tax discount for dependent children. On the expenditure side, a continued acceleration of wage growth in the government sector, higher expenditure on pensions and health care and renewed growth in government investment are expected. The acceleration in government expenditure will be slightly dampened by a drop in some one-off expenditure measures taken this year and a further decline in debt service costs. The effect of fiscal policy on top of rising government consumption will be slightly expansionary in 2017, making a contribution to economic activity of around 0.2 percentage point.

The general government budget will post a surplus of 0.4% of GDP in **2018** due to the positive effect of economic growth. The revenue side will be further bolstered by additional revenues from the extension of the range of business entities obliged to register their sales online and a further increase in excise duty on tobacco. Government investment will continue to rise. The effect of fiscal policy on top of growth in government consumption will be roughly neutral in 2018.

Table II.2.5

FISCAL IMPULSE

The fiscal impulse will be markedly negative in 2016, mainly as a result of a drop in government investment; in 2017 it will be slightly positive

(contributions to GDP growth in percentage points)

	2015 actual	2016 forecast	2017 forecast	2018 forecast
Fiscal impulse	0.8	-0.7	0.2	0.0
of which impact through:				
private consumption	0.2	0.0	0.0	-0.1
private investment	0.1	-0.1	-0.1	0.0
government investment, domestic	0.1	0.0	0.1	0.0
government investment, EU funded	0.4	-0.6	0.2	0.1

10 Payments from EU funds co-financing government institutions' investment activities in accrual terms will be reflected in the general government balance to the same extent on the revenue and expenditure sides.

11 The impact on VAT revenue of 0.2% of GDP is based on a conservative Ministry of Finance 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.

12 The Convergence Programme of April 2016 estimates the positive impact of electronic sales registration in 2017 at approximately 0.3% of GDP. In light of the date when this law will take effect, i.e. December 2016, the impact will be negligible this year.

The current general government **structural deficit** will switch to a moderate surplus by 2018. Given the current fiscal policy settings, the medium-term structural deficit objective of 1% of GDP will thus be comfortably met at the forecast horizon.

The forecast predicts a decrease in **government debt** to 36.2% of GDP in 2018 (from 40.3% of GDP in 2015) owing to the favourable evolution of the general government budget (i.e. increasing primary surpluses) and accelerating growth in nominal GDP and taking into account the evolution of government debt to date and the debt management strategy declared by the Ministry of Finance.

The **risks** to the fiscal forecast include fulfilment of the government investment outlook, the actual impact of anti-tax evasion measures and potential higher government expenditure related to the approaching parliamentary elections in 2017.

II.3 COMPARISON WITH THE PREVIOUS FORECAST

Compared to the previous forecast, the predictions for headline and monetary policy-relevant inflation are slightly lower. This is due to a moderately lower short-term prediction for net inflation, a lower outlook for administered prices and weaker observed and expected growth in nominal wages. Overall GDP growth this year has been revised upwards amid a bigger positive contribution of net exports. By contrast, the GDP forecast for the next two years is slightly lower because of slower growth in external demand, due in part to the expected economic impacts of the future Brexit, and weaker growth in private investment. 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 mid-2017 has been left unchanged. The path of market interest rates after the exit from the CNB's exchange rate commitment has shifted towards slower growth compared to the previous forecast. Nominal wage growth in the business sector has shifted slightly downwards until mid-2017.

The forecast for annual **headline inflation** is slightly lower than the previous one (see Chart II.3.1). This revision is due to a combination of a lower outlook for net inflation for the next five quarters and a lower outlook for administered prices as from mid-2017. The net inflation forecast (see Chart II.3.2) is affected in the short run by leading indicators suggesting weaker growth in food prices and lower adjusted inflation excluding fuels. The forecast also reflects reduced cost pressures resulting from slower wage growth in 2016. Owing to a newly incorporated increase in the minimum wage at the beginning of 2017, however, the cost pressures will rise and fluctuate at roughly the levels of the previous forecast over the remainder of the forecast. Compared to the previous forecast, domestic cost pressures will thus rise more slowly in the short run and will then be roughly the same. The effect of import prices is also little changed. The outlook for administered prices in 2016 has been revised slightly upwards, mainly due to a smaller-than-expected reduction in prices of gas for households. By contrast, their outlook for the next two years has shifted downwards moderately due to a less pronounced expected increase in gas and electricity prices. The estimate of the effects of changes to indirect taxes is unchanged. The forecast for **monetary policy-relevant inflation** has therefore been revised in the same way as that for headline inflation.

Turning to the assumptions regarding the **external environment** (see section II.1), the outlook for industrial producer prices in the effective euro area has been slightly increased for this year and the next compared to the previous forecast. Growth in external demand in the first half of this year was higher than expected, but its outlook has been revised downwards due to the expected impacts of the future Brexit on economic sentiment. The market outlook for 3M EURIBOR interest rates has shifted to slightly less negative levels. The shift in shadow rates matches the revision of the market outlook for 3M EURIBOR rates amid unchanged parameters of the ECB's quantitative easing programme.

Chart II.3.1

CHANGE IN THE HEADLINE INFLATION FORECAST

The forecast for headline inflation is slightly lower over the whole horizon

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

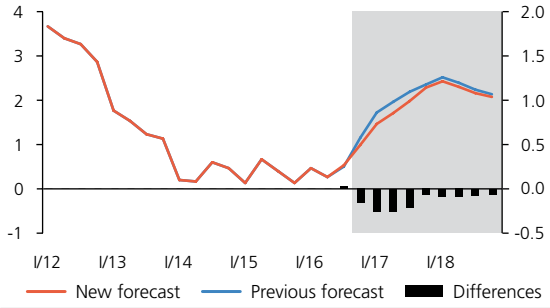


Chart II.3.2

CHANGE IN THE NET INFLATION FORECAST

The lower outlook for net inflation until the end of next year reflects lower expected food price inflation and nominal wage growth

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

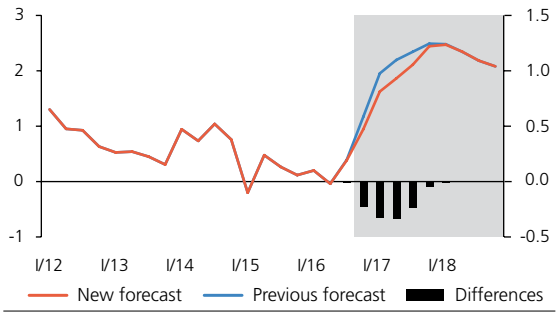


CHART II.3.3

CHANGE IN THE INTEREST RATE PATH

Market interest rates will rise more slowly after the exit from the exchange rate commitment
(3M PRIBOR in %; differences in pp – right-hand scale)

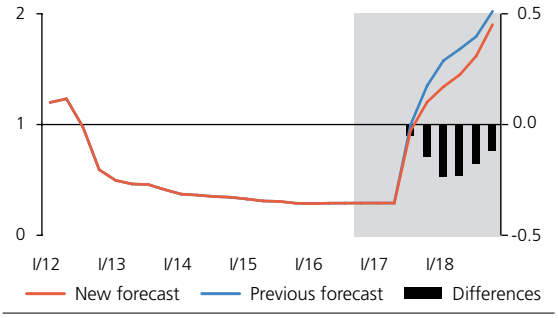


CHART II.3.4

CHANGE IN THE GDP FORECAST

The GDP growth forecast is higher in 2016 and slightly lower in 2017 and 2018 owing to weaker external demand
(annual percentage changes; differences in pp – right-hand scale; seasonally adjusted)

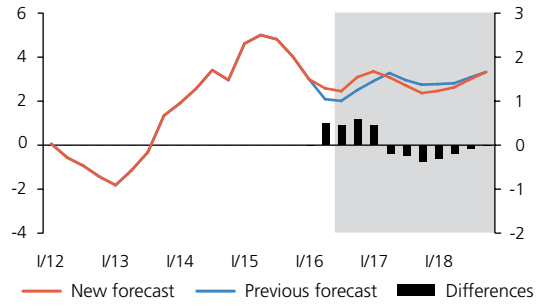
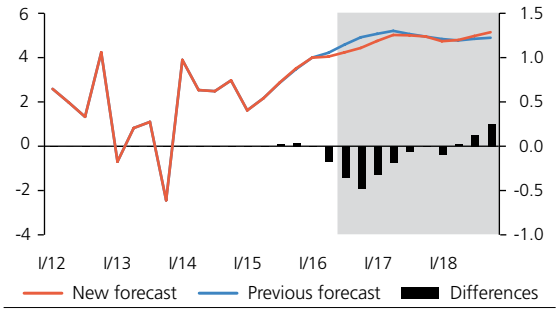


CHART II.3.5

CHANGE IN THE FORECAST FOR NOMINAL WAGES IN THE BUSINESS SECTOR

The nominal wage forecast has shifted slightly lower in the near future
(annual percentage changes; differences in pp – right-hand scale, seasonally adjusted)



The assumption of the use of the exchange rate as an additional monetary policy instrument until mid-2017 remains unchanged. As in the previous forecast, the **exchange rate of the koruna against the euro** will thus remain at the CNB commitment level until then. The exchange rate outlook for 2017 H2 is also unchanged. In 2018, the exchange rate is appreciating insignificantly faster than in the previous forecast, mainly because of a modest increase in the outlook for foreign industrial producer prices. As in the previous forecast, domestic market **interest rates** will remain stable until mid-2017. Their subsequent increase is slower compared to the previous prediction, reflecting a marginally stronger exchange rate and lower inflation (see Chart II.3.3).

The forecast for annual **GDP** growth this year is higher (see Chart II.3.4) owing to higher-than-expected data for 2016 Q2, in particular a stronger contribution of net exports. By contrast, the GDP forecast for 2017 and 2018 is slightly lower, mainly because of slightly lower external demand (the effect of the future Brexit). Despite continued robust growth in wages and salaries, the outlook for household consumption is lower this year owing to a short-term swing in 2016 Q2, which will be offset next year by base effects; the prediction for 2018 is little changed. Gross capital formation growth is being significantly affected this year by government and corporate fixed investment, which has been revised towards a bigger decline. The new data meanwhile indicate that investment by non-financial corporations was affected by the drawdown of EU funds from the previous programme period to a greater extent than the previous forecast had predicted. The fall in investment this year is therefore bigger, and the growth in investment next year has also been lowered. By contrast, real government consumption will rise at a faster rate this year, mainly reflecting the bringing-forward of the increase in public sector wages for 2017 to September 2016. The forecast assumes a similar adjustment (albeit smaller in extent) to be made next year as well. As a result, the overall growth in real government consumption in the next two years is moderately lower compared to the previous forecast. The predicted fiscal impulse on top of government consumption has been revised slightly upwards over the entire forecast horizon.

The contribution of **net exports** to GDP growth will be more positive until mid-2017, because import-intensive overall investment activity has been revised downwards. Subsequently, by contrast, the contribution of net exports is smaller as a result of lower growth in external demand.

Compared to the previous forecast, growth in the average **nominal wage** in the business sector is slightly lower over the next few quarters (see Chart II.3.5). This mainly reflects the less pronounced wage growth observed in 2016 H1. From the beginning of 2017, the forecast newly incorporates a government-approved hike in the minimum wage as of January 2017. Despite that, overall nominal wage growth in the business sector will be slightly lower in 2017 than in the previous forecast. In the following year, by contrast, it will be marginally higher.

II.4. FORECASTS BY OTHER ENTITIES

Analysts' inflation expectations are just below the CNB's target at both the one-year and three-year horizons. The indicator of inflation perceived by households is slightly negative, while the indicator of expected inflation is slightly positive. The analysts expect economic growth to slow below 3% this year and to stay there next year. According to the average of the analysts' opinions, the exchange rate of the koruna will appreciate slightly below CZK 27 to the euro at the one-year horizon. None of the analysts expects the exchange rate commitment to be discontinued before 2017 Q2. All the analysts were also expecting key interest rates to be left unchanged both at the CNB Bank Board's November meeting and at the one-year horizon. The market outlook indicates only a minor decrease in interest rates at the one-year horizon and until mid-2017 is therefore negligibly below the interest rate level contained in the CNB forecast. Consistent with the forecast is an increase in market interest rates thereafter, which the market outlook does not expect.

Inflation expected by financial market analysts is just below the CNB's 2% target at both the one-year and three-year horizons. The inflation expectations of business managers at the one-year horizon remain well below the target (see Table II.4.1).

The indicator of **inflation perceived by households** has been slightly negative for two years now (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 they did previously. Both indicators decreased slightly on average in 2016 Q3 but edged higher at the end of the quarter.

Both the FMIE and CF analysts expect economic growth to slow below 3% this year due to the subsiding of last year's one-off factors (see Tables II.4.1 and II.4.2). The growth is expected to stay below this level next year. Nominal wages are expected to increase by just above 4% in both years. The analysts on average expect the koruna to appreciate slightly below CZK 27 to the euro at the one-year horizon.[13] In line with the communications of the CNB Bank Board, none of the analysts expects the exchange rate commitment to be discontinued before 2017 Q2. Most of them expect the exit to happen in 2017 H2. Before the Bank Board meeting in November, all sixteen 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.

13 The predicted range is relatively wide: CZK 25.5–27.0/EUR in the FMIE survey and CZK 25.8–27.4/EUR in the CF survey.

Table II.4.1

EXPECTED INDICATORS OF FMIE AND CORPORATIONS

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

	6/16	7/16	8/16	9/16	10/16
FMIE:					
CPI	1.8	1.8	1.8	1.9	1.9
CPI, 3Y horizon	1.9	2.0	2.0	2.0	1.9
Real GDP in 2016	2.4	2.4	2.4	2.5	2.5
Real GDP in 2017	2.7	2.6	2.6	2.6	2.6
Nominal wages in 2016	4.2	4.2	4.2	4.2	4.1
Nominal wages in 2017	4.1	4.1	4.2	4.1	4.2
CZK/EUR exchange rate (level)	26.8	26.9	26.9	26.9	26.7
2W repo rate (in per cent)	0.05	0.05	0.05	0.05	0.05
1Y PRIBOR (in per cent)	0.5	0.5	0.5	0.5	0.5
Corporations:					
CPI	1.4			1.3	

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)

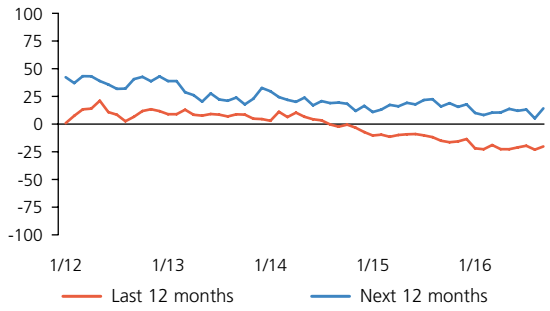


Table II.4.2

CF EXPECTED INDICATORS

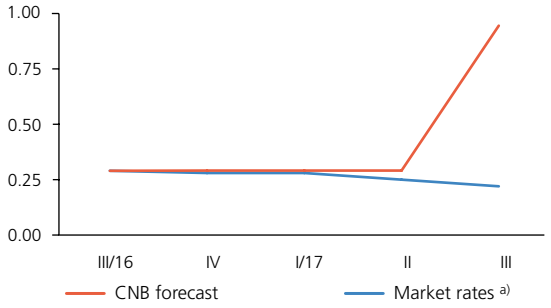
The CF analysts expect economic growth to slow below 3% this year and stay there next year
(at 1Y; annual percentage changes unless otherwise indicated)

	6/16	7/16	8/16	9/16	10/16
Real GDP in 2016	2.5	2.4	2.4	2.5	2.5
Real GDP in 2017	2.7	2.5	2.5	2.5	2.5
Nominal wages in 2016	4.1	4.0	4.1	4.2	4.2
Nominal wages in 2017	4.0	4.0	4.1	4.1	4.2
CZK/EUR exchange rate (level)	26.6	26.8	26.7	26.8	26.7
3M PRIBOR (in per cent)	0.3	0.3	0.3	0.4	0.3

CHART II.4.2

FRA RATES VERSUS THE CNB FORECAST

Consistent with the CNB's new forecast is an increase in market interest rates in 2017 Q3, which the market outlook does not expect
(percentages)



a) for 2016 Q3 and 2016 Q4 the 3M PRIBOR and for 2017 Q1–2017 Q3 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 21 October 2016

Overall, the analysts expect lower real GDP growth both this year and the next **compared to the CNB's new forecast**. Inflation expected by the analysts at the one-year horizon is also below the CNB forecast. The analysts' expectations regarding the 2W repo rate and market rates are in line with the 3M PRIBOR level contained in the new CNB forecast until mid-2017.

Chart II.4.2 provides a **comparison of expected 3M market rates** derived from FRA quotations and the interest rate level assumed by the CNB forecast. The current market outlook for 3M rates implies a minor decrease at the one-year horizon. It will thus be negligibly below the interest rate level assumed in the CNB forecast until mid-2017. Consistent with the forecast is an increase in market interest rates in 2017 Q3, which the market outlook does not expect.

III. CURRENT ECONOMIC DEVELOPMENT

III.1 INFLATION

Annual headline inflation accelerated to 0.5% on average in 2016 Q3, owing chiefly to an unwinding of the sharp decline in food prices and a gradual moderation of the fall in fuel prices. Monetary policy-relevant inflation still stood 0.2 percentage point lower on account of the harmonisation adjustment made to excise duty on cigarettes and tobacco in January 2016. Inflation therefore remained well below the CNB's target, or below the lower boundary of the tolerance band around the target. Adjusted inflation excluding fuels was stable at 1% for the second consecutive quarter and remained the main contributor to consumer price inflation. Its stability reflected the contrary effects of a slight slowdown in tradables prices, due to the still anti-inflationary effect of the external environment, and an acceleration of non-tradables prices driven by domestic factors.

III.1.1 Fulfilment of the inflation target

In 2016 Q3, both headline inflation and monetary policy-relevant inflation were well below the CNB's target, or below the lower boundary of the tolerance band around the target, as well as below the **forecast published in Inflation Report II/2015** (see Chart III.1.1).[14] This 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 the end of 2016. The forecast expected both headline and monetary policy-relevant inflation to be close to zero in 2015 and then rise to the 2% target in 2016. The anti-inflationary effect of import prices – resulting from falling producer prices in the euro area and energy commodity prices – was expected to dissipate gradually. Continued growth in domestic economic activity and recovering wage growth were expected to foster growth in prices over the entire forecast horizon.

Headline **inflation in reality** was initially above the forecast, but has been moving increasingly below it since the end of last year. The gap between actual inflation and the forecast was -1.5 percentage points in 2016 Q3 (see Table III.1.1). This deviation was due to all components of inflation except the first-round effects of indirect tax changes. Unexpectedly subdued food price inflation (a stronger-than-expected

14 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 2016 Q3, we have to examine the period from January 2015 to June 2016, 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 fulfilment of the forecasts is limited here to a comparison of Inflation Report II/2015 with subsequent inflation.

Chart III.1.1

FORECAST VERSUS ACTUAL HEADLINE INFLATION

Inflation was well below the IR II/2015 forecast in 2016 Q3 and therefore well below the CNB's 2% target
(year on year in %)

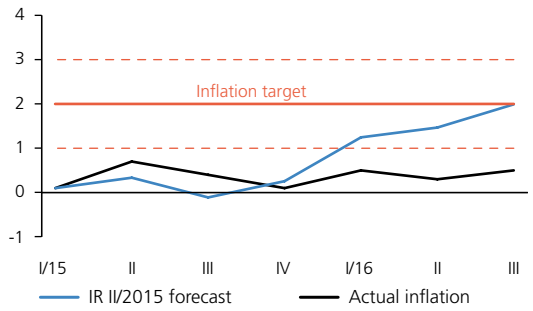


Table III.1.1

FULFILMENT OF THE INFLATION FORECAST

The deviation of inflation from the forecast was due to all components of inflation except changes to indirect taxes
(annual percentage changes; contributions in percentage points)

	IR II/2015 forecast	2016 Q3 outturn	Contribution to total difference
CONSUMER PRICES	2.0	0.5	-1.5
Breakdown into contributions:			
administered prices	1.2	-0.1	-0.2
first-round impacts of changes to indirect taxes[a)]	0.2	0.2	0.0
food prices[b)]	2.2	0.2	-0.5
fuel prices[b)]	3.7	-9.5	-0.5
adjusted inflation excl. fuels[b)]	1.6	1.1	-0.3

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

Table III.1.2

FULFILMENT OF THE EXTERNAL ASSUMPTIONS

External factors had an anti-inflationary effect overall, fostering a need for much easier domestic monetary conditions
(annual percentage changes unless otherwise indicated; p – prediction, o – outturn)

		II/15	III/15	IV/15	I/16	II/16	III/16
GDP in euro area[a), b), c)]	p	1.6	2.0	2.1	2.1	2.1	2.1
	o	1.9	2.2	2.3	2.5	2.4	-
PPI in euro area[b), c)]	p	-1.5	-0.9	0.1	1.4	1.6	1.6
	o	-2.1	-2.6	-3.1	-3.7	-3.7	-
3M EURIBOR	p	0.0	0.0	0.0	0.0	0.0	0.0
(percentages)	o	0.0	0.0	-0.1	-0.2	-0.3	-0.3
USD/EUR exchange rate	p	1.07	1.05	1.04	1.04	1.05	1.05
(levels)	o	1.10	1.11	1.09	1.10	1.13	1.12
Brent crude oil price	p	59.0	61.3	63.0	64.3	65.4	66.4
(USD/barrel)	o	63.5	51.3	44.7	35.2	47.0	47.0

a) at constant prices
b) seasonally adjusted
c) IR II/2015 outlook for effective indicator

Table III.1.3

FULFILMENT OF THE FORECAST FOR KEY VARIABLES

Actual domestic GDP growth was higher than forecasted in 2015, but slightly lower than forecasted in 2016 H1
p – prediction, o – outturn

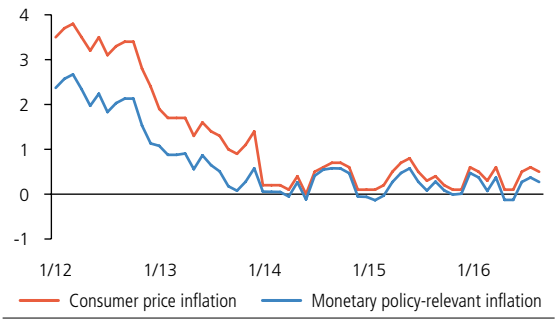
		II/15	III/15	IV/15	I/16	II/16	III/16
3M PRIBOR	p	0.3	0.3	0.3	0.3	0.3	0.3
(percentages)	o	0.3	0.3	0.3	0.3	0.3	0.3
CZK/EUR exchange rate	p	ER commitment: close to CZK 27 to the euro					
(levels)	o	27.4	27.1	27.1	27.0	27.0	27.0
Real GDP[a)]	p	2.4	2.7	3.2	3.0	3.1	3.3
(annual perc. changes)	o	5.0	4.8	4.0	3.0	2.6	-
Nominal wages[b)]	p	3.8	4.3	1.9	2.5	2.5	2.5
(annual perc. changes)	o	2.4	3.0	3.1	4.5	3.9	-

a) seasonally adjusted
b) in the business sector

Chart III.1.2

INFLATION

Inflation accelerated slightly in 2016 Q3
(annual percentage changes)



fall in global agricultural commodity prices, the embargo on food imports into Russia and the abolition of EU milk production quotas) and a drop in fuel prices made the biggest negative contributions. To a lesser extent, the deviation was also due to lower adjusted inflation excluding fuels (owing mainly to a persisting decline in producer prices in the euro area) and more subdued growth in administered prices.

