INFLATION REPORT / III

2015

CNB CZECH NATIONAL BANK

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

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

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

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

This Inflation Report was approved by the CNB Bank Board on 13 August 2015 and contains the information available as of 24 July 2015. Unless stated otherwise, the sources of the data contained in this Inflation Report are the CZSO or the CNB. All the Inflation Reports published to date are available on the CNB website. Underlying data for the tables and charts presented in the text of this Inflation Report, minutes of Bank Board meetings, and time series of selected economic and monetary indicators (available in the ARAD database) are published at the same internet address.

I. SUMMARY

The Czech economy recorded a marked upturn in growth at the start of this year. Both headline and monetary policy-relevant inflation increased, although they were still well below the CNB's target. The direct effect of the weakened exchange rate on inflation through import prices has faded out. However, the easy monetary conditions are still supporting growth in the domestic economy, which is fostering higher costs and consequently higher prices. A recovery in external demand, low oil prices and rising government investment are also having a favourable effect on economic growth. GDP will thus grow by 3.8% this year. The growth will then slow just below 3% in the next two years. The growing economic activity and accelerating wage growth will foster higher inflation, whereas import prices will dampen inflation until mid-2016. Both headline and monetary policy-relevant inflation will rise until the start of 2016, but will still be below the 2% target at the monetary policy horizon. They will not hit the target until 2017. The forecast assumes that market interest rates will be flat at their current very low level and the koruna exchange rate will be used as a monetary policy instrument until the end of 2016. Consistent with the forecast is an increase in interest rates amid modest appreciation of the koruna in 2017.

The **Czech economy** expanded by 4% year on year **in 2015 Q1**, with all domestic demand components making positive contributions. By contrast, the contribution of net exports was negative. GDP growth also picked up significantly in quarter-on-quarter terms. The forecast predicts a correction of the annual GDP growth rate in 2015 Q2 amid a modest quarter-on-quarter decline in economic activity linked with an expected fall in inventories.

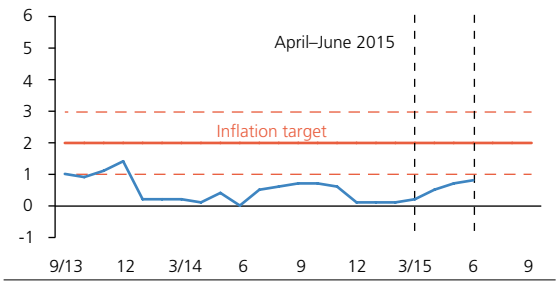
Both **headline and monetary policy-relevant inflation** increased **in 2015 Q2**, although they were still well below the CNB's target, or below the lower boundary of the tolerance band around the target (see Chart I.1). This increase was chiefly due to food prices, which returned to annual growth. Adjusted inflation excluding fuels stayed positive and stable. The effect of accelerating growth in the domestic economy and wages and depreciation of the koruna against the dollar was offset by the fading of the direct effect of the koruna's weakened exchange rate against the euro and by a continuing decline in foreign producer prices. Administered prices continued to rise slightly and the decline in fuel prices moderated.

According to the assumptions of the forecast, growth in economic activity in the **effective euro area** should accelerate to 1.9% in 2015 and reach about 2% in 2016 and 2017. Inflation in the euro area remains very subdued owing mainly to a recent fall in oil prices in an environment of a previous long-running decline in economic activity. Industrial producer prices are falling sharply year on year and consumer price inflation is still close to zero. However, both producer and consumer prices are expected to start rising gradually thanks to the ECB's easy monetary policy, a weakened exchange rate of the euro

CHART I.1

FULFILMENT OF THE INFLATION TARGET

Headline inflation increased in 2015 Q2, but it was still well below the CNB's target
(year on year in %)



and an increase in the growth rate of the euro area economy. This will also be fostered by the fading effect of the fall in oil prices. The quantitative easing of monetary policy by the ECB is reflected in the outlook for 3M EURIBOR rates, which is close to zero until the end of next year. The price of Brent crude oil is expected to rise only slowly after decreasing in late 2014 and early 2015.

According to the **forecast, both headline and monetary policy-relevant inflation** will continue to rise until the start of 2016. However, they will then dip temporarily and will thus still be below the 2% target at the monetary policy horizon. They will not be near the target until 2017 (see Charts I.2 and I.3). The overall upward cost pressures on consumer prices will increase gradually. A decline in euro area producer prices coupled with a fall in global prices of energy commodities and the recent appreciation of the koruna-euro exchange rate will continue to substantially reduce the costs stemming from import prices. The anti-inflationary effect of import prices will subside in mid-2016 in connection with the expected return of energy commodity prices and euro area industrial producer prices to annual growth. Costs in the domestic economy will continue to increase due to accelerating wage growth and rising prices of other inputs amid continued growth in economic activity. This will lead to a steady increase in adjusted inflation excluding fuels. Food prices will continue to rise at a modest pace owing to agricultural producer price developments. Administered prices will remain broadly stable overall until the end of 2016 and then return to modest growth. Fuel prices will return to annual growth at the start of next year, in line with global oil prices.