The substantially lower-than-forecasted domestic inflation was due mainly to **external economic factors**. The biggest deviation was recorded by foreign production prices (more than 5 percentage points in 2016 H1), which did not record the expected return to growth and on the contrary continued to show strongly negative year-on-year dynamics (see Table III.1.2). An unexpected further fall in oil prices as from 2015 H2 contributed substantially to these developments. External demand growth was slightly stronger than expected. Foreign interest rates decreased further, even reaching negative levels, a trend which had not been expected by the forecast either. Overall, then, external developments had an anti-inflationary effect on the Czech economy, i.e. they acted towards a need for much easier monetary conditions. **Domestic market interest rates**, however, remained stable (see Table III.1.3) owing to the zero lower bound. The **exchange rate** stayed at levels close to the commitment announced by the CNB. Although they were weak enough from the current perspective to offset the deflationary pressures from abroad, they were not sufficient to 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.

The observed **domestic GDP growth** in 2015 was markedly higher than the forecast under review. Besides a strong effect of revisions of historical data, this difference was due to a stronger rise in both government and private investment as a result of drawdown of EU funds and to real household consumption, which was favourably affected by unexpectedly low energy commodity prices. In 2016 H1, by contrast, GDP growth was lower than forecasted, mainly as a result of a decline in gross capital formation connected with the only gradual drawdown of EU funds in the new programme period.

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 at the monetary policy horizon 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 low global prices of energy and food commodities) clearly prevailing overall. The CNB's exchange rate commitment is still contributing to growth of the domestic economy, fostering an increase in costs and consequently also consumer prices. On account of strong foreign anti-inflationary or even deflationary cost shocks, however, the inflation target has been significantly

undershot for some time now. Overall, based on current knowledge, it thus seems that the monetary policy pursued between January 2015 and June 2016 should have been easier.

III.1.2 Current inflation

Annual inflation was 0.5% on average in 2016 Q3, up by 0.2 percentage point compared to the previous quarter. After accelerating in July and August, it slowed somewhat in September (see Chart III.1.2). The acceleration of annual consumer price inflation was due chiefly to an unwinding of the marked declines in food prices recorded in May and June coupled with a gradual moderation of the declines in fuel prices. Adjusted inflation excluding fuels stayed at around 1%, remaining the biggest contributor to consumer price inflation (see Chart III.1.3).

The contribution of indirect tax changes to inflation was linked with the impact of the harmonisation adjustment made to excise duty on cigarettes and tobacco in January 2016 and amounted to 0.2 percentage point. **Monetary policy-relevant inflation**[15] thus remained slightly below headline inflation. It was thus still well below the CNB's target, or below the lower boundary of the tolerance band around the target.

Administered prices were broadly flat on average in 2016 Q3 (see Chart III.1.4). However, this reflected contrasting developments in the individual categories. Administered prices were reduced by a decrease in gas prices for households introduced by the largest suppliers from May 2016. Transport prices also recorded a negative contribution as a result of falling fuel prices. By contrast, water supply and sewerage collection charges increased. Prices of electricity and heat for households maintained stable growth slightly above 1%.

Annual **market price inflation**,[16] as measured by net inflation, averaged 0.4% in 2016 Q3. The return of net inflation to positive levels reflected mainly the unwinding of the decline in food prices and to a lesser extent the moderation of the drop in fuel prices. Adjusted inflation excluding fuels stayed broadly stable.

Prices of food, beverages and tobacco rose year on year in July and August, but returned to a slight decline in September (see Chart III.1.5). They continued to reflect the persisting decline in agricultural producer prices stemming from the only gradually abating effect of the abolition of EU milk production quotas and from persisting low prices of crop products. In particular, prices of milk, dairy products and eggs continued to fall. In September, however, prices of fruit,

15 Inflation excluding the first-round effects of indirect tax changes.

16 The following text describes the evolution of the individual categories of market prices adjusted for tax changes.

CHART III.1.3

STRUCTURE OF INFLATION

Inflation increased owing to an unwinding of the decline in food prices and a moderation of the fall in fuel prices
(annual percentage changes; contributions in percentage points)

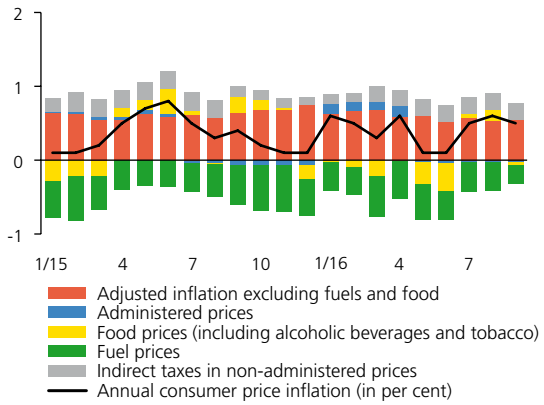


CHART III.1.4

INFLATION COMPONENTS

Adjusted inflation remained the largest component of inflation, while the fall in fuel prices gradually moderated
(annual percentage changes; excluding indirect tax changes except for administered prices)

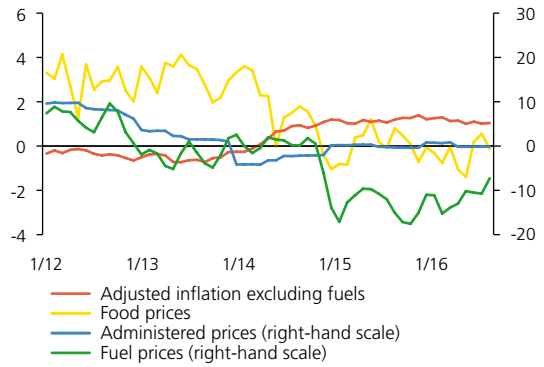


CHART III.1.5

FOOD PRICES

Prices of food, beverages and tobacco went up slightly on average in 2016 Q3 despite a persisting decline in agricultural producer prices
(annual percentage changes)

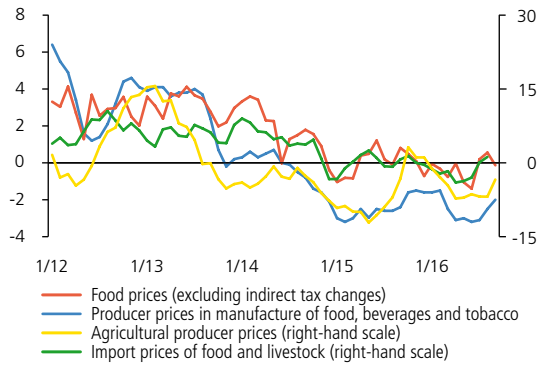
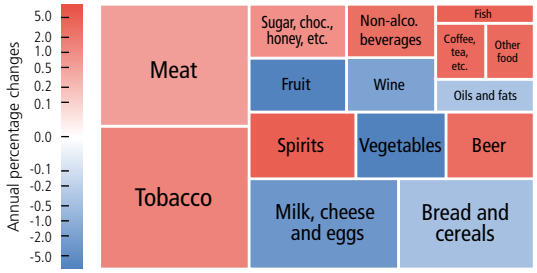


CHART III.1.6

STRUCTURE OF FOOD, ALCOHOL AND TOBACCO PRICE INFLATION IN SEPTEMBER 2016

The trends in food prices remain very mixed
(size of tile – relative weight in consumer basket; colour of tile – annual percentage changes)

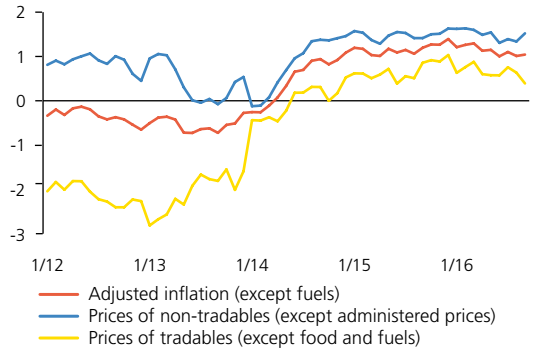


Note: Adjusted for the effect of changes to indirect taxes, tobacco product prices would have increased by 5.9% year on year.

CHART III.1.7

ADJUSTED INFLATION EXCLUDING FUELS

Adjusted inflation stayed close to 1%
(annual percentage changes)



vegetables and, surprisingly, bread products also dropped sharply. By contrast, prices of alcoholic and non-alcoholic beverages, tobacco and meat went up (see Chart III.1.6).

The previously deep annual decline in **fuel prices** slowed gradually in 2016 Q3 (to 7.3% in September; see Chart III.1.4). Fuel prices thus followed the gradually subsiding annual declines in global prices of Brent crude oil and petrol amid only marginal year-on-year appreciation of the koruna against the US dollar.

Adjusted inflation excluding fuels stayed at 1% in 2016 Q3 (see Chart III.1.7). This was due mainly to a slight upswing in growth in prices of non-tradables[17] combined with a slowdown in growth of prices of tradables. The 1.5% increase in non-tradables prices in September reflected continued growth in domestic economic activity, especially in the service sector, and faster growth in wage costs (see Box 2 in Inflation Report III/2016). In particular, increases were recorded by prices of cultural and recreational services, rents, prices of services connected with the operation of personal transport equipment and prices of services connected with personal care. Only post and telecommunications prices recorded a decline. Growth in prices of tradables[18] slowed to 0.4%. This muted trend mainly reflects the continued anti-inflationary effect of foreign prices.

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

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

III.2 IMPORT PRICES AND PRODUCER PRICES

The marked annual decline in import prices gradually moderated in 2016 Q3, mainly because of a decreasing negative contribution from energy commodity prices. Slower price declines in the other components acted in the same direction. This trend was also reflected in industrial producer prices. Prices of agricultural commodities – both crop products and livestock products – also fell at a slower pace than in the previous quarter. Market services price inflation in the business sector remained subdued. Construction work prices continued to rise modestly.

III.2.1 Import prices

The deep year-on-year decline in **import prices** started moderating gradually in April (to 3.6% in August; see Chart III.2.1). Most of the components of import prices recorded slight month-on-month increases in July and August. Besides a persisting (albeit gradually diminishing) negative effect of mineral fuel prices, the year-on-year decline in import prices was also due to import prices of semi-finished products and commodities with a high degree of processing (see Chart III.2.2). Their year-on-year decline, which started in mid-2016, is now fading as well.

The negative contribution of prices of **mineral fuels** was still the largest, but it moderated during 2016 Q3 (see Chart III.2.2). Given the only slight appreciation of the koruna against the dollar, this was due mainly to an unwinding of the year-on-year drop in Brent crude oil prices (to 2.2%). The year-on-year decline in global natural gas prices also slowed, but remained strong (35.2%; see Chart III.2.3), as gas prices usually follow oil prices with a lag of roughly six months.

The year-on-year decline in import prices in the categories of **semi-finished products** and **non-energy commodities** also moderated. This was due to marked month-on-month increases in these categories at the end of 2016 Q2 and the start of 2016 Q3. Import prices of **food, tobacco and beverages** switched to moderate year-on-year growth. This was due to all the main components of this import price category.

The year-on-year fall in **import prices of commodities with a high degree of processing** also moderated during 2016 Q3 in the categories of both imported machinery and transport equipment and miscellaneous manufactured articles (to 1.4% and 1.7% respectively in August). However, import prices in the former category showed mixed trends. While import prices of machinery and equipment switched to marginal annual growth, the decline in import prices of road vehicles deepened.

CHART III.2.1

IMPORT PRICES AND PRODUCER PRICES

The declines in import prices, industrial producer prices and agricultural producer prices moderated
(annual percentage changes)

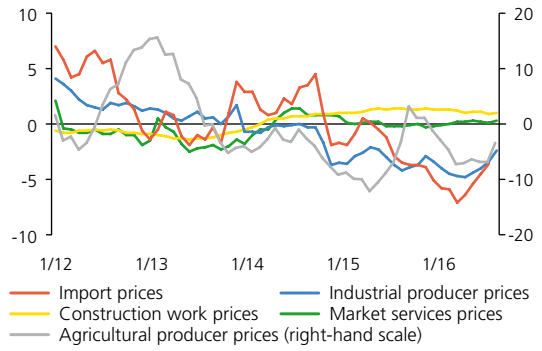


CHART III.2.2

IMPORT PRICES

The continuing decline in import prices remained broad-based, but moderated in all categories
(annual percentage changes; contributions in percentage points)

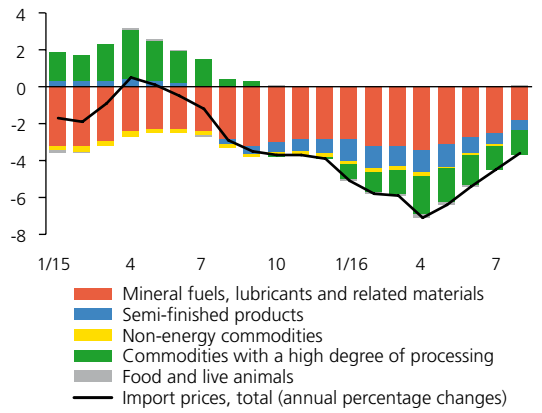


CHART III.2.3

MINERAL FUELS AND LUBRICANTS

Prices of imported mineral fuels reflected a slowing decline in world prices of oil and natural gas coupled with a stable koruna-dollar exchange rate
(annual percentage changes)

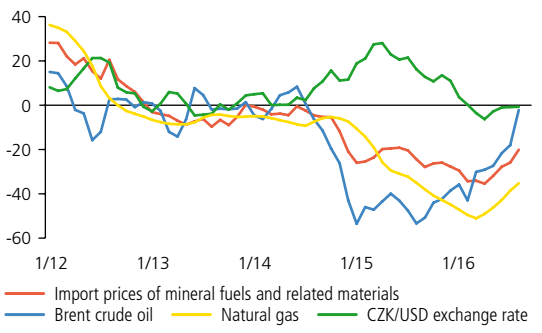


CHART III.2.4

INDUSTRIAL PRODUCER PRICES

The still across-the-board decline in industrial producer prices moderated in 2016 Q3
(annual percentage changes; contributions in percentage points)

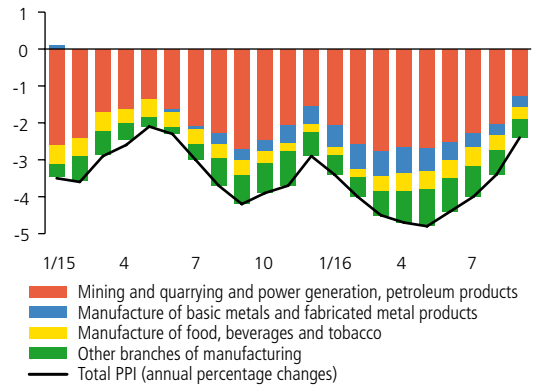


CHART III.2.5

PRODUCER PRICES BY MAIN INDUSTRIAL GROUPINGS

Energy producer prices recorded a further sharp decline, but their fall moderated significantly
(annual percentage changes)

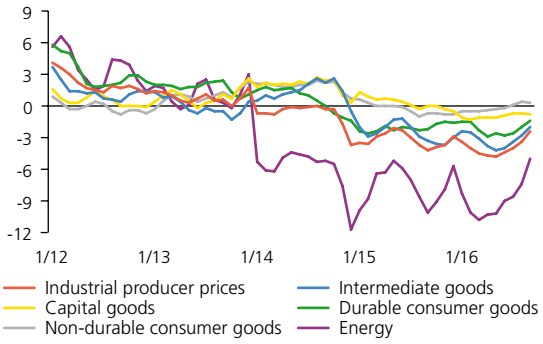
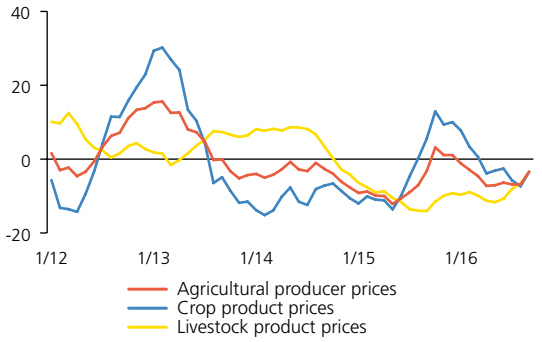


CHART III.2.6

AGRICULTURAL PRODUCER PRICES

The decline in agricultural producer prices slowed in September due to prices of both crop and livestock products
(annual percentage changes)



III.2.2 Producer prices

Industrial producer prices

The long-running marked year-on-year decline in **industrial producer prices** gradually moderated during 2016 Q3 (see Chart III.2.4). This mainly reflected a gradual unwinding of the decrease in prices of imported inputs, in particular world oil prices.

The annual decline in industrial producer prices continued to be driven by a fall in the **composite indicator of energy producer prices and prices of water-related services** (see Chart III.2.4). The continuing sharp annual decline in this indicator was still due most of all to prices in the manufacture of coke and refined petroleum products, primarily reflecting the persisting annual decline in world oil prices. Prices of electricity, gas, steam and air-conditioned air fell at a steady rate. By contrast, the sharper drop in prices in mining and quarrying moderated. As in the previous period, prices in water supply and sewerage-related services continued to rise slightly. In the classification by main industrial groupings, this trend was reflected in a continued annual decline in energy prices, although the decline moderated gradually (see Chart III.2.5).

The year-on-year decline in prices in the food **industry** slowed in 2016 Q3, as did that in manufacture of basic metals and fabricated metal products. By contrast, transport equipment prices were essentially unchanged in year-on-year terms compared to the previous quarter. Overall, the previously sharp decrease in producer prices in manufacturing slowed substantially, reaching 2% in September. This reflected a gradually weakening decline in producer prices in the effective euro area coupled with a fading decline in world prices of oil and other commodities.

Agricultural producer prices

In July and August, **agricultural producer prices** fell at a similar year-on-year rate as in 2016 Q2, but in September their decline slowed to 3.4% (see Chart III.2.6). This was due to prices of both livestock products and crop products. As regards livestock products, the decline in milk prices slowed and prices of pigs started rising again. Turning to crop products, prices in the highest-weight category – grain – kept falling sharply, but prices of hops and grapes, which have a relatively high seasonal weight in this period, surged in September.

As in previous periods, the decrease in agricultural producer prices was driven by several **factors** in 2016 Q3. However, their effect was now fading. This was true of the liberalisation of the EU milk market last year and the continuing retaliatory trade sanctions imposed by Russia on the EU, which mainly affected milk and pork prices. Prices of wheat continued to be pushed down by the good foreign and domestic harvests seen in recent years. The rise in global production outweighed growth in consumption, leading to a constant decline in prices.

Other producer prices

Overall, annual growth in **prices of market services for the business sector** stayed close to zero in 2016 Q3 (see Chart III.2.7). Only postal and courier services, advertising services and market research recorded price growth exceeding 3%.

Construction work prices grew at a steady pace of around 1% (see Chart III.2.7) despite a continuing year-on-year decrease in prices of materials and products used in the construction industry.

CHART III.2.7

MARKET SERVICES PRICES IN THE BUSINESS SECTOR AND CONSTRUCTION WORK PRICES

Market services prices rose only slightly, while growth in construction work prices fluctuated around 1%
(annual percentage changes)

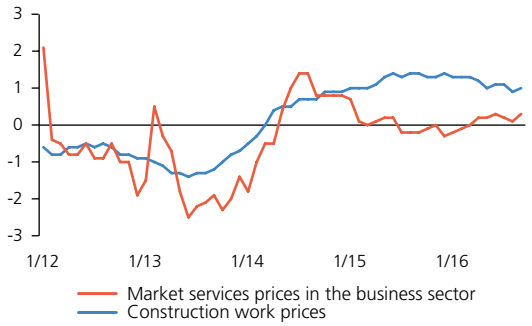


CHART III.3.1

GROSS DOMESTIC PRODUCT

Net exports were the biggest contributor to GDP growth, while household consumption growth slowed and gross fixed capital formation fell

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

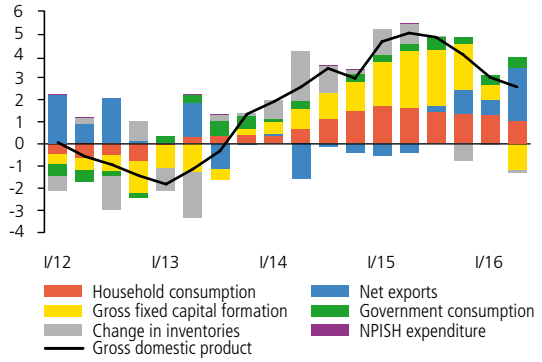


CHART III.3.2

DISPOSABLE INCOME

Wages and salaries are the biggest contributor to the constant growth in disposable income

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

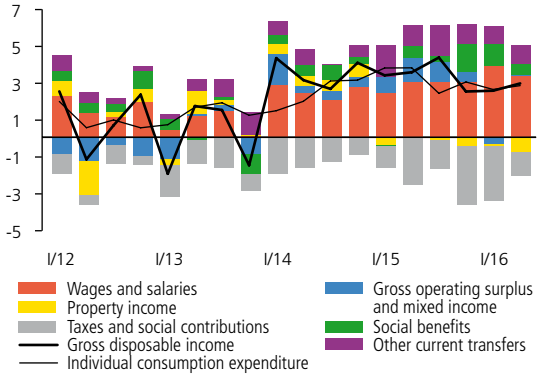
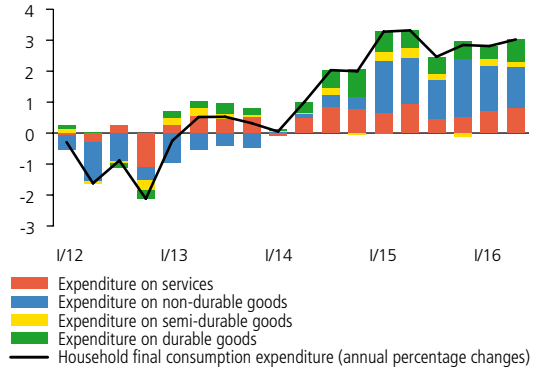


CHART III.3.3

HOUSEHOLD CONSUMPTION

Household consumption expenditure increased in all categories, with expenditure on non-durable goods again recording the largest contribution

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



III.3 DEMAND AND OUTPUT

Economic growth slowed further to 2.6% in 2016 Q2. The Czech economy is close to its potential. Net exports were the biggest contributor to the annual GDP growth. The contribution of household consumption was also positive, although less so than in the previous quarter. The unwinding of the effect of drawdown of EU funds from the previous programme period was reflected in a substantial decline in government fixed investment and to a lesser extent also investment by non-financial corporations.

III.3.1 Domestic demand

In 2016 Q2, annual GDP growth (see Chart III.3.1) was driven most of all by net exports. The contribution of **domestic demand** shrank considerably, with household consumption decelerating and the dynamics of fixed investment turning significantly negative. By contrast, government consumption growth rose slightly.

Final consumption

Growth in seasonally adjusted household consumption slackened markedly in 2016 Q2. However, this was mainly a result of unusually strong calendar effects. Conversely, seasonally unadjusted growth in the real **final consumption expenditure of households** increased slightly (to 2.7%; see Chart III.3.2). Gross disposable income also recorded slightly faster growth and the saving rate was therefore almost unchanged from a year earlier.

Annual growth in nominal **gross disposable income**, which is the main source of financing of households' consumption expenditure, accelerated slightly (to 2.9%; see Chart III.3.2). As the household consumption deflator was almost flat, households' real purchasing power rose by 2.8%. The observed acceleration in annual growth in gross disposable income was due chiefly to a decline in the long-standing negative contribution of payments of taxes and social contributions. By contrast, wages and salaries had a downward effect on disposable income growth, even though their growth rate remained above 5%.

Household consumption expenditure rose further in all the monitored categories (see Chart III.3.3). As in previous quarters, short-term consumption was the biggest contributor to household consumption growth. According to the latest available monthly indicators, annual growth in retail sales remained strong in July and August, driven by sales of non-food goods and fuels.

The **consumer confidence indicator** increased gradually in 2016 Q3 and is nearing the historical highs observed early this year (see Chart III.3.4). This was aided primarily by improving consumer perceptions of the economic situation.

Growth in real **government final consumption expenditure** went up slightly to 2.6% in 2016 Q3. The positive contribution of government consumption to annual GDP growth thus stood at 0.5 percentage point (see Chart III.3.1).

Investment

Fixed investment switched to a marked year-on-year decline in 2016 Q2 (of 4.4%;[19] see Chart III.3.5). This was due predominantly to a deepening of the decline in fixed investment by the government sector to a sizeable 23.5%,[20] which led to a noticeable drop in investment in buildings and structures (see Chart III.3.7). The sizeable drawdown of EU structural funds from the previous programme period last year was followed by an only very gradual start to drawdown from the new programme period, among other things as a result of problems with environmental impact assessments of large infrastructure projects.

Investment in the **non-financial corporations sector** also dropped (see Chart III.3.6), with investment activity falling in most monitored branches. Box 1 shows that co-financing from EU funds significantly affected not only government investment, but also investment by non-financial corporations in 2015. Owing to the only gradual drawdown of structural funds at the start of this year, investment by non-financial corporations co-financed from EU funds is currently falling due to base effects and thus reducing the pace of growth of total investment by non-financial corporations. Investment fully financed by firms' own resources is probably continuing to rise. This is consistent with the CZSO's business survey results, according to which industrial firms view future demand for their products as stable in the long run. The results of the latest survey conducted by the CNB and the Confederation of Industry for 2016 Q3 do not signal any lasting decrease in the investment expenditure of non-financial corporations.

BOX 1
The impact of drawdown of EU funds on investment by non-financial corporations

This box sets out to explain the reasons for the buoyant growth in **investment by non-financial corporations** last year and the sudden year-on-year decline in such investment this year. This pattern has been observed in most sectors. Analyses show that co-financing from EU funds affects not only government investment, but also investment by non-financial corporations.

In the case of the Czech Republic as a small and open economy, investment by non-financial corporations can be explained in the long run largely by changes in **external demand**. However, the estimate of effective external demand based on

CHART III.3.4

CONFIDENCE INDICATORS

Consumer confidence was heading back towards historical highs
(2005 average = 100)

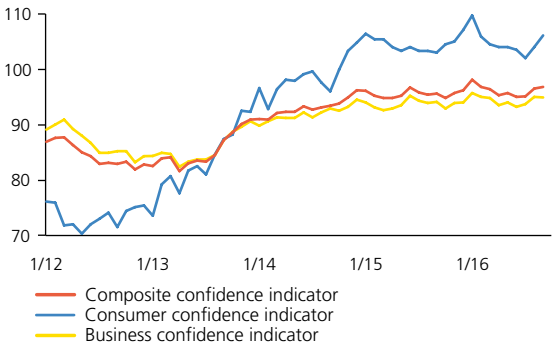
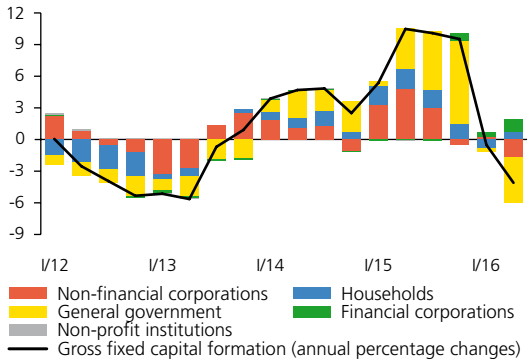


CHART III.3.5

INVESTMENT BY SECTOR

Following buoyant growth, fixed investment fell as a result of government and corporate investment growth turning significantly negative
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)



19 According to seasonally adjusted data at constant prices.

20 According to seasonally unadjusted data at constant prices.

CHART 1 (BOX)

INVESTMENT BY CORPORATIONS AND EXTERNAL DEMAND

Estimates of effective external demand based on EU GDP and EU imports cannot explain the swings in investment by non-financial corporations in 2015 and 2016
(differences from trend in %; CNB calculations)

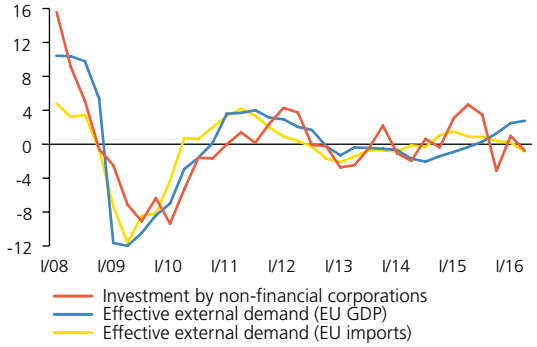


CHART 2 (BOX)

INVESTMENT BY NON-FINANCIAL CORPORATIONS

Investment by non-financial corporations is dominated by investment financed fully from own resources, but the proportion of investment financed from EU funds has increased
(CZK billions, current prices; source: CZSO, CNB calculations)

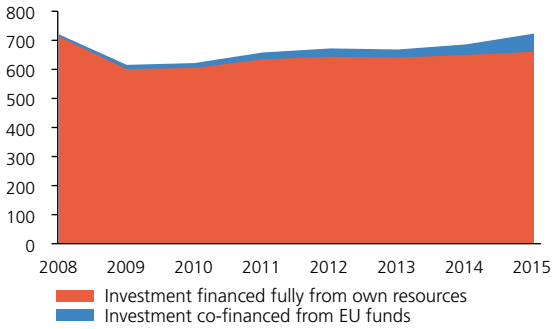
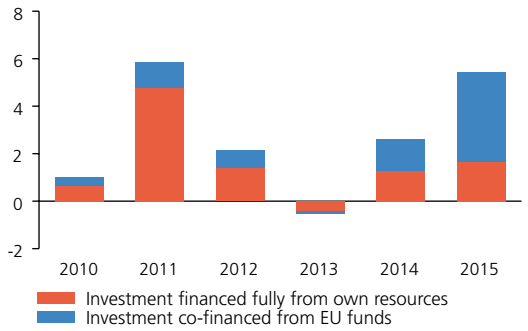


CHART 3 (BOX)

DECOMPOSITION OF ANNUAL GROWTH IN INVESTMENT BY NON-FINANCIAL CORPORATIONS

Annual growth in investment by non-financial corporations was largely driven by investment co-financed from European funds
(annual percentage changes; source: CZSO, MRD; CNB calculations)



the GDP of the Czech Republic's main euro area trading partner countries, which is used to forecast private fixed investment,[21] does not fully capture the swings in investment recorded over the last two years. The estimate of effective external demand as measured by imports of euro area countries has a slightly better predictive ability in this period, but even it cannot fully explain the surge in investment by non-financial corporations observed in 2015 (see Chart 1).

Another explanation may be linked with the increased efforts to **draw down EU funds** from the previous programme period. In contrast to the forecast for government investment, where a large year-on-year swing linked with uneven drawdown of EU funds had been predicted,[22] the forecast for private investment had been much smoother. However, data for 2015 on capital transfers from the government to non-financial corporations[23] linked with the co-financing of investment from EU funds reveal that the amount paid to non-financial corporations almost doubled in 2015 compared to the previous year. Their share in the total allocation for the Czech Republic increased from single percentage figures to around 30% (more than CZK 40 billion in 2015).

In addition, an analysis of the data for individual projects co-financed from structural funds[24] reveals that the **contribution from EU funds** to the value of investment may also be relatively high in the case of private investment. In the government sector, structural funds account for 82% of the value of investment on average, while the figure for non-financial corporations is 65%.

Knowledge of this ratio, combined with data on the volume of transfers from structural funds to non-financial corporations, enables us to break down investment by non-financial corporations into the part co-financed from EU funds and the part financed solely from their own resources. It is clear from this breakdown (see Chart 2) that investment financed from firms' own resources makes up the dominant part of total **investment** by non-financial corporations and has been rising steadily. Recently, however, the changes in total investment have been driven to a growing extent by investment co-financed from structural funds.

21 Non-financial corporations account for about 75% of private investment.
22 See Box 1 in Inflation Report I/2016.
23 Source: CZSO.
24 Source: Ministry for Regional Development.

The decomposition of **annual growth in investment** by non-financial corporations (see Chart 3) confirms that the contribution of investment co-financed from EU funds was particularly dominant in 2015. Information on the gradual start to the drawdown of structural funds at the start of this year suggests that investment co-financed from structural funds is currently falling due to base effects and thus reducing the pace of growth of total investment by non-financial corporations. A return to annual growth in investment co-financed from EU funds is expected in 2017, so that this investment will once again augment the continuing growth in investment from firms' own resources.

Investment by the **household sector** returned to positive year-on-year rates of growth in 2016 Q2 (see Chart III.3.5), aided by renewed growth in investment in dwellings (see Chart III.3.6). Selected indicators suggest that household investment will continue to rise. Households' confidence in favourable future evolution of the economy and employment again approached historical highs during 2016 Q3. Financing conditions for investment in dwellings remain favourable and are being accompanied by strong growth in new mortgage loans (see section III.5.2) and rising property prices (see section III.5.7). While the number of apartment completions rose by almost 10% in 2016 Q2, the number of apartment starts fell substantially. This may reflect developers' problems in finding sites for new projects under the current land use plans.

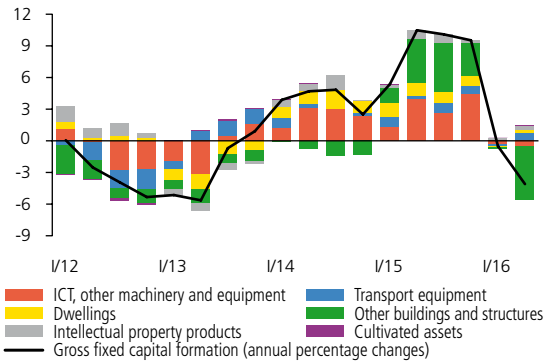
Change in inventories had an only marginal effect on the dynamics of gross capital formation and GDP as a whole in 2016 Q2 (see Chart III.3.1).

CHART III.3.6

GROSS FIXED CAPITAL FORMATION

The decline in gross fixed capital formation was driven mainly by investment in buildings and structures

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



III.3.2 Net external demand

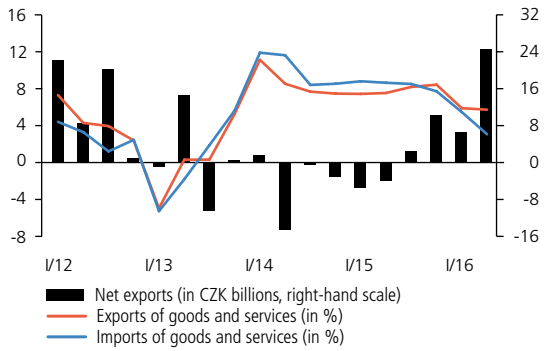
Net exports of goods and services[25] rose sharply in 2016 Q2 (see Chart III.3.7), again contributing to GDP growth. Their contribution of 2.4 percentage points was the biggest of all the components of GDP (see Chart III.3.1). The year-on-year growth in net exports was due chiefly to the goods balance, as its surplus increased for the second quarter in a row. The net export growth was also due to a rise in the services surplus, which has been increasing for a year and a half now. As in the previous period, the year-on-year increase in net exports was a result of export growth outpacing import growth. The lead of export growth widened to 2.6 percentage points owing to a marked slowdown in imports. However, year-on-year growth in total trade turnover slowed for the third consecutive quarter (by 1.3 percentage points).

CHART III.3.7

EXPORTS AND IMPORTS

Net export growth rose sharply, but trade turnover growth slowed further

(annual changes in percentages and CZK billions; constant prices; seasonally adjusted data)



25 At 2010 prices, seasonally adjusted.

CHART III.3.8

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

Gross value added grew at a stable pace
(annual percentage changes; contributions in percentage points)

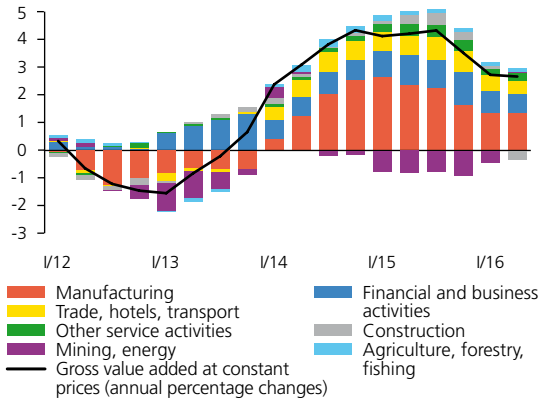


CHART III.3.9

INDUSTRIAL PRODUCTION AND NEW ORDERS IN INDUSTRY

Industrial production fell sharply in July but rose at a rapid pace again in August; new orders in industry showed a similar pattern
(annual percentage changes)

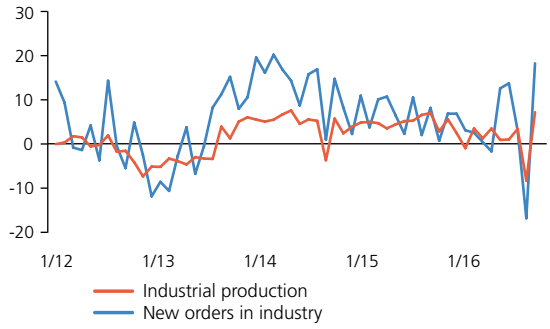
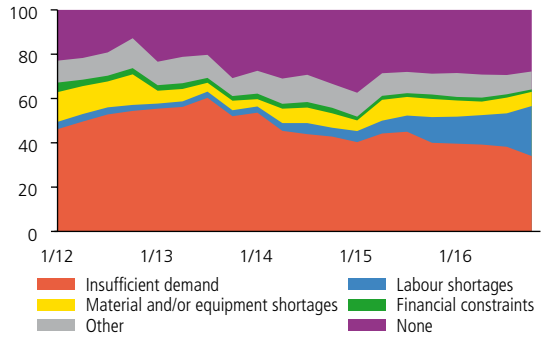


CHART III.3.10

BARRIERS TO GROWTH IN INDUSTRY

The effect of insufficient demand as a barrier to growth in industrial production decreased further, while labour shortages grew in significance
(percentages)



Total exports rose by 5.7% on a year earlier. Compared to the previous quarter, their growth slowed modestly as a result of weaker external demand growth in the Czech Republic's major trading partner countries. The slower growth in total exports was due solely to goods exports, whereas services exports accelerated.

Total imports increased by 3.1%. Their growth slowed for the fifth consecutive quarter, this time by 2.4 percentage points. This was related to the marked weakening of total domestic demand. As in the case of exports, the slower pace of total imports was due to a slowdown in goods imports, whereas services imports accelerated slightly. As in the previous quarter, imports for final consumption recorded the highest growth rates within goods imports, while investment imports were subdued.

III.3.3 Output

Gross value added grew at a stable pace in 2016 Q2 (2.7%; see Chart III.3.8).[26] The growth was still driven mainly by manufacturing and to a lesser extent by trade and services. The contribution of mining and energy switched from negative to zero as a result of renewed growth in energy production. The situation in construction had a negative effect on value added growth.

Industrial production growth slowed year on year in 2016 Q2 (to 2.3%; see Chart III.3.9). This was due above all to a marked slowdown in production in the highest-weight manufacturing sector and partly to a further deepening of the decline in production in mining and quarrying. By contrast, energy production started to rise again for the first time in a long time. In terms of use, industrial production for investment and for long-term consumption increased in particular, in both cases especially for exports. According to the latest available data for July and August, total industrial production was flat year on year on average. The value of new orders increased by a marked 10% in 2016 Q2. It then fell by 16.2% in July but rose again by 18.7% in August. The swings in the data for the last two months are due to different numbers of working days and the timing of company holidays in a different month compared to last year.

According to the October results of the CZSO's business survey, the importance of insufficient demand as the main **barrier to growth** decreased further (see Chart III.3.10). By contrast, the share of businesses in industry considering a shortage of employees to be the main barrier to growth saw a marked increase to its highest level since 2009. The share of businesses which see no barrier to their future development declined slightly. Capacity utilisation in industry continued to fluctuate around 85%.

26 At constant prices, seasonally adjusted.

The decline in **construction output** deepened significantly in 2016 Q2 (to 11.8%). The fall in drawdown of EU funds compared to 2015 thus manifested itself in full. Production went down in both building construction and civil engineering (by 9.6% and 16.1% respectively). Construction output also decreased in July and August. Growth in the number of building permits, which had reached 7.7% in 2016 Q2, halted on average in the last two months. The approximate value of these permits increased by a marked 25.8% in 2016 Q2. The growth slowed to 17.4% in July and a decline of 2.9% was recorded in August.

III.3.4 Estimate of the cyclical position of the economy and potential output

The **output gap** according to the Kalman filter remained closed in 2016 Q2 (see Chart III.3.11). Together with the easy monetary conditions, its closure was due mainly to growth in external demand. These factors will persist over the forecast horizon and the output gap will thus remain close to zero until the end of 2017. It can be expected to open gradually to slightly positive levels during 2018 amid modestly accelerating economic growth. This will be reflected in a decrease in the unemployment rate below its natural level and hence in particular by a growing shortage of labour. By contrast, the tightening of the monetary conditions following the exit from the exchange rate commitment will dampen the opening of the output gap into positive territory.

Potential output growth according to the Kalman filter was around 3.5% in 2016 Q2 (see Chart III.3.12). It will gradually slow over the forecast horizon.