The forecast expects market **interest rates** to be flat at their current very low level until the end of 2016. This reflects an assumption that the 2W repo rate will be left at technical zero and the money market premium will remain unchanged in the same period. Consistent with the forecast is an increase in interest rates in 2017 (see Chart I.4). The short-term forecast for the **koruna-euro exchange rate** in 2015 Q3 takes into account the appreciation recorded in July. The prediction then expects it to be stable in the following quarters at a level that is only slightly weaker than the announced asymmetric exchange rate commitment (i.e. CZK 27 to the euro). The forecast assumes that the exchange rate will be used as a monetary policy instrument until the end of 2016. The 2% inflation target will be reached at the start of 2017. Sustainable fulfilment of this target is a condition for a return to conventional monetary policy. However, this return should not result in the exchange rate appreciating to the level recorded before the CNB started intervening, as the weaker exchange rate of the koruna has in the meantime been passing through to the price level and other nominal variables. A slightly positive interest rate differential and renewed – although much slower than in the past – real convergence of the Czech economy to the advanced euro area countries will be apparent after the exit from the exchange rate commitment, and the koruna will start to appreciate gradually against the euro.

CHART I.2

HEADLINE INFLATION FORECAST

Headline inflation will rise, but will not hit the 2% target until 2017
(year on year in %)

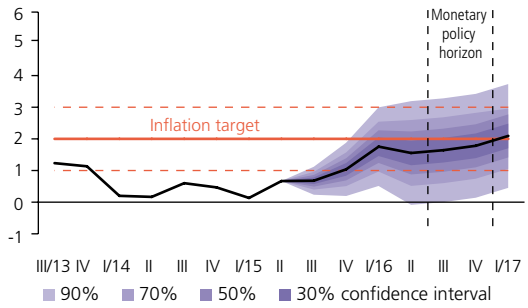


CHART I.3

MONETARY POLICY-RELEVANT INFLATION FORECAST

Monetary policy-relevant inflation will be below the 2% target over the monetary policy horizon
(year on year in %)

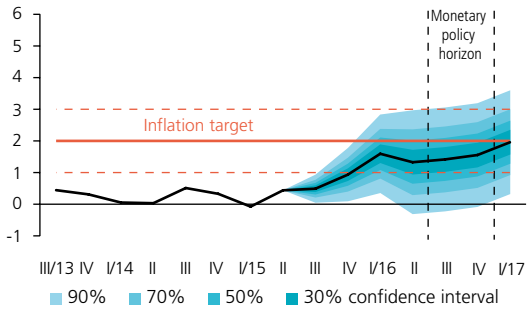


CHART I.4

INTEREST RATE FORECAST

The forecast expects market interest rates to be flat at their current very low level until the end of 2016; consistent with the forecast is an increase in rates in 2017
(3M PRIBOR in %)

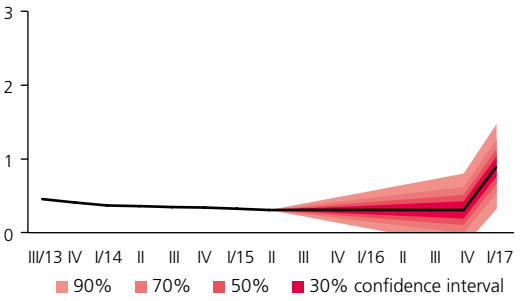
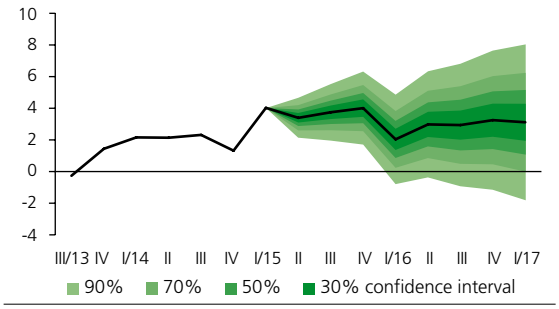


CHART I.5

GDP GROWTH FORECAST

GDP will grow rapidly this year, but the rate of growth will slow slightly in the next two years
(annual percentage changes; seasonally adjusted)



The **Czech economy** will continue to show robust growth (see Chart I.5). Accelerating external demand, low oil prices, easy domestic monetary conditions via the weakened koruna and exceptionally low interest rates, and higher government investment will lead to GDP growth of 3.8% this year. A slowdown in economic growth to just below 3% next year will reflect the unwinding of the effect of an extraordinary increase in inventories at the start of this year as well as a fall in oil prices. A decline in government investment and the recent appreciation of the koruna-euro exchange rate will also foster an economic slowdown. The economy will maintain the same rate of growth in 2017, with positive contributions from all components of domestic demand and, to a small extent, also from net exports. The rising economic activity will manifest itself in the **labour market** in continued growth in the number of employees converted into full-time equivalents. This will result in a further decrease in unemployment. Wage growth in the business sector will increase noticeably and wages in the non-business sector will rise at a roughly stable rate.