Alternative calculations of the cyclical position of the economy using the HP filter and the Cobb-Douglas production function lead to similar conclusions regarding the current output gap coupled with a rather lower estimate of the potential growth of the economy.[27]

CHART III.3.11

OUTPUT GAP

The Czech economy is close to its potential output level
(% of potential output)

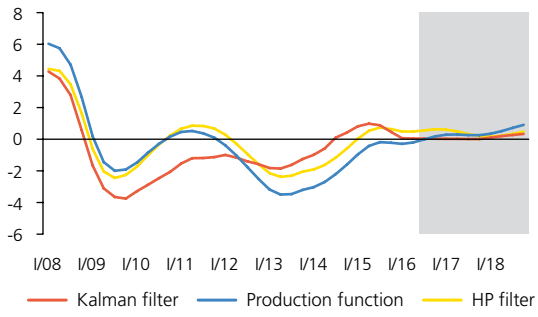
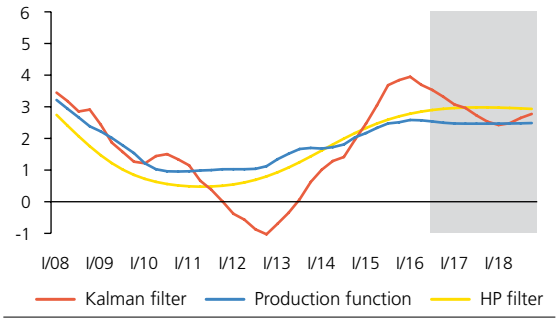


CHART III.3.12

POTENTIAL OUTPUT

The rate of growth of potential output is around 3%
(annual percentage changes)



27 The estimate using the HP filter used coefficient λ = 1,600.

CHART III.4.1

LABOUR MARKET INDICATORS

Wage growth in the business sector and nominal unit labour costs continued to rise, although at a slower pace
(annual percentage changes)

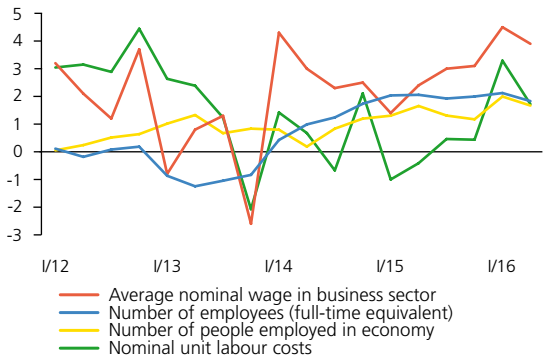


CHART III.4.2

EMPLOYMENT BREAKDOWN BY BRANCHES

Non-market services were the biggest contributor to the growth in employment
(contributions in percentage points to annual change; selected branches; source: LFS)

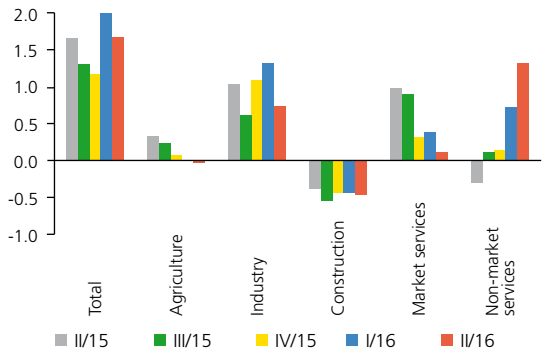
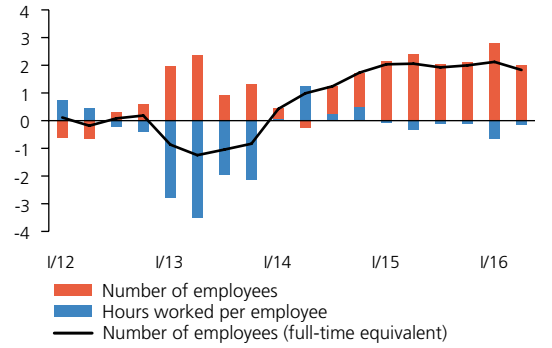


CHART III.4.3

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

Rapid growth in the number of employees was accompanied by only a slight decrease in average hours worked per employee
(annual percentage changes; contributions in percentage points)



III.4 THE LABOUR MARKET

In 2016 Q2, the labour market followed similar trends as in the previous period. Total employment and the number of employees converted into full-time equivalents rose significantly year on year. 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 2016 Q3, too. Average wage growth slowed, but this is only a temporary phenomenon according to monthly data for industry. The pick-up in economic activity was reflected in faster growth in whole-economy labour productivity and lower growth in nominal unit labour costs.

III.4.1 Employment and unemployment

Despite slowing somewhat, **total employment** grew at a rapid pace in 2016 Q2 (see Chart III.4.1). This was due to an increase in the number of employees, whereas the number of entrepreneurs was broadly flat.

The **tertiary sector** (especially non-market services) was the biggest contributor to the growth in employment (see Chart III.4.2). Although the growth in employment in non-market services was broad-based, it was due most of all to a rise in the number of people employed in education. The contribution of market services decreased, with a substantial increase in the number of people employed in transport and storage and in professional, scientific and technical activities being largely offset by a decrease in employment in accommodation and food services and in wholesale and retail trade.

The contribution of the **secondary sector** to total employment growth dropped compared to the previous quarter. This was due to slower growth in the number of persons employed in industry coupled with constantly falling employment in construction. According to the July and August figures, year-on-year growth in the registered number of employees[28] in industry will slow further in 2016 Q3, while the decline in the same indicator in construction will moderate slightly.

Part-time employment accounted for around one-third of the annual growth in employment. However, this was reflected in only a slight year-on-year decrease in average hours worked per employee. Owing to the strong growth in the number of employees, the **number of employees converted into full-time equivalents** continued to rise significantly (see Chart III.4.3). The highest-weight category of manufacturing accounted for the largest share of the growth in this indicator.

28 In corporations with 50 employees or more, excluding agency workers.

The continuing strong year-on-year growth in employment was reflected in a further decline in the **general unemployment rate**[29] (see Chart III.4.4). However, its year-on-year decline was considerably more moderate than the growth in the number of employed persons, reflecting a rise in the labour force. It rose mainly in the case of persons close to retirement age. The growing labour force coupled with the long-running decline in the population aged 15–64 led to an increase in the rate of economic activity. It rose to a historical high (of just below 75% when seasonally adjusted). According to the monthly LFS data for July and August, the general unemployment rate continued to fall in 2016 Q3, although at only a weak pace, amid an increasing rate of economic activity. The **share of unemployed persons**[30] also gradually fell further in 2016 Q3, with the number of available job applicants registered with labour offices continuing to decline and the population in the given age group shrinking slightly.

From the long-term perspective, the labour market viewed in terms of the **Beveridge curve** is gradually nearing the peak observed at the start of 2008. The decline in the number of registered unemployed persons accelerated in 2016 Q3, while the number of vacancies registered at labour offices increased further (see Chart III.4.5). A comparison with the same phase of the previous labour market cycle reveals similar values of adjusted inflation excluding fuels as well.

III.4.2 Wages and productivity

Growth in the **average nominal and real wage** slowed in 2016 Q2 (see Chart III.4.6), due to slower wage growth in both the business and non-business sectors.

The slower wage growth in the **business sector** was due mainly to slower wage growth in wholesale and retail trade and in manufacturing. The highest wage growth was recorded in the low-weight sector of culture and in financial intermediation and insurance. Wages in accommodation and food services grew by around 6%. The increase in the average nominal wage in this sector was due to an increase in the minimum wage in January 2016 (from CZK 9,200 to CZK 9,900). The current data for July and August indicate that wage growth in industry will increase again on average in 2016 Q3.

The average wage in the **non-business sector** also grew at a slower pace in 2016 Q2 than in the previous quarter. This was due mainly to slower wage growth in public administration and defence, which, however, remained high (at almost 5%). Health care also saw

29 The general unemployment rate covers the 15–64 age group (as measured by the ILO methodology, seasonally adjusted). It is the ratio of the number of unemployed persons to the labour force (i.e. the sum of employed and unemployed persons) in the given age group.

30 The share of unemployed persons is the ratio of available job applicants aged 15–64 to the population of the same age. The data are seasonally adjusted.

CHART III.4.4

UNEMPLOYMENT INDICATORS

The general unemployment rate and the share of unemployed persons both decreased further
(percentages; seasonally adjusted data; source: MLSA, CZSO)

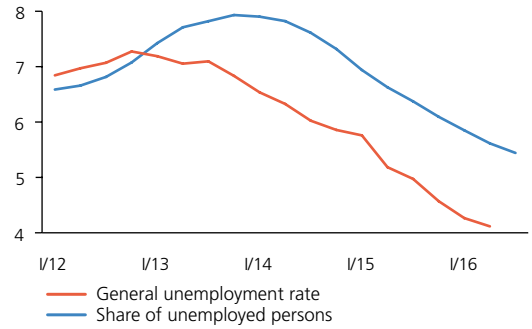


CHART III.4.5

BEVERIDGE CURVE

The number of unemployed persons declined steadily, while the number of vacancies increased slightly further
(numbers in thousands; seasonally adjusted data; annual percentage changes for adjusted inflation; source: MLSA, CZSO)

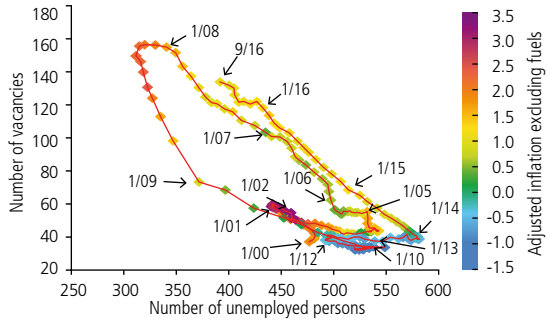


CHART III.4.6

AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Labour productivity growth lagged significantly behind wage growth
(annual percentage changes)

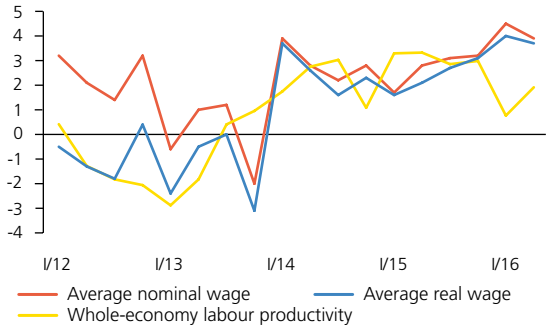


CHART III.4.7

PRODUCTIVITY IN BRANCHES

Labour productivity in industry switched from decline to rapid growth, while that in construction fell sharply
(annual percentage changes)

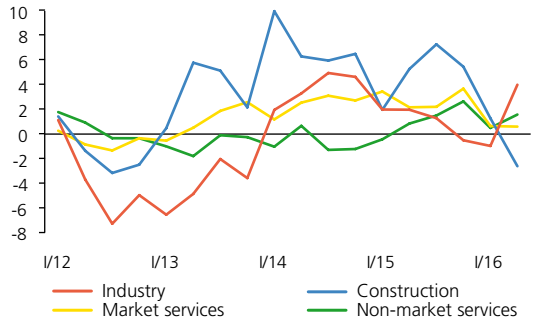
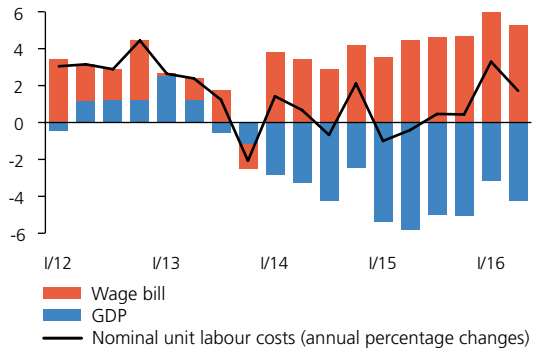


CHART III.4.8

UNIT LABOUR COSTS

Faster economic growth and a slower increase in the wage bill fostered slower growth in nominal unit labour costs
(annual percentage changes; contributions in percentage points)



a pronounced slowdown in average wage growth. By contrast, wage growth in education increased slightly, but still lagged behind the rest of the non-business sector.

Whole-economy labour productivity[31] growth picked up noticeably to 1.9% in 2016 Q2. With employment growth falling only slightly, this was due mainly to faster (seasonally unadjusted) growth in economic activity. Labour productivity in industry returned to year-on-year growth (see Chart III.4.7). This was due to a sharp rise in labour productivity in manufacturing. Productivity in both market and non-market services continued to grow at an insignificant pace. By contrast, labour productivity in construction fell sharply due to a year-on-year drop in gross value added. Despite the above-mentioned upswing in economic activity, a marked year-on-year increase in the number of hours worked – which to some extent reflected a higher number of working days this year – resulted in a deeper annual decline in **hourly labour productivity**.

Faster annual growth in economic activity[32] (compared to the previous quarter), coupled with a slower increase in the wage bill, resulted in slower growth in **nominal unit labour costs** in 2016 Q2 (see Chart III.4.8). Nominal unit labour costs recorded mixed trends across sectors, rising in construction and to a lesser extent in services, while falling in industry due to the renewed growth in labour productivity.

31 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).

32 According to seasonally unadjusted data.

III.5 FINANCIAL AND MONETARY DEVELOPMENTS

M3 growth stayed just below 10% in Q3. The money growth continued to reflect fast growth in domestic loans amid a continued decrease in interest rates and relaxed credit standards. Growth in loans for house purchase picked up slightly further. This was accompanied by a continued increase in residential property prices. Growth in consumer credit also gained pace, while growth in corporate loans slowed. Government bond yields fell, reaching significantly negative levels at shorter maturities. The positive interest rate differentials vis-à-vis euro rates were unchanged. The koruna remained just above the CNB's exchange rate commitment and recorded a slight year-on-year appreciation against the dollar. The financial results of non-financial corporations were affected by falling input prices on the one hand and strong growth in wage costs on the other. Gross operating surplus returned to year-on-year growth.

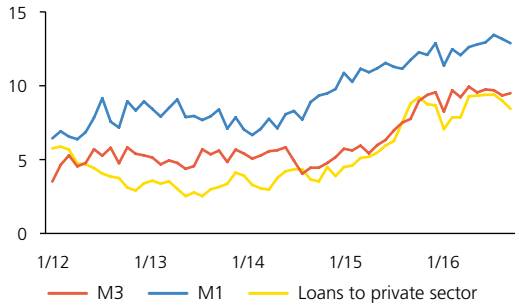
III.5.1 Money

M3 growth stabilised at relatively high rates. The annual growth rate of M3 was 9.5% in August and remained close to the levels recorded since the start of 2016 (see Chart III.5.1). M3 continues to grow at a much higher pace than nominal GDP. The M3 growth is due predominantly to liquid overnight deposits included in M1, in an environment of persisting exceptionally low interest rates. The decline in other short-term deposits deepened. This has recently been accompanied by a reduction in bank interest rates on such deposits. In terms of money-holding sectors, the contribution of deposits of households increased further, supported by wage growth. Turning to the **creation of money**, the M3 growth reflects buoyant growth in domestic loans and a continued elevated inflow of capital from abroad, which is leading to growth in the net external assets of the banking sector. The share of foreign currency deposits remained at around 10%.

Chart III.5.1

MONETARY AGGREGATES AND LOANS

Money aggregate growth remains high
(annual percentage rates of growth)



III.5.2 Credit

Growth in the total stock of loans remains high despite the current slowdown, credit conditions are relaxed, and, according to banks, demand for loans is continuing to rise in all the main segments of the market. The annual growth rate of loans to the private sector has been fluctuating around 8% so far in 2016, bolstered by the record-low interest rate level and continued positive developments in the economy. The stabilised growth rate of total loans this year is a result of increasing growth in loans to households for house purchase and consumption combined with slower growth in loans to non-financial corporations (see Chart III.5.2).

Chart III.5.2

LOANS TO THE PRIVATE SECTOR

Loans are growing quickly in all segments of the credit market
(annual percentage rates of growth)

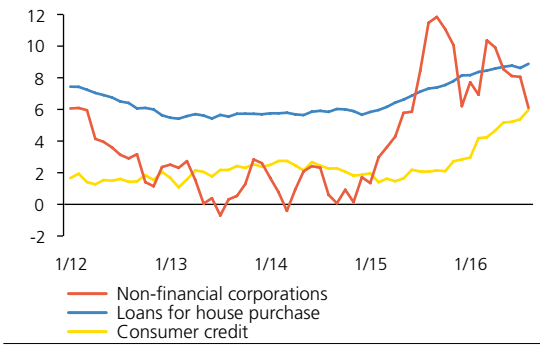


CHART III.5.3

CREDIT STANDARDS

Credit standards eased further overall in 2016 Q3, but were unchanged for loans for house purchase
(net percentages of banking market)

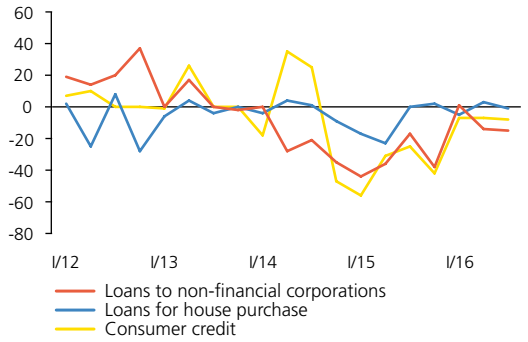
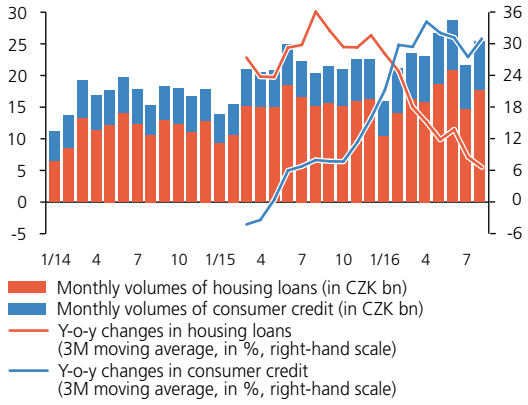


CHART III.5.4

NEW LOANS TO HOUSEHOLDS

Year-on-year growth in new loans for house purchase slowed further, but monthly credit volumes remain high
(adjusted for refinancing and refixation)

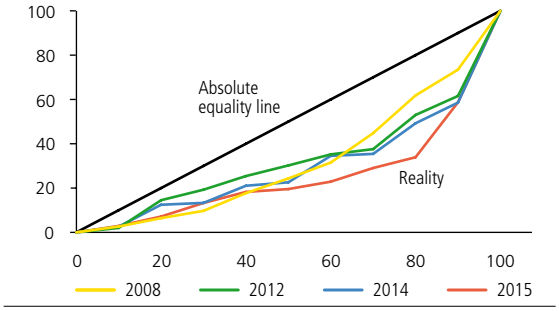


Note: New loans data adjusted for refinancing and refixation are available since January 2014.

CHART III.5.5

LORENZ CURVE – LOANS TO HOUSEHOLDS

A total of 40% of new loans were in the highest income decile in 2015
(percentages on both axes; source: CZSO Household Budget Survey, CNB calculations)



Note: The x-axis is the percentage cumulative share of households by income and the y-axis is the percentage cumulative share of households in loans.

According to the bank lending survey, **credit standards** eased further in part of the banking market in 2016 Q3, specifically in the segments of corporate loans and consumer credit, while remaining unchanged for loans for house purchase (see Chart III.5.3). Banks also relaxed their credit conditions, primarily by reducing their average interest margins. A decline in the LTV ratio for loans for house purchase acted in the opposite direction.

The growth in loans to the private sector was mostly due to **loans to households**, whose growth rate increased to around 8% in August following a slowdown in July (see Chart III.5.2). Demand for **loans for house purchase** rose further, supported by the record-low interest rates. Mortgage growth remains slightly above 8% and growth in building society loans has edged up this year. Year-on-year growth in new loans for house purchase, including building society loans (adjusted for refinancing and refixation), slowed further, but their monthly volumes are close to historical highs (see Chart III.5.4). According to the latest Fincentrum Hypoindex data, the volumes and numbers of new mortgage loans increased by around 20% and 14% year on year respectively in September, but their growth slowed on average in 2016 Q3. Interest rates on mortgages decreased slightly further. In addition to the low interest rates, demand for loans for house purchase is being affected by expectations of further growth in property prices (see section III.5.7) and favourable household sentiment. According to banks' perceptions, household demand for loans for house purchase will increase further in 2016 Q4. At the same time, banks are indicating a tightening of credit standards for house purchase loans connected with new legislation (the Consumer Credit Act effective from December 2016) and CNB regulatory measures, which together will reduce the availability of mortgages. Growth in **consumer credit** is also continuing to increase, owing to growing consumer expenditure and strong consumer confidence, amid easing credit conditions (see Chart III.5.2).

The shape of the **Lorenz curve** for credit points to increased inequality in the case of new loans to households. Around 80% of such loans were concentrated in households with above-median incomes in 2015. A total of 40% of new loans are in the highest income decile (see Chart III.5.5).

The **total indebtedness of households** is increasing faster than their income. This is reflected in an increase in the ratio of loans to aggregate annual nominal disposable income to around 65% in 2016 Q2. However, Czech households remain significantly less indebted than the euro area average (around 100%). The rise in indebtedness combined with a continued sharp decline in interest income on deposits has recently been reflected in growth in net interest paid by households to banks (to 2%).

The growth rate of **loans to non-financial corporations** has recently slowed to about 6%. The continued growth in corporate loans is being supported by favourable credit conditions and increased

corporate demand for long-term investment loans. It is concentrated primarily in services and real estate activities (see Chart III.5.6). Loans in manufacturing also increased slightly, while loans in other industrial sectors and in construction decreased amid a decline in their output. Year-on-year growth in **foreign currency loans** (especially euro-denominated loans) picked up further to 24%. The share of these loans in total loans is at a historical high of 25%. This year, demand for foreign currency loans is highest among firms in services (including real estate), manufacturing, transport and financial intermediation and insurance.

III.5.3 Interest rates

Monetary policy interest rates

The **monetary policy decision-making** of the CNB Bank Board in 2016 Q3 was based on the macroeconomic forecast published in the previous Inflation Report. The forecast assumed that market interest rates would be flat at their very low level and the exchange rate would be used as a monetary policy instrument until mid-2017.

At its **August and September meetings**, the Bank Board of the Czech National Bank decided unanimously to keep key interest rates unchanged at their current level, i.e. at technical zero[33] (see Chart III.5.7). The Board also decided to continue using the exchange rate as an additional instrument for easing the monetary conditions. It also confirmed the CNB's commitment to intervene on the foreign exchange market if needed to weaken the koruna against the euro so that the exchange rate of the koruna is kept close to CZK 27 to the euro. At both meetings, the Bank Board assessed the risks to the forecast at the monetary policy horizon as being balanced. The Bank Board stated at the August meeting that the CNB would not discontinue the use of the exchange rate as a monetary policy instrument before 2017. In September, it stated that it would not discontinue the use of the exchange rate before 2017 Q2. The Bank Board still considered it likely that the commitment would be discontinued in mid-2017.

At its **monetary policy meeting on 3 November 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 inflation forecast at the monetary policy horizon as being balanced. The uncertainties of the forecast include the speed of return

33 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.