At its monetary policy meeting on 6 August 2015, the Bank Board decided unanimously to keep interest rates unchanged at technical zero. The Bank Board also decided to continue **using the exchange rate as an additional instrument for easing the monetary conditions** and confirmed the CNB's commitment to intervene on the foreign exchange market if needed to weaken the koruna against the euro so that the exchange rate of the koruna is kept close to CZK 27 to the euro. In line with this, the Czech National Bank still stands ready to intervene automatically, i.e. without the need for an additional decision of the Bank Board, and without any time or volume limits. The asymmetric nature of this exchange rate commitment is unchanged. The Bank Board assessed the risks to the forecast as being broadly balanced at the monetary policy horizon; a modest downside risk may arise from the decline in oil prices. In this situation, the Bank Board emphasised that the Czech National Bank would not discontinue the use of the exchange rate as a monetary policy instrument before the second half of 2016. The exchange rate will therefore be at CZK 27 to the euro or weaker at least until mid-2016. A need to maintain significantly expansionary monetary conditions persists. In this respect, the recent exchange rate appreciation is thus an unfavourable factor that is tightening the monetary conditions and hence postponing achievement of the inflation target.

II. THE FORECAST, ITS CHANGES AND RISKS

II.1 EXTERNAL ASSUMPTIONS OF THE FORECAST

The growth rate of external economic activity abroad will rise to 2% this year and will stay around this level over the rest of the forecast horizon. The decline in producer prices this year is still being affected by the previous economic downturn in the euro area and by the fall in prices of oil and other energy commodities. Producer prices will return to annual growth at the start of 2016. Consumer price inflation will also rise gradually from very low levels owing to recovering demand and the unwinding of the effect of the slump in oil prices, but it will not exceed 2% before the end of 2017. A low outlook for 3M EURIBOR rates reflects the continuing quantitative easing of monetary policy by the ECB, which is also apparent in both an observed and expected depreciation of the euro against the dollar until early 2017. The outlook for the Brent crude oil price reflects its fall in late 2014 and early 2015. It is expected to increase gradually over the following two years.

The outlook for the **effective indicator of euro area GDP** foresees a pick-up in economic growth to 1.9% this year. This is 0.9 percentage point higher than in 2014 (see Chart II.1.1).[1] This pick-up will be fostered by the continued easy monetary policy of the ECB and a related weakened exchange rate of the euro and low prices of energy commodities. Next year, economic growth in the effective euro area is expected to rise further to 2.1%. A slight slowdown to 2% is forecasted for 2017. Compared to the previous forecast, the outlook is slightly higher for this year. Otherwise, the changes are negligible. Concerns about the impacts of the Greek debt crisis on euro area countries, Germany in particular, represent a downside risk to growth.

The outlook for the **effective indicator of producer prices in the euro area** continues to reflect the previous lengthy economic contraction and the decline in prices of oil and other energy commodities in late 2014 and early 2015. Producer prices are expected to drop by 1.8% on average this year (see Chart II.1.2). Their growth will turn positive again at the start of next year. Producer prices are expected to rise by 1.4% on average in 2016 and pick up further to 1.9% in 2017 as the economic recovery gathers pace and the effect of the fall in commodity prices unwinds. Compared to the previous forecast, the outlook is lower mainly for this year.

1 The outlooks for euro area GDP, PPI and CPI and the dollar-euro exchange rate are based on the July Consensus Forecasts (CF). The outlooks for the 3M EURIBOR and Brent crude oil are derived from prices of market contracts as of 13 July 2015. The outlook is indicated by the grey areas in the charts. This convention is used throughout this Report. The differences between the previous and new forecast for already known facts are due, in addition to revisions, to an update of the weights of individual countries in Czech exports and new seasonal adjustment.

Chart II.1.1

EFFECTIVE GDP IN THE EURO AREA

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

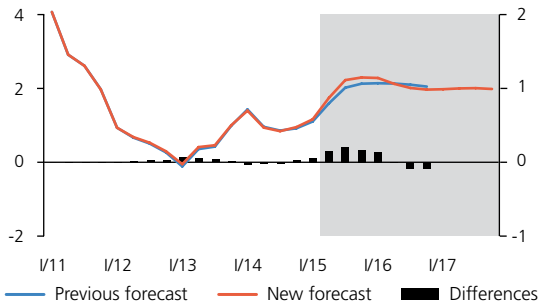


Chart II.1.2

EFFECTIVE PPI IN THE EURO AREA

The decline in producer prices is expected to fade out at the end of this year and these prices are expected to rise modestly over the next two years
(year on year in %; differences in percentage points – right-hand scale; seasonally adjusted)

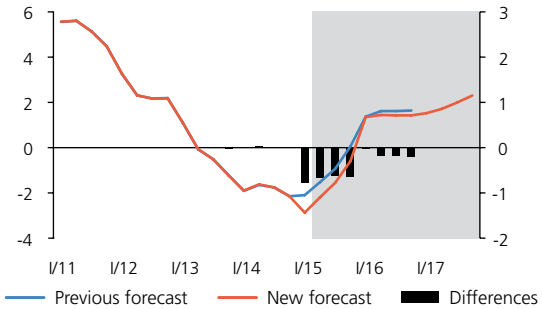


Chart II.1.3

EFFECTIVE CPI IN THE EURO AREA

The currently very low consumer price inflation will gradually rise, but will be below 2% over the entire forecast horizon
(year on year in %; differences in percentage points – right-hand scale; seasonally adjusted)

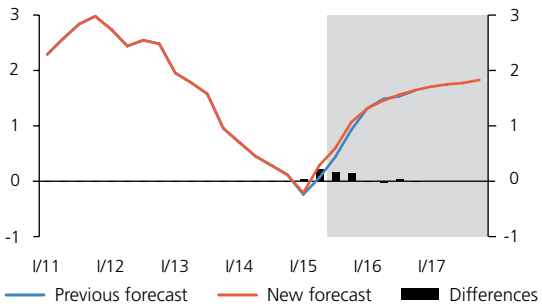


CHART II.1.4

3M EURIBOR

The low outlook for 3M EURIBOR market interest rates reflects the quantitative easing of monetary policy by the ECB
(in %; differences in percentage points – right-hand scale)

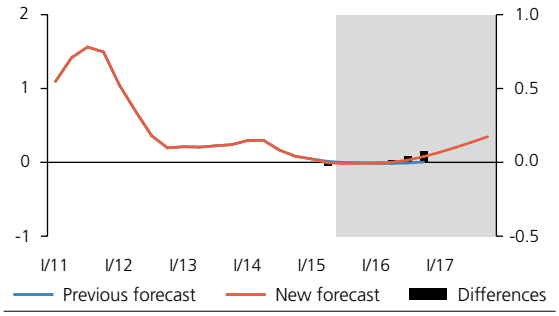


CHART II.1.5

EURO-DOLLAR EXCHANGE RATE

The euro is expected to weaken slightly against the dollar until the start of 2017
(USD/EUR; differences in % – right-hand scale)

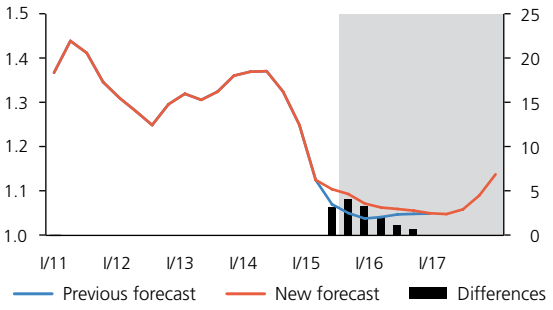
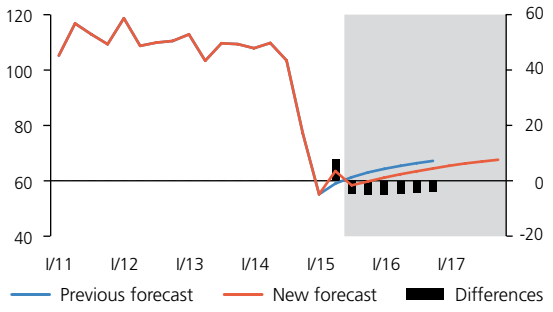


CHART II.1.6

PRICE OF BRENT CRUDE OIL

The crude oil price is expected to increase only gradually over the forecast horizon following its recent fall
(USD/barrel; differences in % – right-hand scale)



Inflation measured by the **effective indicator of consumer prices in the euro area** was negative at the start of this year, mainly due to a strong decline in prices of energy for households. Inflation will rise gradually during 2015, however, reaching 0.4% on average for the year as a whole (see Chart II.1.3). Consumer prices are expected to increase by 1.5% on average next year and by 1.8% in 2017 as growth in economic activity accelerates and the effect of low oil prices unwinds. Compared to the previous forecast, the outlook for this year is slightly higher and that for 2016 is unchanged.

The outlook for **3M EURIBOR rates** primarily reflects the quantitative easing of monetary policy by the ECB. Foreign interest rates are expected to fluctuate around zero almost until the end of 2016 (see Chart II.1.4) and then rise gradually, reaching 0.3% at the end of 2017. The market outlook for foreign interest rates corresponds to the expectations of the analysts surveyed in the July CF, who also expect the 3M EURIBOR to be flat at the zero level at the 3–12-month horizon. At the same time, most of the analysts expect the ECB's main refinancing rate to stay at the current level of 0.05% at least until the end of June next year.

The **euro-dollar exchange rate** is expected to continue weakening until the start of 2017 (see Chart II.1.5). The outlook for a modestly weakening euro reflects faster growth in the US economy and expected interest rate hikes by the Fed. By contrast, the ECB is continuing to ease monetary policy using unconventional instruments. The average rate is expected to be USD 1.10 to the euro this year and USD 1.06 in 2016. In 2017, by contrast, the euro is expected to be slightly stronger, at USD 1.08 on average.