CHART III.5.6

LOANS TO NON-FINANCIAL CORPORATIONS ACCORDING TO SECTOR OF ACTIVITY

The growth in loans to non-financial corporations is concentrated in services and real estate activities
(contributions in percentage points; annual percentage changes)

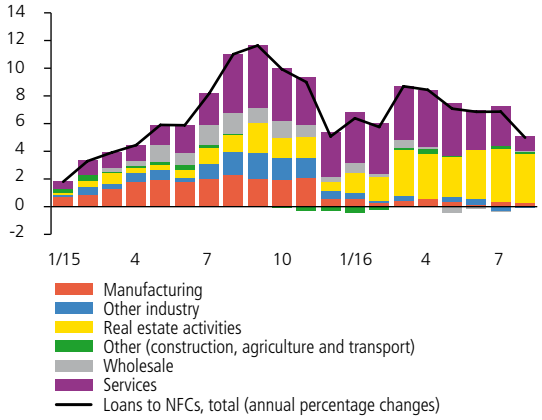
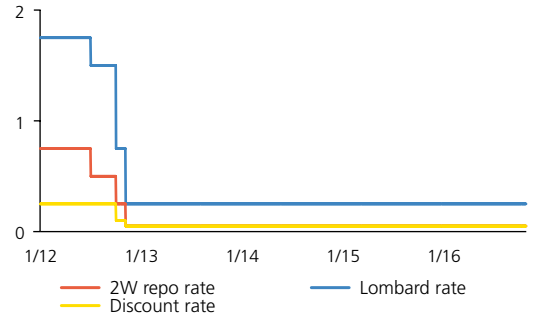


CHART III.5.7

CNB KEY RATES

The CNB left its key interest rates at technical zero in 2016 Q3
(percentages)



to growth in government and corporate investment, the effect of the election cycle on discretionary government expenditure, the impacts of the outcome of the UK referendum on external demand and the future settings of the monetary conditions of the major central banks. The Bank Board stated again that the CNB would not discontinue the use of the exchange rate as a monetary policy instrument before 2017 Q2. The Bank Board still considers it likely that the commitment will be discontinued in mid-2017

Financial market interest rates

PRIBOR rates remained at historical lows at all maturities in 2016 Q3 (see Chart III.5.8). 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 around 0.25 percentage point.

In July, **FRA derivative rates** reversed their previous decline. As in other countries, this was the initial reaction to the result of the Brexit referendum. FRA rates were almost unchanged thereafter, moving only slightly higher overall in 2016 Q3. The market outlook for 3M rates according to end-October FRA quotations implies a minor decline in the 3M PRIBOR at the one-year horizon. It will thus be negligibly below the interest rate level contained in the new CNB forecast until mid-2017. Consistent with the forecast is an increase in market interest rates from 2017 Q3 onwards, which the FRA outlook does not expect (see section II).

Short-term **interest rate differentials** vis-à-vis both major world currencies (PRIBOR/CZK-EURIBOR/EUR and LIBOR/USD) reflected different movements in money markets in the euro area and the USA (due to opposite expectations regarding their future monetary policy stances – see below) amid market interest rate stability in the Czech Republic. The positive differentials vis-à-vis euro rates remained stable, while the negative differentials vis-à-vis the dollar widened (see Chart III.5.9). The 3M PRIBOR–3M EURIBOR differential was 0.6 percentage point on average in 2016 Q3 and was at the same level at the end of October.

Domestic **interest rates with longer maturities** (IRS) moved mostly in line with European rates. Following the initial shock of the Brexit referendum result, global financial markets calmed in early July and were affected mainly by different expectations regarding the monetary policy stances in the euro area and the USA. Part of the market expected the ECB's meeting in September (8 September) to result in an extension of the asset purchase programme and potentially also a change in the parameters of the securities purchased.[34] Conversely, expectations of a rate hike intensified in the USA due to the Fed's

CHART III.5.8

MARKET INTEREST RATES

Money market interest rates stayed at historical lows, while IRS rates with longer maturities went up slightly
(percentages)

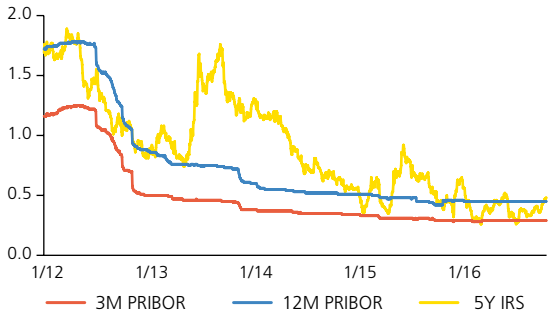
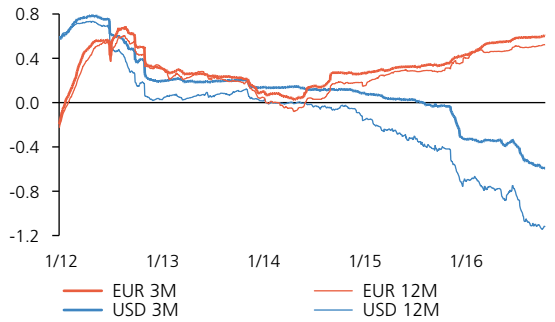


CHART III.5.9

INTEREST RATE DIFFERENTIALS

The positive interest rate differentials vis-à-vis the euro were unchanged, while the negative differentials vis-à-vis the dollar widened
(percentage points)



34 About one-third of the bonds are not compliant with the conditions of the ECB's asset purchase programme due to a decline in their yields below the ECB's deposit rate (-0.4%).

communications and favourable economic developments, especially in the labour and property markets. The outcome of the ECB's meeting (which concluded that the current monetary policy stance was effective and no further stimuli were needed and did not discuss any extension of the asset purchase programme or other measures) was reflected in an increase in euro and subsequently also domestic interest rates. Overall, domestic IRS rates rose by 0.1–0.2 percentage point compared to the start of July (see Chart III.5.8). However, domestic government bond yields fell sharply at the start of September, especially at shorter maturities, on speculation that the CNB would discontinue its exchange rate commitment as early as the start of 2017, which significantly boosted demand for koruna. This was subsequently reflected in demand for Czech government bonds. The domestic government bond yield curve is thus negative up to 6Y maturity (see Chart III.5.10).

Fourteen auctions of fixed coupon bonds were held on the primary **government bond market** in 2016 Q3. The total volume of bonds issued was CZK 65.3 billion.[35] Demand exceeded supply in most of the auctions; the average bid-to-cover ratio was 1.8. The Ministry of Finance again took advantage of the favourable market conditions and sold bonds at shorter maturities with a negative yield. It meanwhile continued to implement its strategy of limiting the issuance of T-bills with maturities of up to 1Y and replacing them with bonds with zero or negative yields. Demand from foreign investors in the auctions remained high and was focused mainly on bonds with shorter maturities. The share of non-residents in total holdings of medium- and long-term government bonds thus increased to around 27% at the end of September 2016.

Client interest rates

The low/negative and still falling government bond yields are being reflected in a continuing decline in **client interest rates** (see Chart III.5.11). Client interest rates on loans have been falling faster than financial market reference rates for some time, i.e. since the start of 2015. This is due in part to favourable risk perceptions in a situation of high bank liquidity. The **average deposit rate** is at a historical low. Since the start of 2015, it has gone down by 0.3 percentage point to 0.3%, mainly because of a decrease in time deposit rates to around 1%. Unlike in the past, there is little difference between rates on short-term and long-term time deposits. To some extent, this reflects the zero spread between the ten-year government bond yield and money market rates. In the euro area, loan rates are showing a downward trend due to the ECB's monetary policy measures and rates on corporate loans are similar to those in the Czech Republic.

35 The Czech Republic's updated Funding and Debt Management Strategy for 2016 assumes issues of medium- and long-term government bonds of at least CZK 150 billion.

Chart III.5.10

GOVERNMENT BOND YIELD CURVE

Government bond yields are at noticeably negative levels at the shorter end of the curve
(percentages)

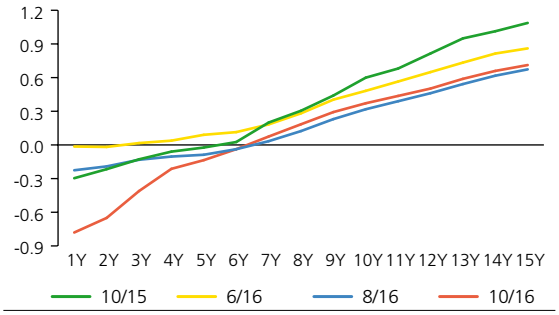


Chart III.5.11

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 continued to fall moderately in both the Czech Republic and the euro area
(cost of borrowing indicators; new business; percentages)

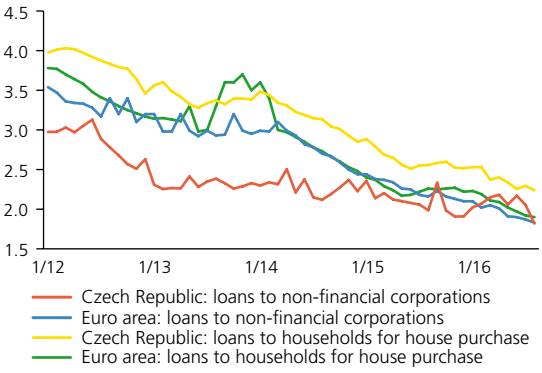


Chart III.5.12

INTEREST RATES ON LOANS TO HOUSEHOLDS

Interest rates on loans for house purchase are lowest for fixation periods of over five years and up to ten years, while the consumer credit rate remains above 10% despite having fallen
(new business; percentages)

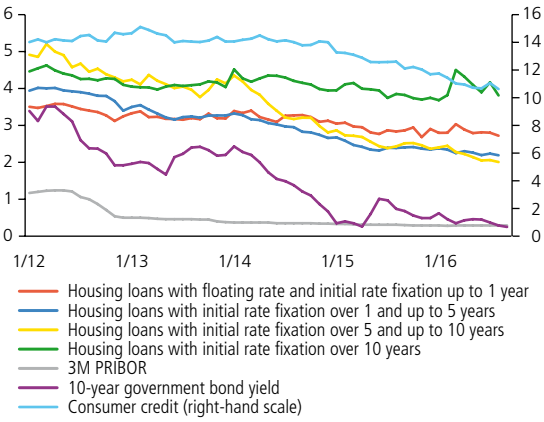


CHART III.5.13

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna remained just above the CNB's exchange rate commitment level in 2016 Q3; against the dollar it appreciated slightly year on year

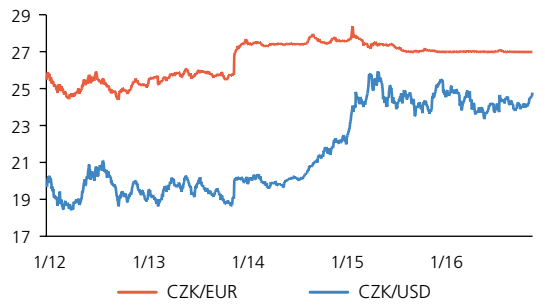


CHART III.5.14

NOMINAL EFFECTIVE KORUNA EXCHANGE RATE

The koruna appreciated modestly year on year in effective terms, most of all against the British pound
(basic index; year 2010 = 100)

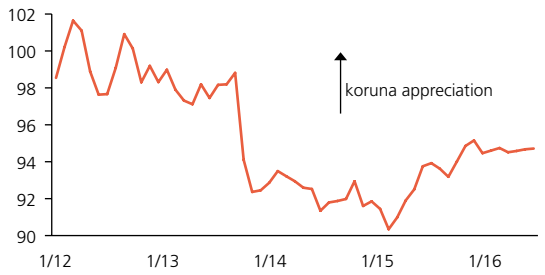
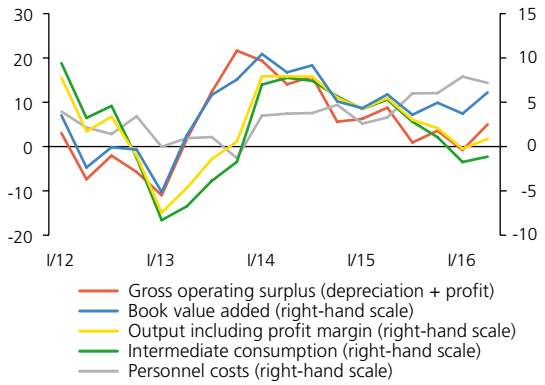


CHART III.5.15

KEY FINANCIAL INDICATORS

The gross operating surplus of non-financial corporations started to rise again
(annual percentage changes)



The **interest rate on corporate loans** in the domestic currency fell below 2%. Rates on large loans and small loans dropped to 1.4% and 2.4% respectively. The spread vis-à-vis the 3M PRIBOR reference rate narrowed in Q3. The rate on domestic euro-denominated corporate loans was similar to that on koruna loans. The **interest rate on loans to households** for house purchase and consumption continued to decrease slightly (see Chart III.5.12). The rate on mortgages with fixation periods of over five years and up to ten years edged down to 1.8% and the share of such mortgages rose to almost 40% from around 20% last year. Despite having fallen to 10.6%, the rate on consumer credit remains well above the euro area level (around 6%).

Real client interest rates[36] on loans and deposits fell slightly to 0.6% and -1.5% respectively in Q3 amid unchanged expected inflation (1.8%). Real interest rates on corporate loans and loans to households for house purchase fell to near-zero levels.

III.5.4 The exchange rate

The **exchange rate of the koruna against the euro** fluctuated mostly within a narrow range just above the level of the CNB's exchange rate commitment in 2016 Q3 and the first half of October. The only exception was a brief period in early July, when the koruna temporarily weakened slightly (to CZK 27.1 to the euro). The average exchange rate was CZK 27.03 to the euro (in line with the forecast). This represented a year-on-year appreciation of the koruna of 0.2% (see Chart III.5.13).

The koruna appreciation pressures observed since July 2015 (with temporary interruptions in October 2015 and March 2016) continue to be associated with the better economic situation in the Czech Republic than in the euro area and the expected appreciation of the koruna after the exit from the CNB's exchange rate commitment. The ECB's easy monetary policy and the positive interest rate differential of the koruna against the euro are also playing a role. The effect of the Brexit referendum result faded quickly. The exchange rate was not visibly affected by new statistical information from the domestic or global economy in 2016 Q3, as it showed no major deviations from financial market expectations. The growing need for interventions to defend the exchange rate commitment in Q3 was due mainly to the shortening expected duration of the commitment and to speculation by part of the market that the exit might occur as early as the start of 2017. As a result, the size of the **interventions made by the CNB** in defence of its exchange rate commitment increased significantly compared to the previous three quarters (to around CZK 136 billion).

36 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.

The average **exchange rate of the koruna against the dollar** was CZK 24.2 in 2016 Q3. This represented a year-on-year appreciation of 0.6% and a quarter-on-quarter depreciation of 1.1%. The koruna-dollar exchange rate during 2016 Q3 reflected the relatively insignificant movements of the dollar's exchange rate on global markets. Financial market expectations regarding future growth in interest rates in the USA moderated considerably, mainly because of a significant slowdown in economic growth this year (to roughly the euro area level). In October, however, the dollar started to appreciate again on world markets. As a result, the koruna-dollar exchange rate was around CZK 24.6 to the dollar shortly after mid-October.

The **nominal effective exchange rate** (NEER)[37] of the koruna appreciated by 1.4% year on year in Q3 (see Chart III.5.14). This was due to the koruna appreciating mainly against the pound (by 15.7%)[38] and to a lesser extent also against the renminbi, the zloty and the rouble (by 3.2%–4.7%). The strengthening of the koruna NEER was dampened partly by depreciation of the koruna against the Japanese yen of 18.6%. The changes in the exchange rate of the koruna against the other currencies in the basket were insignificant.

III.5.5 Economic results of non-financial corporations

The **financial results of non-financial corporations with 50 employees or more** (around 9,200 entities) were affected by still falling input prices (see Chart III.5.15 and Table III.5.1). Corporate costs were conversely increased by fast growing wage costs. Output switched from stagnation to slight growth in 2016 Q2, contributing to faster growth in book value added. Following a slight decline, gross operating surplus rose by 5%.

The renewed growth in output and operating surplus was due mainly to **manufacturing** (see Chart III.5.16), which was affected most of all by an increase in automotive production. By contrast, output declined in the chemical industry, mining and energy, and construction.

The output of **corporations with 250 employees or more** (around 1,800 entities) was virtually flat year on year. However, their intermediate consumption dropped by 1.7% and, as a result, growth in book value added increased to 5.2%. As in the previous quarter, personnel costs grew faster in large corporations than in the wider sample (8.4%). This was due mainly to higher growth in employment. The gross operating surplus of corporations with 250 employees or more rose by 2.1%.

37 The NEER indicates the change in the exchange rate of the koruna against a basket of the most important currencies in terms of their share in the Czech Republic's trade turnover. The euro has the largest share in the basket (more than 65%). The renminbi, the zloty, the pound, the dollar and the forint have smaller, but still significant shares (2.2%–7.2%). The shares of the remaining six currencies range between 0.8% and 1.6%. The calculation method (as applied by the IMF) includes all SITC categories.

38 The year-on-year appreciation of the koruna against the pound in mid-October was even more pronounced, amounting to 18%.

Table III.5.1

PERFORMANCE INDICATORS OF NON-FINANCIAL CORPORATIONS

Intermediate consumption of corporations continued to fall year on year, whereas personnel costs rose sharply

	2015 Q2 CZK billions	2016 Q2 CZK billions	Annual percentage changes
Sales	2,052.5	2,072.9	1.0
Output incl. profit margin	1,553.5	1,566.9	0.9
Intermediate consumption	1,123.8	1,111.0	-1.1
Book value added	429.7	455.9	6.1
Personnel costs	220.3	236.1	7.2
Gross operating surplus	209.4	219.9	5.0
	%	%	Annual changes in pp
Material cost-output ratio	72.3	70.9	-1.4
Ratio of book value added to output	27.7	29.1	1.4
Personnel cost-output ratio	14.2	15.1	0.9
Ratio of personnel costs to value added	51.3	51.8	0.5
Ratio of gross operating surplus to value added	48.7	48.2	-0.5

Chart III.5.16

OPERATING PROFIT BY SECTOR

The renewed growth in gross operating surplus was due mainly to manufacturing

(annual percentage changes; contributions in percentage points)

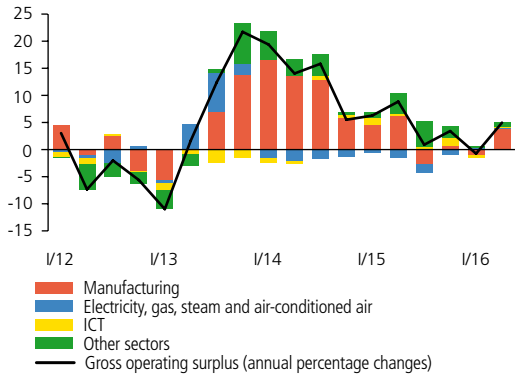


CHART III.5.17

FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

The further acceleration in growth in corporate financial liabilities was due mainly to loans and shares and other equity excluding quoted shares
(annual percentage changes; contributions in percentage points)

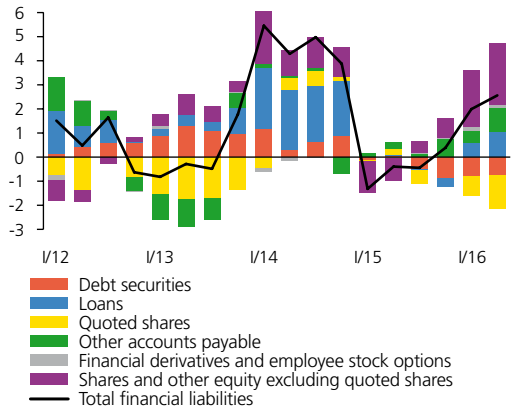


CHART III.5.18

STRUCTURE OF HOUSEHOLD FINANCIAL ASSETS

The slowdown in growth in households' net financial assets was due mainly to shares and other equity and debt securities
(contributions in percentage points; annual percentage changes and percentage ratios)

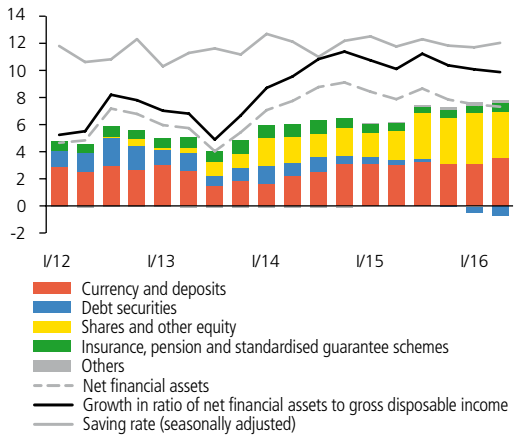
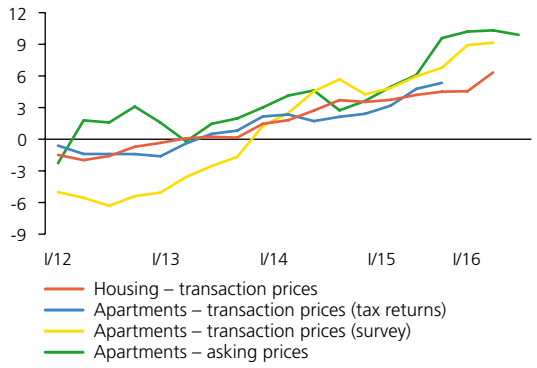


CHART III.5.19

TRANSACTION AND ASKING PRICES OF HOUSING

Apartment prices are rising sharply
(annual percentage changes)



III.5.6 Financial position of corporations and households

Growth in the **financial liabilities of non-financial corporations** accelerated further year on year in 2016 Q4 (to 2.6%; see Chart III.5.17). This was due mainly to loans, long-term ones in particular, and to unquoted shares. The negative contribution of debt securities decreased slightly again in this quarter, while that of quoted shares increased due to revaluation. Annual growth in the **financial assets of non-financial corporations** slowed (to 3.9%) due to shares, securities and other accounts receivable, whose effect outweighed an increased contribution of loans and currency and deposits. Overall, the negative net financial position of corporations increased slightly.

The main **trends in the balance sheets of non-financial corporations** are reflected in their financial indicators. The acid-test ratio[39] of corporations decreased for the second consecutive quarter (to 189%), but was still higher in year-on-year terms. The market-based financing ratio[40] also declined (to 7.6%), due to stagnant issuing activity. The corporate solvency ratio[41] also decreased compared to the previous quarter (to 119%).