The market outlook for the price of **Brent crude oil** indicates an average price of USD 59 a barrel this year (see Chart II.1.6), which means a decrease of about 40% compared to 2014. The currently low price of Brent crude oil mainly reflects the high global supply of oil, the slowing growth rate of the Chinese economy and the expected return of Iran to the oil market after the embargo against it is lifted. The futures curve of the Brent crude oil price remains gradually upward-sloping, but the curve has been revised downwards slightly over the entire horizon compared to the previous forecast. From the whole-year perspective, the price of oil is expected to be USD 63 a barrel in 2016 and USD 67 a barrel in 2017. The analysts surveyed in the July CF expect the Brent crude oil price to be approximately USD 68 a barrel at the 12-month horizon, i.e. slightly higher than the market outlooks. By contrast, the current price of oil at the end of July is noticeably lower than assumed by the forecast.

II.2 THE FORECAST

Both headline and monetary policy-relevant inflation increased in 2015 Q2, but were still well below the target, or below the lower boundary of the tolerance band around the target. They will continue to rise until the start of 2016. However, they will then dip temporarily and will thus still be below the 2% target at the monetary policy horizon. They will not hit the target until 2017. The current anti-inflationary effect of import prices arising from the previous fall in euro area producer prices and global oil prices and the recent appreciation of the koruna-euro exchange rate will subside gradually, and import prices will be slightly inflationary in 2016 H2. The domestic economy will foster higher costs and subsequently higher consumer prices over the entire forecast horizon via accelerating wage growth and rising prices of capital. The high GDP growth recorded at the start of this year will – despite a correction in Q2 – continue in the rest of the year thanks to expanding domestic and external demand. It will then slow somewhat in the next two years. GDP growth will be fostered by still easy monetary conditions and this year also by the positive supply-side effect of low oil prices and an increase in government investment. The contribution of fiscal policy to economic growth will be positive in 2015 and 2017 and slightly negative in 2016. The economic growth will also give rise to a further improvement in the situation on the labour market. The forecast assumes that market interest rates will be flat at their current very low level and the exchange rate will be used as a monetary policy instrument until the end of 2016. Consistent with the forecast is an increase in interest rates amid modest appreciation of the koruna in 2017.

Annual **headline inflation** rose to 0.7% on average in 2015 Q2. It will stay at this level in Q3 and then increase further. This will be due to rising cost pressures from the domestic economy and a moderation of the anti-inflationary effect of import prices, reflecting the previous decline in euro area industrial producer prices and the fall in energy commodity prices on global markets. The anti-inflationary effect of import prices will fade out completely in mid-2016. This, combined with a continuing upward effect of the domestic economy on costs, will have a tendency to increase headline inflation next year. On the other hand, annual food and fuel price inflation will slow for a short time owing to base effects and inflation will thus dip temporarily. Headline inflation will thus still be below the 2% target at the monetary policy horizon and will not hit the target until early 2017 (see Chart II.2.1).

Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, rose to 0.4% on average in 2015 Q2. It was thus still well below the CNB's 2% target, or below the lower boundary of the tolerance band around the target. Over the forecast horizon, monetary policy-relevant inflation will follow a similar path to headline inflation, although it will be slightly lower until the end of the forecast horizon owing to positive first-round effects of changes to indirect taxes (see Chart II.2.1). It, too, will be close to the 2% inflation target as from the start of 2017.

CHART II.2.1

HEADLINE INFLATION AND MONETARY POLICY-RELEVANT INFLATION

Both headline and monetary policy-relevant inflation will rise, but will still be below the 2% target at the monetary policy horizon and will not hit the target until 2017
(year on year in %)

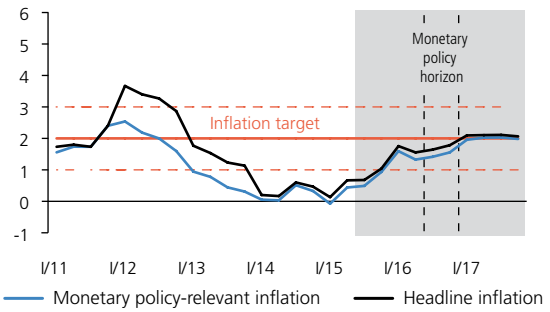


CHART II.2.2

ADMINISTERED PRICES AND FUEL PRICES

Administered price inflation will be close to zero until the end of 2016, while fuel prices will return to growth at the start of next year
(annual percentage changes; fuel prices excluding first-round effects of indirect tax changes)

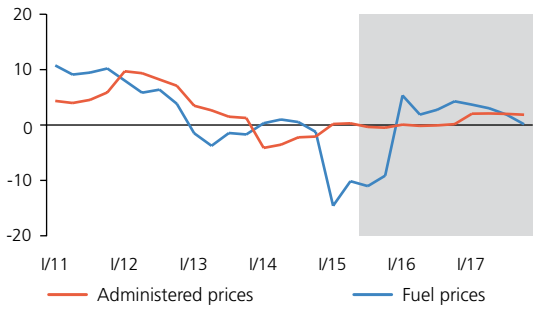


TABLE II.2.1

FORECAST OF ADMINISTRATIVE EFFECTS

Administered prices will not rise moderately before 2017, as the forecast expects a further decline in prices of energy, especially natural gas, in 2016
(annual average percentage changes; contributions to headline inflation in percentage points)

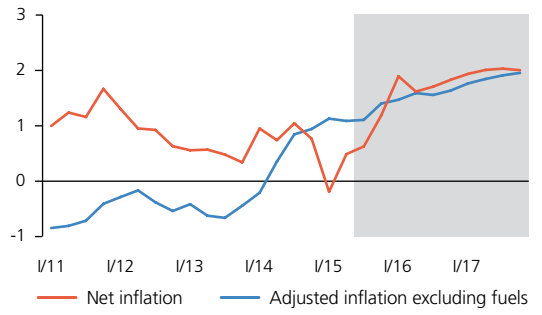
	2014 actual		2015 forecast		2016 forecast		2017 forecast	
Administered prices – total[a)]	-3.0	-0.51	-0.1	-0.01	0.0	0.00	2.0	0.34
of which (main changes):								
electricity	-10.3	-0.49	-0.4	-0.02	-0.5	-0.02	1.7	0.08
natural gas	-2.4	-0.07	2.8	0.08	-5.0	-0.15	1.4	0.04
heat	0.5	0.01	1.8	0.04	1.1	0.02	2.0	0.04
water	3.4	0.03	3.4	0.03	3.0	0.03	3.0	0.03
health care	-5.6	-0.07	-17.0	-0.20	2.8	0.03	3.0	0.03
First-round impacts of indirect tax changes in non-administered prices		0.13		0.21		0.21		0.10

a) Including effects of indirect tax changes

CHART II.2.3

NET INFLATION AND ADJUSTED INFLATION EXCLUDING FUELS

Net inflation will accelerate in the near future, while adjusted inflation excluding fuels will rise steadily
(year on year in %)



The contribution of changes to **indirect taxes** to headline annual inflation was 0.2 percentage point in 2015 Q2. This reflected harmonisation increases in excise duties on cigarettes in January and December 2014. This was offset by the introduction of a second reduced VAT rate of 10% on medicines, books and irreplaceable infant food with effect from 1 January 2015. The forecast assumes a further two increases in excise duty on tobacco products in 2016 and 2017 with an estimated impact on headline inflation of 0.2 percentage point and 0.1 percentage point respectively.

Administered price inflation picked up slightly in 2015 Q2 (see Chart II.2.2), owing mainly to a rise in prices of heat for households. The continuing, albeit insignificant, rise in administered prices also reflected an increase in gas prices and water supply and sewerage collection charges implemented at the start of this year. The abolition of some regulatory fees in health care acted in the opposite direction. The forecast expects administered prices to show a modest annual decline in the second half of this year as last July's increase in prices of natural gas drops out of the year-on-year comparison. Administered price inflation will also fluctuate around zero next year, as it will be dampened by a further decline in prices of energy for households. The evolution of electricity generation prices suggests that electricity prices will decrease only slightly compared to this year. The forecast, however, expects a decline in prices of gas for households, where a decrease in the market prices of its commodity component has been seen for two quarters now. The forecast expects administered prices to increase by 2% in 2017 on the back of renewed growth in prices of energy for households and concurrent positive contributions from its other components (see Table II.2.1).

Annual **net inflation** turned positive again in 2015 Q2, reaching 0.5% (see Chart II.2.3). This was due mainly to renewed growth in food prices and a moderation of the year-on-year decline in fuel prices. Net inflation will rise further in the period ahead thanks to a further increase in food price inflation and adjusted inflation excluding fuels, which will reflect continuing growth of the domestic economy and strengthening cost pressures from the labour market. In 2017, net inflation will be close to 2%, with positive contributions from all its components.

Adjusted inflation excluding fuels was unchanged in 2015 Q2, averaging 1.1%. The upswing in growth in prices of other nontradables can be attributed to rising domestic economic activity and a recovery on the labour market. By contrast, prices of other tradables excluding fuels reflected the continuing decline in foreign producer prices and the unwinding of the direct effect of the koruna's weakened exchange rate against the euro, which in June outweighed the inflationary effect of the depreciation of the koruna against the US dollar (see Box 1 in chapter III.1). The forecast expects a further rise in adjusted inflation excluding fuels in 2015 H2 and 2016, fostered by a continuing inflationary effect of the domestic economy and the labour market and by renewed price growth abroad. These factors will be only partially offset in 2017 by an expected modest appreciation of the koruna, so adjusted inflation will approach 2% at the end of 2017 (see Chart II.2.3).

Food prices returned to annual growth in 2015 Q2, averaging 0.7%. They reflected an increase in prices of some imported food items, most notably fruit and vegetables, while domestic agricultural producer prices continued to fall sharply. The forecast expects food price inflation to rise further in the second half of this year, reflecting agricultural producer prices, which will return to slight annual growth by the end of the year due to the new harvest. Following a temporary slowdown in 2016 due to slowing growth in food import prices (caused by base effects), annual food price inflation will accelerate again as agricultural producer prices continue to increase, and will stay above 2% in 2017 (see Chart II.2.4).