Growth in the **net financial assets of households** slowed slightly to 7.3% year on year in 2016 Q2 (see Chart III 5.18). The growth in net financial assets relative to annual gross disposable household income was similar (9.9%). The slowdown in growth in **households'** financial assets was moderate compared to the previous quarter (to 7.1%). It was due to shares and other equity and debt securities. By contrast, growth in currency and deposits increased slightly. Their contribution to the growth in household financial assets is currently around 3 percentage points. From a longer-term perspective, the increasing growth in shares and other equity is being driven by rising investment in investment fund shares and units. Unquoted shares also contributed to the growth in shares and other equity in this quarter. Annual growth in the **financial liabilities of households** increased slightly (to 6.7%), predominantly reflecting a rise in long-term loans.

III.5.7 The property market

Transaction prices of housing continued to rise in 2016 Q2. According to the CZSO House Price Index, they picked up by slightly less than 2 percentage points year on year compared to the previous period, to 6.3% (see Chart III.5.19). According to CZSO survey estimates, **transaction prices of older apartments** rose by 9.1%

39 The acid-test ratio is a ratio with currency in circulation, transferable deposits, short-term debt securities held and short-term loans provided as the numerator and short-term debt securities issued and short-term loans accepted as the denominator.

40 The ratio of bonds and quoted shares issued to total liabilities.

41 The ratio of total financial assets to liabilities excluding shares and other equity.

in the same period. Their growth rate increased to 7.4% in Prague and remained close to 10% in the rest of the Czech Republic. Since their last cyclical trough, these prices have gone up by almost 17% in Prague and 19% in the rest of the Czech Republic.[42]

Asking prices of apartments continued to rise faster than transaction prices in 2016 Q2 according to CZSO data. This difference remained particularly significant in Prague. Growth in asking prices stayed around 10% in 2016 Q3.

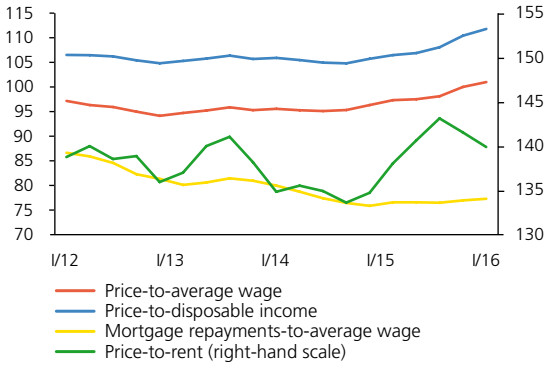
The growth in apartment prices in 2016 Q3 was again reflected in a deterioration of the **indicators of the affordability and perceived profitability of purchasing an apartment**[43] (see Chart III.5.20). According to estimates, the price-to-average wage ratio and the price-to-disposable income ratio rose by 3.8% and 5% year on year respectively. According to IRI data, the price-to-rent ratio increased by 1.3% year on year. The mortgage-to-average wage ratio[44] increased only slightly (by 0.9% year on year), due in part to a further drop in interest rates on new loans for house purchase.

CHART III.5.20

APARTMENT PRICE SUSTAINABILITY INDICATORS

The indicators of the affordability and perceived profitability of buying an apartment deteriorated again

(average for 2000–2007 = 100[a]; 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.

42 Transaction prices in Prague and in the rest of the Czech Republic last reached historical lows in 2012 Q3 and 2013 Q4 respectively.

43 To calculate these indicators, apartment prices are approximated by tax return and survey-based transaction prices and by asking prices, depending on availability.

44 A mortgage with fixed parameters of an LTV of 65% and a maturity of 20 years for the purchase of an apartment of a standard size of 68 m^2 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 2016 Q3.

CHART III.6.1

CURRENT ACCOUNT

The current account was almost balanced in 2016 Q2, as compared to a large deficit in the same period of last year
(CZK billions)

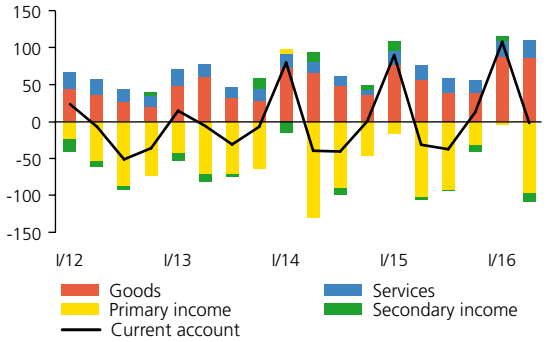


CHART III.6.2

EXTERNAL TRADE IN GOODS BY SITC

An increase in the machinery surplus was the biggest contributor to the rise in the trade surplus
(Q2 of relevant year in CZK billions; national concept)

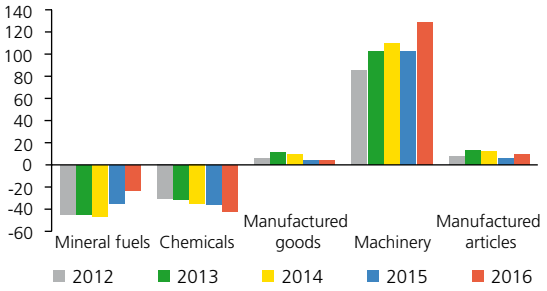
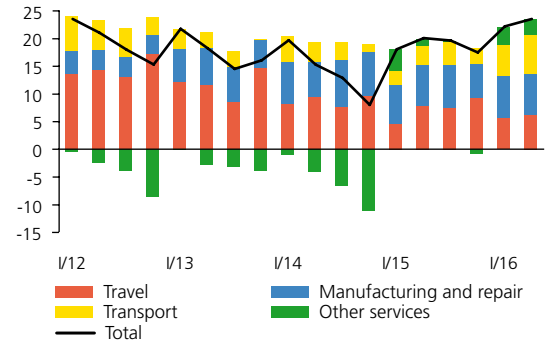


CHART III.6.3

SERVICES

All components contributed to the services surplus
(CZK billions)



III.6 THE BALANCE OF PAYMENTS

The balance of payments in 2016 Q2 was characterised by a broadly balanced current account. This was a result of almost equal levels of the goods and services surplus and the income deficit. The capital account showed a surplus owing to drawdown of EU funds. On the financial account, portfolio and direct investment recorded net outflows. Their counterpart was growth in reserve assets linked with foreign exchange interventions by the CNB and conversions of EU funds.

III.6.1 The current account

The **current account** ended 2016 Q2 in only a slight deficit of CZK 0.1 billion. The deficit narrowed by almost CZK 30 billion year on year. The decline in the overall deficit was due primarily to a rise in the goods surplus (see Chart III.6.1). The ratio of the annual moving current account surplus to GDP reached 1.9%, up by 0.6 percentage point on the previous quarter.

The **goods** balance ended 2016 Q2 in a surplus of CZK 85.6 billion. The surplus increased in year-on-year terms for the third consecutive quarter, this time by almost CZK 30 billion. The increase was due mainly to developments in real terms. However, roughly one-quarter of the growth was due to a price effect associated with a positive year-on-year change in the terms of trade. Turning to the commodity structure, the biggest contributor to the year-on-year rise in the overall surplus was an increase in the machinery and transport equipment surplus (see Chart III.6.2). Nominal trade turnover started to rise again in 2016 Q2 after having recorded a year-on-year drop in the first quarter, but the growth remained low (0.7%). Moreover, it was associated solely with a rise in goods exports (of 2.5%), which was recorded despite a continuing sizeable price decline and a slight slowdown in demand in the euro area. By contrast, goods imports continued to fall year on year for the second consecutive quarter (by 1.2%). This drop was related to a further deepening of the decline in import prices and a slowdown in total domestic demand. The year-on-year growth in the overall goods surplus continued during 2016 Q3, exceeding CZK 8 billion in July to August.

The goods and services surplus was also due to a CZK 23.5 billion surplus on **services** (see Chart III.6.3). The services surplus increased in year-on-year terms for the fifth consecutive quarter, rising by more than CZK 3 billion in 2016 Q2. Services recorded similar developments as in the previous quarter. The largest contributor to the overall surplus was a surplus on manufacturing and repair services of CZK 7.5 billion, but the other three component balances also recorded surpluses. The annual growth in the overall surplus was mainly due to the transport balance as a result of growth in credits and a decline in debits.

In contrast to the goods and services surplus, **primary income** posted a high seasonal deficit of CZK 96.8 billion, despite narrowing by

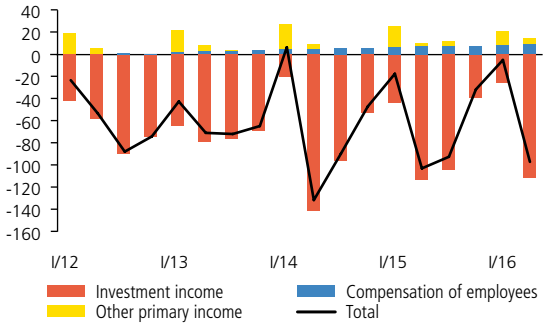
almost CZK 6 billion year on year. The decline in the overall deficit was due most of all to a year-on-year increase in income from the EU budget recorded under other primary income. However, the largest component of the overall balance was still the investment income deficit (see Chart III.6.4), stemming mainly from a direct investment income deficit of CZK 113.9 billion, which in 2016 Q2 was linked mainly with dividend payouts to non-residents (Box 2 provides an international comparison of direct investment dividend outflows). Portfolio investment income also recorded a slight deficit as a result of dividends on shares paid to non-residents. By contrast, a surplus on compensation of employees, consisting mainly of wages, was the biggest contributor to the moderation of the overall deficit.

Secondary income also recorded a deficit (of CZK 12.4 billion). The deficit widened by more than CZK 9 billion year on year, mainly because of lower income from the EU budget. Net income from the EU budget recorded under secondary income switched from a moderate surplus to a deficit of CZK 4.5 billion in year-on-year terms. The largest component of secondary income was an overall deficit on other income not connected with the EU budget, under which the largest deficits were recorded for social contributions and current taxes on income and property.

CHART III.6.4

PRIMARY INCOME

The primary income deficit narrowed year on year due mainly to an increase in the other primary income surplus
(CZK billions)



BOX 2
Comparison of dividend outflows in EU Member States

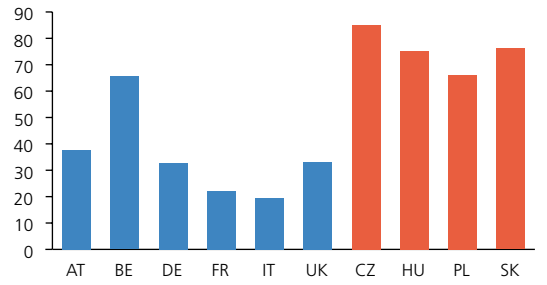
Foreign direct investment (FDI) has been gradually increasing since the 1980s, in line with the growth in international trade. **Outflows of FDI income** have become a major component of the primary income balance in EU countries over time. This box sets out to compare the sizes of these outflows, concentrating on the dividend outflows recorded across EU countries[45] in recent years.

Based on the data for 2012–2014,[46] **FDI income** for the most part accounted for less than half of the **total investment income** paid to non-residents in the traditional EU Member States (see Chart 1). The biggest investment income item in those countries was portfolio investment income, reflecting the high levels of development of their financial sectors and their higher levels of private and government indebtedness.[47] By contrast, the ratios of FDI income to total investment income

CHART 1 (BOX)

FDI INCOME-TO-INVESTMENT INCOME RATIOS

The ratio of FDI income to investment income is noticeably higher in the Visegrad Group countries than in traditional EU countries
(percentages; averages for 2012–2014; expenditure side of balance sheet)



45 FDI dividends are recorded in the current account under the primary income balance on the debit side in the direct investment income item. The calculations referred to here are based on IMF statistical data.

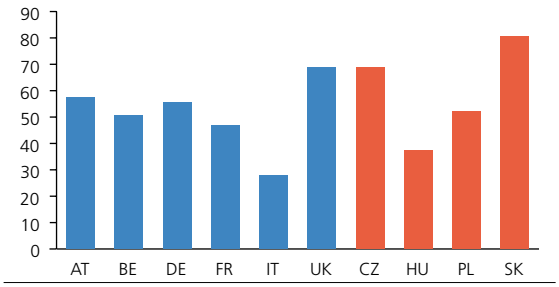
46 2014 is the most recent year for which final data are available.

47 The exception in this respect is Belgium. Also worth mentioning is the Netherlands' 72% share of FDI income, reflecting that country's position as a base for investing in other countries.

Chart 2 (BOX)

DIVIDEND-TO-FDI INCOME RATIOS

The ratios of dividends to FDI income vary considerably across EU countries
(percentages; averages for 2012–2014; expenditure side of balance sheet)

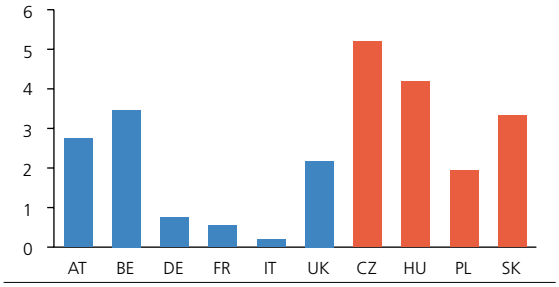


Note: The calculations for Austria include only 2012 and 2014.

Chart 3 (BOX)

FDI DIVIDEND OUTFLOW-TO-GDP RATIOS

The largest traditional EU countries have the lowest FDI dividend outflow-to-GDP ratios, while the ratio in the Czech Republic is relatively high
(percentages; averages for 2012–2014)



in Member States that have joined the EU since 2004 are high.[48] This reflects the higher stocks of FDI in those countries and the higher returns on that FDI, which, in turn, are linked with the continued process of economic convergence and substantial support in the form of investment incentives.

The FDI income structure is mostly a result of investment strategies and reflects the various stages of the investment life cycle in individual countries. Study results show that the annual return on new FDI initially rises, then peaks in approximately the seventh year and subsequently gradually declines until the sixteenth year after the initial investment, when the investment cycle is completed. Total FDI income is divided into dividends paid to foreign investors, profits reinvested in the host economy, and interest. There is a broad consensus that reinvested earnings dominate in the first stages of the life cycle and that dividends gain in importance only gradually. There is no fundamental difference in dividend-to-reinvested earnings ratios between the traditional and newer EU Member States. Data for 2012–2014 show that the **ratios of dividends to total FDI income** vary quite considerably across the countries under review (see Chart 2).

The lower FDI-to-GDP ratios in the largest traditional EU Member States imply that their **dividend-to-GDP ratios** are also very low (mostly below 1%; see Chart 3). By contrast, the highest ratios are recorded by tax havens and countries with stable legal frameworks, such as Luxembourg (with an average dividend-to-GDP ratio of 128% in the period under review) and the Netherlands (17%). The ratios of the EU Member States that have joined the EU since 2004 were mostly between 1.1% and 4.2% in 2012–2014. However, the ratio in the Czech Republic was above the upper limit of this range (at 5.2%). A past exception was Cyprus, whose dividend-to-GDP ratio reached double figures but had dropped significantly by 2014. The current record-holder in this respect is Malta (with a ratio of over 100%).[49]

As is apparent from the comparison with other EU countries, the outflow of FDI dividends to non-residents is – in the absence of significant tax relief – a very important item in the Czech Republic from the perspective of the entire current account, not only the primary income balance. The high ratio of dividends to Czech GDP stems, among other things, from a large amount

48 Recently, only Slovenia and Croatia have recorded shares of less than 40%.

49 In the above cases, the ratios of dividends to GDP are significantly affected by the level of taxation. As regards the taxation of dividends themselves, the basic rate in Malta and Cyprus is only 5%, while in EU countries it is usually 15%. Countries such as Malta and Cyprus also have the lowest effective corporate income tax rates (5% and 10% respectively).

of FDI and from the structure of FDI, which is characterised by a high proportion of foreign investment in sectors with above-average profitability. The natural counterpart to this outflow of dividends is a goods and services surplus, with exports being generated largely by foreign-controlled corporations.

III.6.2 The capital account

The **capital account** recorded a surplus of CZK 21.6 billion due to drawdown of funds from the EU budget totalling CZK 20.5 billion. In year-on-year terms, however, the total surplus dropped by CZK 31 billion owing to lower drawdown of EU funds.

III.6.3 The financial account

The **financial account** recorded net borrowing from abroad (a net inflow) of CZK 9.3 billion in 2016 Q2. This was linked with a net inflow of direct and portfolio investment. However, that was largely offset by growth in reserve assets and a net outflow of other investment (see Chart III.6.5).

Following three quarters of net outflow, **direct investment** recorded a net inflow of CZK 68.3 billion (see Chart III.6.6), with assets dropping and liabilities simultaneously rising.[50] The inflow of foreign investment into the Czech Republic amounted to almost CZK 43 billion and was related mainly to reinvestment of earnings and a predominance of loans in debt instruments. By contrast, an outflow of funds prevailed under shares and other equity. The decline in Czech investment abroad was due to a net reduction in assets in debt instruments. However, this was partly offset by reinvestment of earnings and growth in shares and other equity. The year-on-year rise in the net inflow of more than CZK 61 billion was also mainly a result of a change in credit relations.

As in the previous three quarters, **portfolio investment** recorded net borrowing from abroad (a net inflow) of CZK 51.5 billion in 2016 Q2 (see Chart III.6.7). The biggest transactions were purchases of government koruna bonds by non-residents and growth in banks' liabilities in the form of short-term bonds. The year-on-year change in portfolio investment flows (exceeding CZK 86 billion) was also due mainly to purchases of domestic debt securities. Holdings of domestic equity and investment fund shares by foreign investors increased only moderately. Overall, the inflow of portfolio investment by non-residents reached almost CZK 58 billion. Purchases also dominated

50 However, about two-thirds of the total net inflow was not directly connected with real investment activity in the Czech Republic.

CHART III.6.5

FINANCIAL ACCOUNT

The net inflow of direct and portfolio investment was largely offset by growth in reserve assets and a net outflow of other investment

(CZK billions)

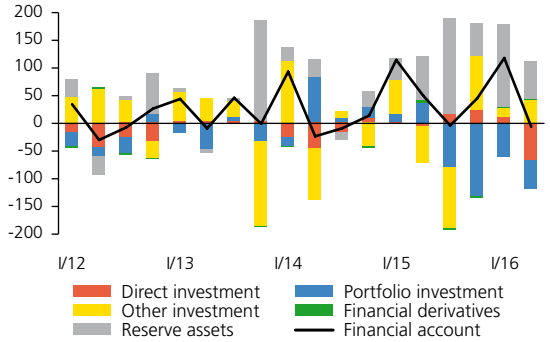


CHART III.6.6

DIRECT INVESTMENT

The largest component of the net inflow of direct investment was a net inflow under debt instruments

(CZK billions)

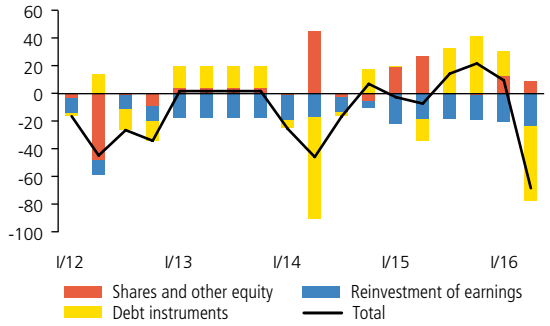


CHART III.6.7

PORTFOLIO INVESTMENT

Portfolio investment recorded a net inflow as a result of purchases of domestic government bonds by non-residents

(CZK billions)

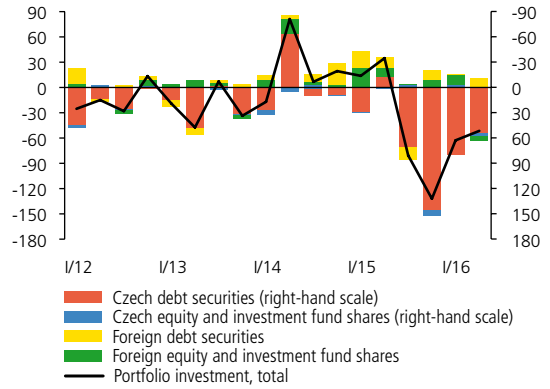
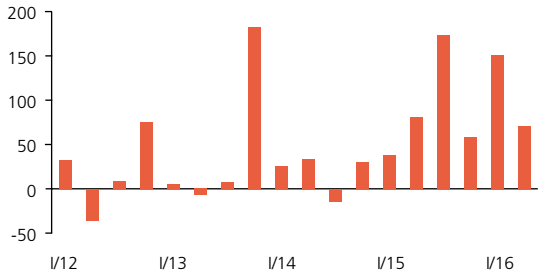


CHART III.6.8

RESERVE ASSETS

Reserve assets increased again, due above all to the CNB's foreign exchange interventions and conversions of EU funds
(changes in CZK billions)



domestic investors' transactions in foreign securities. However, they were related exclusively to growth in holdings of foreign bonds, whereas sales slightly predominated in the case of equity and investment fund shares.

By contrast, settlement of **financial derivatives and employee stock options** led to moderate net lending abroad (a net outflow) of CZK 0.5 billion amid a year-on-year change in flows of almost CZK 4 billion.

Other investment recorded net lending abroad (a net outflow) of CZK 40.1 billion. This was due to a net outflow of almost CZK 64 billion via the corporate sector. It was linked mainly with provision of long-term loans and growth in short-term deposits abroad. However, it was partly offset by a net inflow in the banking sector including the CNB (exceeding CZK 24 billion) associated with a rise in short-term deposits in domestic banks. The year-on-year change in flows of more than CZK 106 billion was due in almost equal measure to a decrease in the net inflow in the banking sector including the CNB and a rise in the net outflow in the corporate sector.

Reserve assets increased for the seventh consecutive quarter. Their growth reached CZK 70 billion in 2016 Q2 due to the CNB's foreign exchange interventions and conversions of funds from the EU budget (see Chart III.6.8).

III.7 THE EXTERNAL ENVIRONMENT

Annual economic growth in the euro area weakened only slightly in 2016 Q2, whereas the US economy slackened more markedly, slowing for the sixth consecutive quarter. In the euro area, consumer price inflation rose and the year-on-year decline in industrial producer prices slowed in 2016 Q3. Inflation also went up in the USA. Inflation is expected to rise in both these economies next year. The euro appreciated markedly further against the pound while remaining relatively stable against the dollar and yen. The price of oil edged higher in 2016 Q3 then rose sharply in October in line with the price of coal. The price of electricity responded to this by surging as well. By contrast, prices of food commodities were falling until September.