The year-on-year decline in **fuel prices** slowed (to around 10%) in 2015 Q2 on average owing to smaller decrease in oil prices and petrol prices abroad (see Chart II.2.5). Fuel prices stabilised in June, and the current data indicate a renewed slight deepening of their annual decline. The forecast expects the annual growth rate to remain at roughly the current levels in the remainder of this year. In 2016, in line with oil prices, fuel prices will return to growth (of 3.6% on average), which will continue at a slower pace in 2017.

Domestic money market **interest rates** remained at historical lows at all maturities in 2015 Q2. The forecast expects market interest rates to be flat at their current very low level until the end of 2016. This reflects an assumption that the 2W repo rate will be left at technical zero and the money market premium will remain unchanged in the same period. Consistent with the forecast is an increase in interest rates in 2017 (see Chart II.2.6).

The **exchange rate of the koruna against the euro** appreciated slightly in 2015 Q2, to CZK 27.4 on average. The short-term exchange rate forecast for 2015 Q3 takes into account the appreciation recorded in July. The prediction then expects the exchange rate to be stable in the following quarters at a level that is only slightly weaker than the announced asymmetric exchange rate commitment (i.e. CZK 27 to the euro). The forecast assumes that the exchange rate will be used as a monetary policy instrument until the end of 2016. The 2% inflation target will be reached at the start of 2017. Sustainable fulfilment of this target is a condition for a return to conventional monetary policy. However, this return should not result in the exchange rate appreciating to the level recorded before the CNB started intervening, as the weaker exchange rate of the koruna has in the meantime been passing through to the price level and other nominal variables. A slightly positive interest rate differential[2] and renewed – although much slower than in the past – real convergence of the Czech economy to the advanced euro area countries will be apparent after the exit from the exchange rate commitment, and the koruna will start to appreciate gradually against the euro. Given the CF outlook for a gradually depreciating euro against the dollar (see chapter II.1),

2 The forecast only partially reflects the low outlook for 3M EURIBOR interest rates in 2017 and hence implicitly assumes a lower interest rate differential than indicated in Chart II.2.6.

CHART II.2.4

FOOD PRICES AND AGRICULTURAL PRODUCER PRICES

Food prices will reflect agricultural producer prices, which will start rising moderately in year-on-year terms at the end of this year

(annual percentage changes)

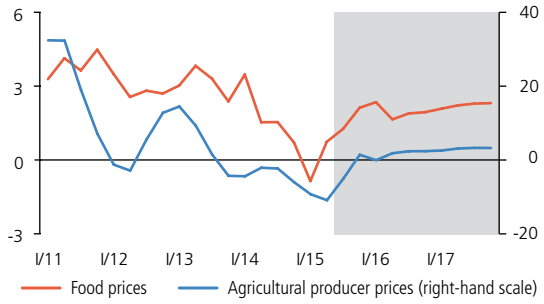


CHART II.2.5

FUEL PRICES AND OIL PRICES

Fuel prices will return to annual growth at the start of next year, in line with global oil prices

(annual percentage changes)

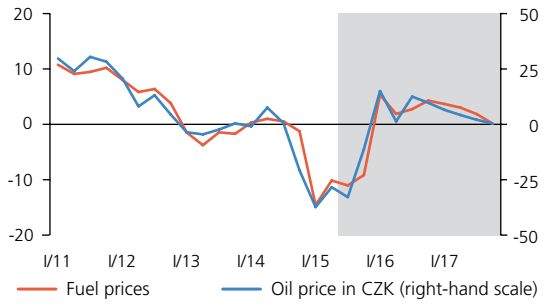


CHART II.2.6

INTEREST RATE FORECAST

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

(percentages)

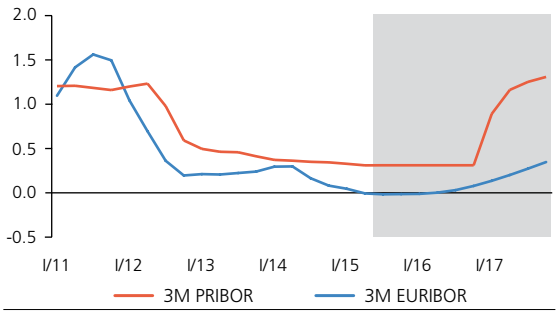


CHART II.2.7

COSTS IN THE CONSUMER SECTOR

Growth in costs in the consumer sector will reflect the strengthening effect of the growing domestic economy, while the negative contributions of import prices will fade out in 2016 H2
(quarterly percentage changes; contributions in percentage points; annualised)