III.7.1 The euro area

Annual **GDP growth** in the euro area slowed slightly to 1.6% in 2016 Q2 (see Chart III.7.1), due mainly to smaller contributions from private consumption and investment. The fastest growing countries in the euro area in 2016 Q2 were Germany, Spain, Slovakia and Ireland. By contrast, Greece stayed in recession. After the initial shock of the UK referendum result had subsided, international institutions (with the exception of the OECD) raised their GDP growth outlooks for this year by 0.1 percentage point (see Chart III.7.2).

Monthly data indicate that the euro area economy should continue to show modest growth in 2016 Q3. Except for a drop in July caused mainly by seasonal factors, industrial production was favourable, with output growth gradually rising in most sectors. Following a two-month decline, the PMI leading indicator in manufacturing increased in September as growth in output, new orders, exports and jobs accelerated again. Unemployment has been flat at 10.1% for several months now, due mainly to mixed trends across euro area countries. According to CF, it will remain at this level until the end of this year. Retail sales growth fell sharply across all items in August following favourable developments in previous months.

Headline **inflation in the euro area** is gradually increasing and in September hit its highest level since October 2014 on the back of food and services prices. Energy prices remain anti-inflationary, but their year-on-year fall is gradually slowing. Next year, inflation is expected to accelerate above 1% but remain distinctly below the ECB's 2% target (see Chart III.7.2). Inflation excluding energy and food prices remains below 1%. The year-on-year decline in industrial producer prices gradually moderated for the fourth consecutive month, but their month-on-month rise has slowed in recent months (see Chart III.7.3).

The **ECB's monetary policy** has seen no changes in recent weeks. According to the ECB, the euro area economy seems resilient to current global economic and political uncertainties, although downside risks to growth still predominate. The 3M EURIBOR will remain at negative levels according to market outlooks.

CHART III.7.1

GDP IN THE EURO AREA

The slight slowdown in GDP growth in 2016 Q2 was due to smaller contributions from private consumption and investment
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)

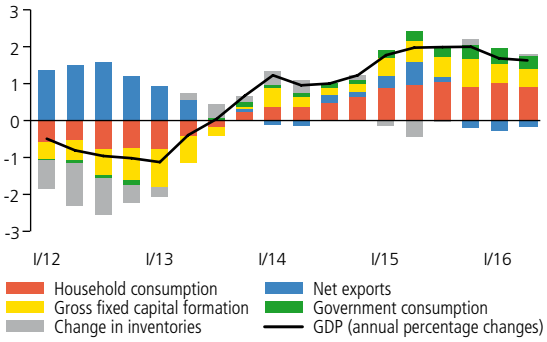
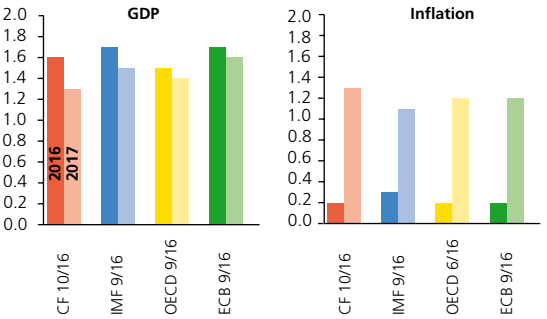


CHART III.7.2

EURO AREA GDP AND HICP INFLATION OUTLOOKS

Euro area GDP growth is expected to slow next year, while inflation will conversely accelerate 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

Headline inflation has been gradually increasing in recent months and the decline in industrial producer prices is abating
(annual percentage changes; source: Datastream)

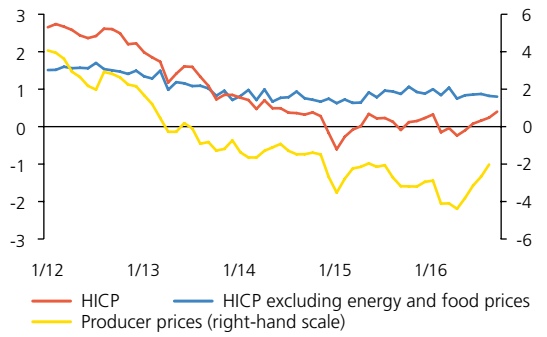


CHART III.7.4

GDP IN GERMANY

Annual GDP growth slowed slightly in 2016 Q2, mainly due to a smaller contribution from fixed investment
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)

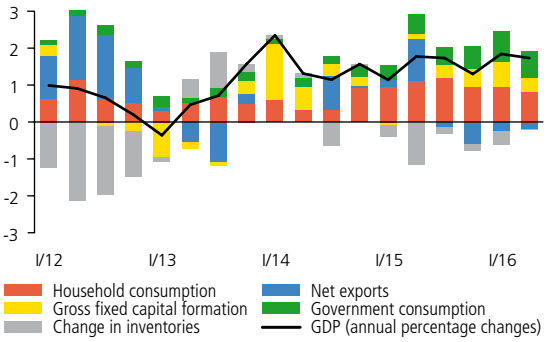
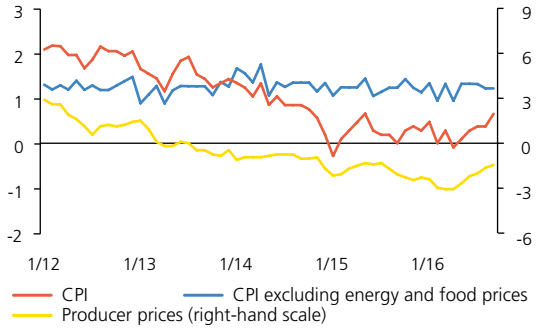


CHART III.7.5

INFLATION AND PRODUCER PRICES IN GERMANY

Consumer price inflation kept rising and the decline in industrial producer prices continued to moderate in 2016 Q3
(annual percentage changes; source: Datastream)



Annual economic growth in Germany slowed slightly to 1.7% in 2016 Q2[51] (see Chart III.7.4). The still robust growth was fostered by strong growth in investment and household and government consumption. By contrast, a drop in net exports dampened GDP growth. The favourable economic situation is being accompanied by a decline in the unemployment rate[52] (to 4.2% in July) and growth in employment (by 0.3% quarter on quarter and 1.2% year on year).

The **German Ministry of Finance** expects the economic growth to enable the state budget to post a surplus again this year, although the surplus will be lower than last year due to further expenditures on refugees. The ministry expects the budget to continue to show a surplus in the medium term and the ratio of debt to GDP to drop from the current 71% to 60% by 2020.

According to the **October CF and Bundesbank** estimates, the economic situation remained favourable in 2016 Q3. Foreign demand for German products continued to rise (especially in the euro area and China), as did household consumption owing to increasing disposable income (bolstered by growth in employment and real wages). Government consumption also went up. The favourable situation is confirmed by growth in industrial production and retail turnover in July and August and by rising leading indicators (Ifo, ZEW and PMI) for September and October. The October CF expects annual GDP growth to reach 1.8% this year but decline to 1.3% next year owing to the negative impact of the Brexit referendum result.

German inflation rose by 0.3 percentage point to 0.7% in September (see Chart III.7.5) due to a more moderate year-on-year drop in energy prices. Food and services prices meanwhile continued to increase. Core inflation (excluding energy and food prices) remained distinctly positive, although it fell to 1.2% in August. The year-on-year decline in industrial producer prices moderated further to 1.4% in September. According to CF, consumer price inflation in Germany will reach 0.4% in 2016 as a whole and accelerate to 1.5% next year.

GDP **in Slovakia** increased by 3.7% year on year (and by 0.9% quarter on quarter) in 2016 Q2. The robust growth was fostered mainly by increasing net exports. The strong economic growth was reflected in growth in employment (of 2.3% year on year) and a drop in unemployment (to 9.5% in August). It is thus resulting in a partial shortage of labour and hence increased employment of foreigners, who now account for 20% of employment growth.

51 The quarter-on-quarter growth rate of the German economy also slowed – from 0.7% to 0.4% – due to slower growth in household and government consumption and a fall in investment. Counteracting this was an increase in net exports.

52 Despite the fact that refugees who have come to Germany in recent years are gradually joining the ranks of the unemployed.

The average **growth rate of industrial production** declined somewhat in July and August, so a modest slowdown of the economy can be expected in 2016 Q3. The October CF also expects some weakening of economic growth in 2016 H2. It estimates GDP growth at 3.3% for 2016 as a whole (a slowdown of 0.3 percentage point compared with last year) and a further slight slowdown for next year.

The annual **decline in consumer prices** in Slovakia slowed by 0.3 percentage point to 0.5% in September. According to the NBS, the decline should turn into moderate growth at the end of this year. The October CF expects inflation of -0.4% for 2016 as a whole and an increase to 1.3% next year.

III.7.2 The United States

The US economy slowed for the sixth consecutive quarter in year-on-year terms. In 2016 Q2, the USA recorded **annual GDP growth** of just 1.3% (see Chart III.7.6). Inventories dropped sharply and the contribution of net exports was also slightly negative. The positive contribution of investment shrank further, with oil prices generating lower profits in the energy sector. The only item to record an increased contribution compared to the previous quarter was household consumption.

According to the available data, the growth of the US economy **in 2016 Q3** was again driven by strong household consumption. The unemployment rate stagnated close to 5% in the period under review. Non-farm payroll growth averaged 191,000 in July–September. Average year-on-year growth in retail sales was 2.4% in 2016 Q3 after revision, thanks mainly to car sales. According to the Conference Board survey, consumer confidence is at its highest level since August 2007. However, the situation in other sectors is not so optimistic. Wholesale inventories dropped again in year-on-year terms in July and August, so the effect of inventories on overall growth in 2016 Q3 should remain negative. Investment will continue to be adversely affected by the low profitability of firms in the energy sector. Industrial production in manufacturing was flat in year-on-year terms and the ISM PMI leading indicator implies only slight expansion. According to the monitored outlooks, US GDP will rise by between 1.5% and 1.8% in 2016 (see Chart III.7.7), which is a markedly lower outlook compared to July. GDP growth is not expected to accelerate until 2017.

Inflation in the USA went up in 2016 Q3. Annual headline inflation rose from 0.9% in July to 1.5% in September, while average inflation excluding energy and food prices was 2.2% (see Chart III.7.8). Inflation is being pushed up by rising health care costs and rents. The inflation outlooks for 2016 from the monitored institutions range from 1.1% to 1.3%. Inflation in the USA is expected to rise in 2017 – above 2% according to some predictions. Annual producer price inflation was close to zero in July and August but rose to 0.7% in September.

CHART III.7.6

GDP IN THE USA

GDP growth in the USA slowed for the sixth consecutive quarter
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)

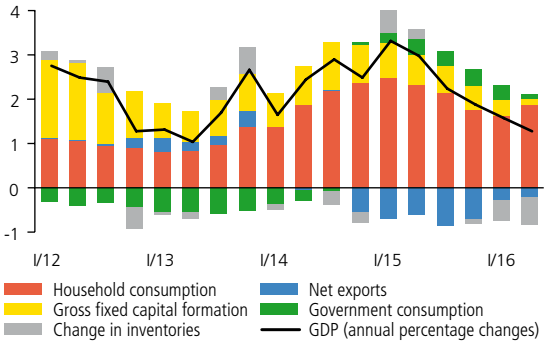
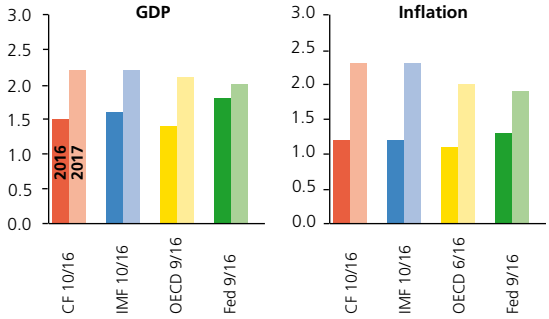


CHART III.7.7

US GDP AND INFLATION OUTLOOKS

All the monitored institutions revised their GDP growth outlooks for 2016 below the 2% level
(annual percentage changes; source: CF, IMF, OECD, Fed)

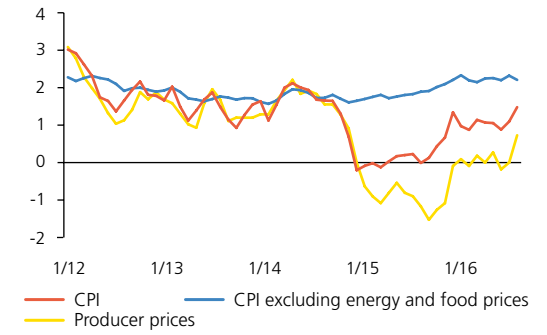


Note: Horizontal axis shows most recent forecast data in format "Source month/year of publication". Midpoint of range for Fed.

CHART III.7.8

INFLATION AND PRODUCER PRICES IN THE USA

Inflation went up in 2016 Q3
(annual percentage changes; source: Datastream)



The **Fed's monetary policy** remained unchanged in the period under review. According to market expectations, however, the central bank will increase its policy rate at least once by the end of the year. Due to the presidential elections, the markets do not expect this to happen before the December meeting. Fed representatives' comments are mixed at the moment.

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

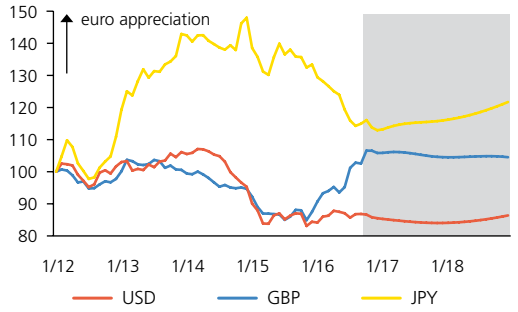
The **exchange rate of the euro against the dollar** continued to depreciate moderately in July (see Chart III.7.9) as increased uncertainty prevailed on markets after the UK referendum. However, the euro strengthened against the dollar at the end of July following the Fed meeting and the publication of unexpectedly weaker US economic growth data. During August, the euro erased most of its referendum-related losses. The dollar was boosted by an unequivocally hawkish speech delivered by Janet Yellen at Jackson Hole at the end of August, but the optimism lasted only until the publication of further weaker data from the USA. During September, the euro fluctuated within a relatively narrow band around USD 1.12 to the dollar. In the first half of October, it weakened to USD 1.10 after FOMC members made a series of comments fuelling expectations that rates in the USA will go up by the end of this year. Voters' preferences ahead of the presidential elections, which according to polls are shifting in favour of Hillary Clinton, are pushing the exchange rate in the same direction.

Since the Brexit referendum in June, the exchange rate of the euro against the **British pound** has been responding mainly to news from the UK. The sharp depreciation of the pound following the release of the referendum result halted in mid-July after the appointment of a new prime minister helped stabilise the political situation in the UK. The BoE's monetary policy meeting in early August, at which a decision was made to lower interest rates and increase the amount of assets purchased in the quantitative easing programme, gave the pound a further depreciation stimulus. The exchange rate trend changed direction in mid-August when it started to become apparent from incoming data that the concerns that the referendum outcome would have an immediate negative impact on the UK economy had not been confirmed. The pound thus strengthened against the euro back to the early July level. This appreciation was also fostered by financial market expectations that the ECB would also ease monetary policy in early September. However, this did not happen and the pound started to weaken again against the euro. Its fall accelerated in early October after the UK prime minister released more information about the timing of the official steps for leaving the EU, which hit the part of the markets that was still hoping that Brexit ultimately might not happen. By mid-October, the euro had climbed to a five-year high against sterling.

CHART III.7.9

EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

The euro appreciated further against the pound, but remained relatively stable against the dollar and the yen
(January 2012 = 100; source: Datastream; outlook from Consensus Forecasts; CNB calculation)



The **Japanese yen** is still regarded as a safe asset, one to which investors resort every time risk aversion increases in world markets. The yen thus responded to the UK referendum result by strengthening significantly. A correction occurred after the Japanese elections, in which Shinzo Abe was re-elected prime minister. This boosted expectations that the Japanese government and central bank would continue their efforts to support the economy. Nevertheless, the BoJ disappointed the markets at the end of July by easing monetary policy by less than they had expected (only the amount of equity purchases was increased, while interest rates and the asset purchase programme remained unchanged) and the yen strengthened against the euro again. In August, the exchange rate stabilised after the government announced a new stimulus package. At the end of September, the BoJ also helped calm the markets by giving up its efforts to cut short-term rates further into negative territory. The central bank's latest plan is to try to influence the slope of the yield curve by targeting yields at its long end. It will also stop purchasing fixed amounts of assets. The quantitative easing programmes will instead respond flexibly to the current needs of the economy. This has helped the BoJ regain some credibility in the eyes of the markets, which in recent months have been sceptical about the effectiveness of its previous measures. In this context, the yen fluctuated around a slightly weaker level against the euro in the first half of October.

According to the **October CF**, the euro will weaken moderately against all three above-mentioned currencies at the one-year horizon – by 2.8% against the dollar (to USD 1.09), by 3.4% against the pound and by just 0.6% against the yen.

III.7.4 Prices of oil and other commodities

The price of **Brent crude oil** fell in July in response to changes in market fundamentals (see Chart III.7.10). Increasing production by OPEC and Russia kept the supply of oil high. Thanks to strong refinery activity, this oil was converted into growing stocks of refined products during the main driving season. In addition, growth in petrol consumption in the USA turned out to be not as strong as preliminary data had suggested. The price drop was amplified by speculative activity by hedge funds. However, they responded to a fall in petrol stocks in the USA in early August and started to take profits from the previous drop and close massive short positions. Market sentiment then improved, thanks in part to news of a planned informal meeting of large oil producers in Algeria, and the price rose from a four-month low of USD 42 a barrel to USD 50 a barrel in less than three weeks. The growth was also fostered by the weaker dollar.

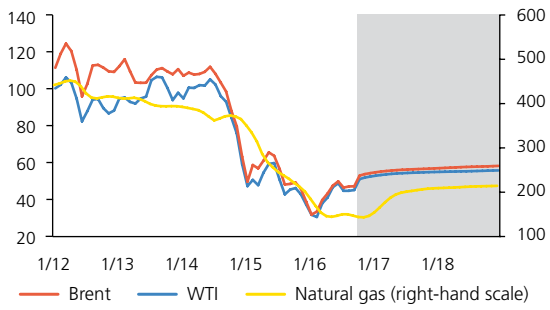
However, **concerns of a fundamental excess of oil** predominated on the market again at the end of August as oil stocks in the USA surprisingly rose and the active oil rig count continued to increase. The price thus dropped again and fluctuated close to USD 46 a barrel through most of September. This situation was changed by the outcome

Chart III.7.10

OIL AND NATURAL GAS PRICES IN USD

The price of Brent crude oil rose to a 12-month high in the first half of October after OPEC agreed to cut output

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



of the informal talks held in Algeria, where OPEC representatives surprisingly agreed to cut daily output by around 700,000 barrels to 32.5–33.0 million barrels. Country quotas and other technical aspects will be set at the regular OPEC meeting in Vienna in late November.[53] Brent prices have since risen by more than 15% in two weeks. The Russian president also voiced support for the deal at a subsequent meeting in Istanbul. However, Russia prefers to freeze its oil output at the existing level.

The oil price has been hovering above USD 50 a barrel **since early October**, although excess oil supply persists[54] and many analysts are sceptical about the implementation of the Algeria agreement. There is limited further room for a more significant rise in oil prices, as a price of between USD 50 and 60 a barrel will lead to growth in drilling activity in the USA. The productivity of new shale oil wells in the USA has increased markedly in the past two years, while the costs of setting up such wells have dropped. Many producers are thus using the current price, which is close to a one-year high, to hedge the prices at which they will sell their future output. This will put off the balancing of supply and demand.

The **koruna price of oil** is expected to switch from a more than two-year-long annual decline to growth at the end of this year, owing mainly to changes in the dollar price (see Chart III.7.11).

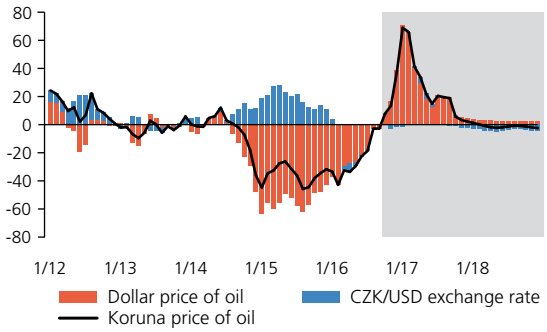
The **market futures curve** has shifted upwards in line with the recent price growth, implying a Brent oil price of USD 54 a barrel for the fourth quarter of this year. An average price of about USD 56 and USD 58 a barrel is expected in 2017 and 2018 respectively. By contrast, the EIA has revised its oil price forecast for 2017 down to an average of USD 51 a barrel. The year-end forecast saw the biggest revision – from USD 58 to USD 55 a barrel. This is due to slower growth in expected demand and higher than previously expected growth (or a weaker decline) in output in Russia and the USA. The October CF forecast is also about USD 3 below the market curve, predicting a Brent oil price of USD 53.7 a barrel at the one-year horizon. The short-term risks to future price movements are on the downside, as extraction in Libya and Nigeria is gradually being renewed thanks to a calmer political situation. At the same time, the current price may lead to renewed growth in output in the USA. The price could decline also if the deal to curb oil production struck in Algeria fails.

Chart III.7.11

DECOMPOSITION OF KORUNA OIL PRICE GROWTH

The koruna price of oil will start to rise year on year at the end of this year; the key factor will be the dollar price

(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)



53 OPEC's current output is estimated to be 33.6 million barrels a day. The cut in output is not expected to apply to Libya, Nigeria and Iran.

54 The EIA estimates that global oil stocks will rise by 0.7 million barrels a day this year and 0.3 million barrels a day next year.

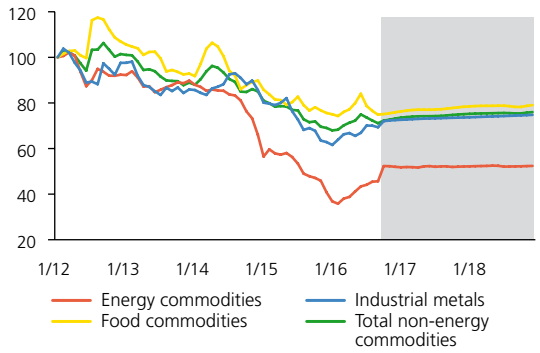
The energy commodity **price index** rose slightly in 2016 Q3 (see Chart III.7.12). In October, however, it jumped upwards owing to not only oil prices, but also to coal prices, which hit their highest level since August 2014. The electricity price also rose sharply in response to this. The non-energy commodity price index decreased in 2016 Q3. The agricultural commodity price sub-index recorded a particularly significant drop. Prices of food commodities, especially grain, went down due to good weather and high expected stocks after this year's harvest. They stopped falling in September and increased moderately in October on the back of strong demand for wheat and corn, and also because rains complicated the harvest in the main agricultural regions of the USA and Canada. Meat prices also fell sharply in the period under review. Only the sugar price recorded higher growth. The industrial metals sub-index was virtually flat in 2016 Q3. In the first half of October, however, it rose to its highest level since July 2015 due to faster growth in industrial production in China.

CHART III.7.12

COMMODITY PRICES

Food commodity prices stopped falling in September; the energy commodity price index jumped upwards in October owing to an increase in oil and coal prices

(January 2012 = 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).

ABBREVIATIONS

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

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 cyclicality of the unemployment rate and wages	(Box)	II/2015
The monetary conditions index for the Czech Republic	(Box)	II/2015

The monetary conditions index for the euro area	(Box)	II/2015
The pass-through of the koruna-dollar exchange rate to prices of tradable goods	(Box)	III/2015
The equilibrium koruna-euro exchange rate	(Box)	III/2015
The German economy and the dollar-euro exchange rate	(Box)	III/2015
Employment of foreign and agency workers and their effect on the employment statistics	(Box)	IV/2015
Public procurement data as a leading indicator of public investment	(Box)	I/2016
The changeover from national to harmonised monetary statistics	(Box)	I/2016
The impact of the Chinese economic slowdown on the world economy and commodity prices	(Box)	I/2016
Wage growth in 2015 from the CZ-ISCO skills structure perspective	(Box)	II/2016
The house price index and its evolution in EU countries	(Box)	II/2016
A model of the effective indicator of industrial producer prices in the euro area	(Box)	III/2016
The impact of the Balassa-Samuelson effect on prices in the domestic economy	(Box)	III/2016
The Czech Republic's trade relations with the UK	(Box)	III/2016
The impact of drawdown of EU funds on investment by non-financial corporations	(Box)	IV/2016
Comparison of dividend outflows in EU Member States	(Box)	IV/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).

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 countries in the Czech Republic's total exports to the euro area.

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

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

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

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

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

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

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

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

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

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

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										
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p.,of 2010, seas. adjusted	4,057.2	3,866.7	3,949.3	4,028.7	3,999.6	3,980.2	4,088.2	4,276.9	**4,395.8**	**4,522.2**	**4,651.2**
GDP	%, y-o-y, real terms, seas. adjusted	2.5	-4.7	2.1	2.0	-0.7	-0.5	2.7	4.6	**2.8**	**2.9**	**2.9**
Household consumption	%, y-o-y, real terms, seas. adjusted	2.8	-0.6	0.9	0.3	-1.2	0.5	1.8	3.1	**2.6**	**3.3**	**2.9**
Government consumption	%, y-o-y, real terms, seas. adjusted	1.1	3.0	0.4	-2.2	-2.0	2.5	1.1	2.0	**2.4**	**2.2**	**2.0**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	0.8	-17.8	4.1	1.9	-3.8	-5.1	8.5	10.2	**-2.3**	**1.7**	**3.7**
Gross fixed capital formation	%, y-o-y, real terms, seas. adjusted	2.2	-9.8	1.0	0.9	-2.9	-2.5	3.9	9.1	**-2.7**	**3.5**	**3.8**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	3.8	-9.5	14.4	9.2	4.5	0.2	8.7	7.9	**6.1**	**6.4**	**6.7**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	2.8	-10.7	14.5	6.7	2.8	0.1	10.1	8.4	**4.3**	**6.4**	**7.1**
Net exports	CZK bn, constant p.,of 2010, seas. adjusted	86.6	107.9	121.5	193.7	245.8	249.7	233.1	236.2	**296.9**	**327.3**	**334.3**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	-1.8	-13.6	8.6	5.9	-0.8	-0.1	5.0	4.6	-	-	-
Construction output	%, y-o-y, real terms	0.0	-0.9	-7.4	-3.6	-7.6	-6.7	4.3	7.1	-	-	-
Receipts in retail sales	%, y-o-y, real terms	2.7	-4.7	1.5	1.7	-1.1	1.2	5.5	8.1	-	-	-
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	6.4	1.1	1.5	1.9	3.3	1.4	0.4	0.3	-	-	-
Consumer Price Index	%, y-o-y, average	6.4	1.1	1.5	1.9	3.3	1.4	0.4	0.3	**0.6**	**1.9**	**2.2**
Regulated prices (18.70%)*	%, y-o-y, average	15.6	8.4	2.6	4.7	8.6	2.2	-3.0	0.0	**0.2**	**1.2**	**1.6**
Net inflation (81.30%)*	%, y-o-y, average	2.4	-0.9	0.0	1.3	0.9	0.5	0.9	0.2	**0.4**	**2.0**	**2.3**
Food prices (including alcoholic beverages and tobacco) (24.58%)*	%, y-o-y, average	3.0	-0.9	0.9	3.9	2.8	3.1	1.8	0.0	**0.0**	**1.9**	**3.0**
Adjusted inflation excluding fuels (53.32%)*	%, y-o-y, average	2.0	0.0	-1.2	-0.7	-0.4	-0.6	0.5	1.2	**1.1**	**1.5**	**1.9**
Fuel prices (3.39%)*	%, y-o-y, average	4.3	-11.1	12.8	9.9	6.0	-2.3	0.2	-13.5	**-8.3**	**10.5**	**1.6**
Monetary policy inflation (excluding tax changes)	%, y-o-y, average	4.3	0.9	0.4	1.9	2.1	0.6	0.2	0.2	**0.4**	**1.9**	**2.2**
GDP deflator	%, y-o-y, seas. adjusted	2.0	2.6	-1.4	0.0	1.5	1.4	2.5	1.0	**0.8**	**0.9**	**2.0**
Partial price indicators												
Industrial producer prices	%, y-o-y, average	4.5	-3.1	1.2	5.6	2.1	0.8	-0.8	-3.2	**-3.2**	**1.9**	**1.4**
Agricultural prices	%, y-o-y, average	9.3	-24.9	7.1	22.1	3.3	5.0	4.7	-6.7	**-5.4**	**3.5**	**2.6**
Construction work prices	%, y-o-y, average	4.5	1.2	-0.2	-0.5	-0.7	-1.1	0.5	1.2	-	-	-
Brent crude oil	%, y-o-y, average	35.4	-36.5	28.4	38.2	0.7	-2.6	-8.5	-46.1	**-14.8**	**22.8**	**2.9**
LABOUR MARKET												
Average monthly wage	%, y-o-y, nominal terms	7.8	3.3	2.2	2.5	2.5	-0.1	2.9	2.7	**4.2**	**5.0**	**4.8**
Average monthly wage	%, y-o-y, real terms	1.4	2.3	0.7	0.6	-0.8	-1.5	2.5	2.4	**3.7**	**3.1**	**2.5**
Number of employees	%, y-o-y	1.6	-2.2	-2.2	0.0	-0.1	1.6	0.6	2.2	**2.0**	**0.3**	**0.4**
Unit labour costs	%, y-o-y	4.7	3.0	-1.7	0.3	3.4	1.0	0.9	-0.1	**2.6**	**2.1**	**2.2**
Unit labour costs in industry	%, y-o-y	-1.7	3.3	-6.2	0.7	5.9	5.1	-0.4	1.8	-	-	-
Aggregate labour productivity	%, y-o-y	0.5	-3.1	3.4	2.3	-1.2	-0.8	2.2	3.1	**1.3**	**2.4**	**2.5**
ILO general unemployment rate	%, average, age 15–64	4.4	6.7	7.4	6.8	7.0	7.1	6.2	5.1	**4.1**	**3.9**	**3.8**
Share of unemployed persons (MLSA)	%, average	4.1	6.2	7.0	6.7	6.8	7.7	7.7	6.5	**5.6**	**5.2**	**5.0**
PUBLIC FINANCE												
Government budget balance (ESA 2010)	CZK bn, current p.	-84.6	-216.2	-174.5	-109.9	-159.6	-51.1	-83.1	-28.6	**-11.9**	**-1.4**	**18.3**
Government budget balance / GDP**	%, nominal terms	-2.1	-5.5	-4.4	-2.7	-3.9	-1.2	-1.9	-0.6	**-0.3**	**0.0**	**0.4**
Government debt (ESA 2010)	CZK bn, current p.	1,150.7	1,335.7	1,508.5	1,606.5	1,805.4	1,840.4	1,819.1	1,836.3	**1,844.3**	**1,856.4**	**1,859.0**
Government debt / GDP**	%, nominal terms	28.7	34.1	38.2	39.8	44.5	44.9	42.2	40.3	**39.0**	**37.9**	**36.2**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current p.	-4.4	65.0	40.4	75.5	123.8	167.0	219.5	210.7	**280.0**	**265.0**	**270.0**
Trade balance / GDP	%, nominal terms	-0.1	1.7	1.0	1.9	3.0	4.1	5.1	4.6	**5.9**	**5.4**	**5.3**
Balance of services	CZK bn, current p.	89.3	81.9	78.5	81.3	77.6	70.4	55.7	75.0	**90.0**	**90.0**	**90.0**
Current account	CZK bn, current p.	-75.3	-89.2	-141.8	-84.8	-63.3	-21.8	7.5	41.4	**115.0**	**75.0**	**70.0**
Current account / GDP	%, nominal terms	-1.9	-2.3	-3.6	-2.1	-1.6	-0.5	0.2	0.9	**2.4**	**1.5**	**1.4**
Foreign direct investment												
Direct investment	CZK bn, current p.	-36.3	-37.7	-95.0	-46.8	-121.3	7.4	-80.4	26.6	**-120.0**	**-50.0**	**-50.0**
Exchange rates												
CZK/USD	average	17.1	19.1	19.1	17.7	19.6	19.6	20.8	24.6	-	-	-
CZK/EUR	average	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.	-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.	-8.6	4.6	-4.1	-3.1	2.6	2.3	4.8	-0.4	-	-	-
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	-4.6	0.2	-1.0	1.7	2.9	1.2	3.5	-1.7	**-3.1**	**0.5**	**-0.4**
Prices of imports of goods	%, y-o-y, average	-3.3	-3.5	2.0	4.3	4.2	-0.2	1.9	-1.9	**-4.3**	**2.4**	**-0.5**
MONEY AND INTEREST RATES												
M3	%, y-o-y, average	14.2	6.5	0.2	1.0	5.1	5.1	5.1	7.3	**9.2**	**8.1**	**6.4**
2W repo rate	%, end-of-period, CNB forec. = avg.	2.25	1.00	0.75	0.75	0.05	0.05	0.05	0.05	**0.05**	**0.44**	**1.34**
3M PRIBOR	%, average	4.0	2.2	1.3	1.2	1.0	0.5	0.4	0.3	**0.3**	**0.7**	**1.6**

* figures in brackets are constant weights in current consumer basket
** CNB calculation
- data not available/forecasted/released
data in bold = CNB forecast

2014				2015				2016				2017				2018			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
1,006.3	1,015.9	1,027.6	1,038.4	1,052.8	1,066.7	1,077.1	1,080.2	1,084.4	1,094.3	**1,103.5**	**1,113.6**	**1,120.7**	**1,128.0**	**1,133.5**	**1,140.0**	**1,148.3**	**1,157.7**	**1,167.4**	**1,177.9**
1.9	2.6	3.4	3.0	4.6	5.0	4.8	4.0	3.0	2.6	**2.5**	**3.1**	**3.4**	**3.1**	**2.7**	**2.4**	**2.5**	**2.6**	**3.0**	**3.3**
0.6	1.3	2.2	3.0	3.5	3.3	2.9	2.8	2.7	2.2	**2.8**	**2.7**	**3.0**	**3.7**	**3.3**	**3.2**	**3.0**	**2.9**	**2.8**	**2.7**
0.8	1.8	-0.1	1.8	1.4	1.5	3.2	1.7	2.3	2.6	**2.1**	**2.8**	**2.9**	**2.2**	**1.9**	**1.8**	**1.9**	**2.1**	**2.1**	**1.7**
5.5	13.4	9.8	5.9	12.7	13.6	9.7	5.0	2.3	-4.6	**-4.9**	**-1.9**	**-2.3**	**1.1**	**3.8**	**4.1**	**3.7**	**3.6**	**3.7**	**4.0**
2.0	3.7	4.6	5.3	8.0	10.4	10.0	8.2	2.6	-4.4	**-5.0**	**-3.7**	**-0.6**	**5.0**	**5.4**	**4.2**	**3.8**	**3.6**	**3.8**	**4.1**
11.1	8.5	7.7	7.5	7.4	7.5	8.2	8.4	5.9	5.7	**6.7**	**5.9**	**6.8**	**7.4**	**6.2**	**5.4**	**5.7**	**6.1**	**7.0**	**8.0**
11.9	11.6	8.4	8.5	8.8	8.6	8.5	7.7	5.5	3.1	**4.5**	**4.1**	**4.8**	**7.3**	**7.0**	**6.7**	**6.6**	**6.7**	**7.2**	**7.8**
62.3	56.0	58.6	56.1	56.9	52.0	61.0	66.3	63.6	65.2	**82.9**	**85.2**	**84.7**	**83.3**	**80.5**	**78.7**	**81.0**	**82.4**	**84.2**	**86.7**
6.9	6.0	4.0	3.2	5.1	5.6	4.1	3.7	2.9	5.7	-	-	-	-	-	-	-	-	-	-
13.3	5.6	2.9	0.7	9.5	12.3	7.3	1.5	-8.9	-10.4	-	-	-	-	-	-	-	-	-	-
7.0	4.7	5.7	4.7	8.3	8.7	6.2	9.1	7.5	8.8	-	-	-	-	-	-	-	-	-	-
1.0	0.7	0.5	0.4	0.3	0.5	0.4	0.3	0.4	0.3	0.4	-	-	-	-	-	-	-	-	-
0.2	0.2	0.6	0.5	0.1	0.7	0.4	0.1	0.5	0.3	0.5	**1.0**	**1.5**	**1.7**	**2.0**	**2.3**	**2.4**	**2.3**	**2.2**	**2.1**
-4.1	-3.5	-2.2	-2.1	0.2	0.3	-0.2	-0.4	0.7	0.2	-0.1	**0.1**	**0.6**	**1.2**	**1.6**	**1.5**	**1.7**	**1.5**	**1.5**	**1.5**
0.9	0.7	1.0	0.8	-0.2	0.5	0.3	0.1	0.2	0.0	0.4	**0.9**	**1.6**	**1.9**	**2.1**	**2.4**	**2.5**	**2.3**	**2.2**	**2.1**
3.4	1.5	1.5	0.7	-0.9	0.7	0.3	0.0	-0.4	-0.8	0.2	**0.8**	**1.0**	**1.5**	**2.1**	**3.0**	**3.5**	**3.3**	**2.9**	**2.5**
-0.2	0.4	0.8	0.9	1.1	1.1	1.1	1.3	1.3	1.1	1.1	**1.0**	**1.1**	**1.4**	**1.7**	**1.9**	**2.0**	**1.9**	**1.8**	**1.9**
0.3	1.0	0.5	-1.2	-14.6	-10.1	-12.6	-16.6	-12.4	-12.4	-9.5	**1.1**	**15.3**	**12.0**	**9.0**	**5.5**	**1.8**	**0.7**	**2.0**	**2.0**
0.1	0.0	0.5	0.3	-0.1	0.4	0.2	0.0	0.3	0.0	0.3	**0.8**	**1.5**	**1.8**	**2.1**	**2.3**	**2.3**	**2.2**	**2.1**	**2.0**
2.1	2.8	2.9	2.1	1.5	1.1	0.8	0.6	1.3	0.9	**0.5**	**0.7**	**0.4**	**1.5**	**0.7**	**0.9**	**1.2**	**1.2**	**2.9**	**2.8**
-0.7	-0.2	-0.1	-1.9	-3.3	-2.3	-3.6	-3.5	-4.0	-4.6	-3.3	**-1.1**	**2.0**	**2.2**	**2.1**	**1.5**	**1.3**	**1.3**	**1.5**	**1.6**
-4.4	-2.1	-2.3	-6.0	-9.3	-10.9	-6.5	1.8	-2.9	-6.9	-5.7	**-5.5**	**-2.1**	**5.3**	**6.6**	**4.2**	**3.8**	**2.8**	**2.0**	**1.8**
-0.3	0.5	0.7	0.9	1.0	1.3	1.4	1.3	1.3	1.1	1.0	-	-	-	-	-	-	-	-	-
-4.2	6.2	-5.7	-29.5	-48.9	-42.1	-50.6	-41.6	-36.3	-26.1	-7.6	**21.5**	**58.7**	**19.6**	**20.2**	**5.7**	**3.7**	**2.9**	**2.6**	**2.4**
3.9	2.8	2.2	2.8	1.7	2.8	3.1	3.2	4.5	3.9	**4.2**	**4.6**	**4.9**	**5.1**	**5.0**	**4.9**	**4.7**	**4.8**	**4.9**	**4.7**
3.7	2.6	1.6	2.3	1.6	2.1	2.7	3.1	4.0	3.7	**3.6**	**3.6**	**3.4**	**3.4**	**3.0**	**2.6**	**2.3**	**2.5**	**2.7**	**2.6**
0.4	-0.2	1.0	1.2	2.1	2.4	2.0	2.1	2.8	2.0	**1.8**	**1.2**	**0.0**	**0.4**	**0.4**	**0.3**	**0.3**	**0.3**	**0.4**	**0.5**
1.4	0.7	-0.7	2.1	-1.0	-0.4	0.5	0.4	3.3	1.7	**3.0**	**2.3**	**1.8**	**2.0**	**2.1**	**2.4**	**2.2**	**2.3**	**2.3**	**2.0**
2.0	0.3	-2.4	-1.6	0.3	0.9	2.3	3.8	4.6	-0.3	-	-	-	-	-	-	-	-	-	-
1.7	2.8	3.0	1.1	3.3	3.3	2.9	3.0	0.8	1.9	**0.8**	**1.6**	**2.9**	**2.6**	**2.3**	**2.0**	**2.2**	**2.3**	**2.6**	**2.9**
6.9	6.1	6.0	5.8	6.1	5.0	4.9	4.5	4.4	4.0	**4.0**	**3.9**	**4.1**	**3.8**	**3.9**	**3.8**	**4.0**	**3.7**	**3.7**	**3.7**
8.5	7.6	7.4	7.2	7.5	6.4	6.2	6.0	6.3	5.4	5.3	**5.2**	**5.7**	**5.0**	**5.1**	**5.1**	**5.6**	**4.9**	**4.8**	**4.8**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71.5	65.2	47.7	35.1	76.9	56.0	38.9	38.9	86.4	85.6	**54.0**	**53.9**	**86.0**	**76.0**	**50.0**	**53.0**	**87.0**	**77.0**	**51.0**	**55.0**
7.2	6.1	4.3	3.1	7.3	4.9	3.3	3.3	7.9	7.2	**4.5**	**4.3**	**7.6**	**6.1**	**4.1**	**4.1**	**7.4**	**6.0**	**3.9**	**4.1**
19.6	15.2	12.8	8.0	18.0	20.0	19.6	17.4	22.1	23.5	**23.0**	**21.4**	**22.0**	**24.0**	**23.0**	**21.0**	**22.0**	**24.0**	**23.0**	**21.0**
81.7	-37.7	-38.7	2.1	91.9	-29.6	-35.5	14.6	109.8	-0.1	**-31.0**	**36.2**	**108.0**	**-15.0**	**-42.0**	**24.0**	**104.0**	**-14.0**	**-41.0**	**21.0**
8.2	-3.5	-3.5	0.2	8.7	-2.6	-3.1	1.2	10.0	0.0	**-2.6**	**2.9**	**9.5**	**-1.2**	**-3.4**	**1.9**	**8.8**	**-1.1**	**-3.1**	**1.5**
-25.4	-45.7	-16.3	7.1	-2.5	-7.2	14.5	21.8	9.6	-68.3	-	-	-	-	-	-	-	-	-	-
20.0	20.0	20.9	22.1	24.5	24.8	24.3	24.7	24.5	23.9	24.2	-	-	-	-	-	-	-	-	-
27.4	27.4	27.6	27.6	27.6	27.4	27.1	27.1	27.0	27.0	27.0	-	-	-	-	-	-	-	-	-
7.9	6.7	6.6	3.2	0.4	-0.7	-2.2	-1.9	-2.2	-1.3	-0.4	-	-	-	-	-	-	-	-	-
6.1	4.7	5.1	3.2	1.2	0.0	-1.0	-1.7	-1.9	-0.3	0.6	-	-	-	-	-	-	-	-	-
4.1	3.4	4.7	2.0	-0.5	-0.5	-2.7	-3.3	-4.2	-4.3	**-2.6**	**-1.4**	**0.6**	**1.5**	**0.4**	**-0.4**	**-0.9**	**-1.2**	**0.1**	**0.6**
2.4	1.3	2.9	1.2	-1.5	0.0	-2.5	-3.8	-5.6	-6.3	**-3.7**	**-1.5**	**2.8**	**3.9**	**2.2**	**0.9**	**-0.3**	**-1.1**	**-0.1**	**0.4**
5.3	5.5	4.3	5.1	5.7	6.5	8.0	9.0	9.6	9.7	**9.2**	**8.4**	**8.3**	**8.3**	**8.2**	**7.6**	**7.0**	**6.4**	**5.9**	**6.2**
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**	**0.71**	**0.96**	**1.10**	**1.21**	**1.38**	**1.66**
0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	**0.3**	**0.3**	**0.3**	**0.9**	**1.2**	**1.3**	**1.4**	**1.6**	**1.9**

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