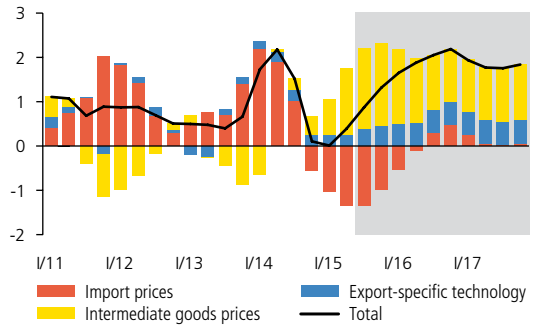


CHART II.2.8

COSTS IN THE INTERMEDIATE GOODS SECTOR

Domestic costs will rise on the back of accelerating wage growth and a rising price of capital
(quarterly percentage changes; contributions in percentage points; annualised)

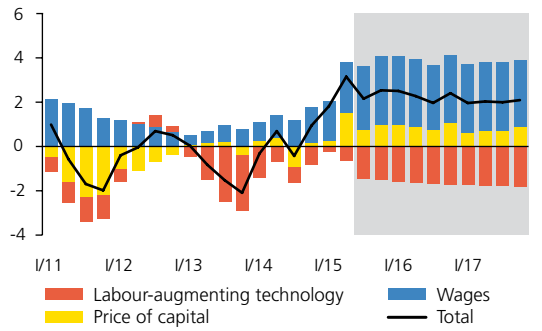
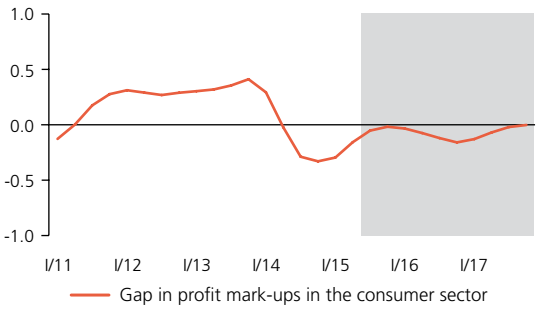


CHART II.2.9

GAP IN PROFIT MARK-UPS IN THE CONSUMER SECTOR

The gap in profit mark-ups will fluctuate at slightly negative levels until the end of 2017
(percentages)



this implies gradual depreciation of the koruna-dollar rate until the end of 2016. By contrast, the koruna will start to appreciate against the dollar at the beginning of 2017 due to an expected appreciation of the euro against the dollar and a slight appreciation of the koruna against the single European currency.

Weak quarterly growth in **nominal marginal costs in the consumer goods sector** resumed in 2015 Q2 (see Chart II.2.7). This mainly reflects accelerating intermediate goods price inflation due to cost pressures from the domestic economy, most notably wage growth in the business sector. On the other hand, falling import prices resulting from deflation in euro area industrial producer prices coupled with a slight strengthening of the koruna are significantly dampening the rise in costs. The estimated impact on inflation of growth in export-specific technology, linked to different productivity growth in tradables and non-tradables (the Balassa-Samuelson effect), has been substantially weaker than in the pre-crisis period for some time now. The overall upward cost pressures on consumer prices will strengthen gradually in the rest of this year and next year. From mid-2016 onwards, growth in costs will fluctuate around 2%, reflecting accelerating wage growth and continued growth in economic activity. At the same time, the return to growth in foreign producer prices will gradually moderate the anti-inflationary effect of import prices, and from mid-2016 onwards import prices will have a slight upward effect on costs. However, this effect will subside again during 2017 as the koruna gradually appreciates following the assumed exit from the exchange rate commitment, which will be offset by continued growth in euro area producer prices.

Nominal marginal costs in the intermediate goods sector rose in 2015 Q2. This was mainly due to nominal wage growth in the business sector outpacing labour productivity growth. The price of capital also made a positive contribution to marginal costs, reflecting a recovery in investment activity and overall economic activity in a growth phase of the business cycle (see Chart II.2.8). The growth rate of domestic nominal costs will stay slightly above 2% over the entire forecast horizon on the back of gradually strengthening wage growth and continued growth in the price of capital. These cost pressures will be only partly offset by growth in labour productivity.

The negative gap in **profit mark-ups in the consumer goods sector** has started to close gradually this year, due to a slight rise in market prices coupled with very subdued growth in total costs. The gap in mark-ups will almost close in the next few quarters as prices and costs (especially in the domestic economy) increase further. The fading fall in energy commodity prices will have a positive effect on the cost side. Next year, the slightly negative gap in mark-ups will temporarily open again, with growth in costs (boosted by import prices) outweighing growth in prices of consumer goods. The gap in mark-ups will close again in 2017 as the exchange rate appreciates slightly again and domestic costs (wages in particular) rise steadily in a situation where inflation is close to the 2% target (see Chart II.2.9).

After stagnating at the end of 2014, whole-economy **labour productivity** rose by 2.9% year on year in 2015 Q1 due to faster economic growth than growth in employment. Labour productivity is expected to maintain a similar pace of growth on average for this year as a whole. This will be due to continued fast growth of the economy combined with gradually slowing growth in employment. Labour productivity will increase by 2.2% on average over the following two years.

The average nominal **wage in the business sector** rose by 2% year on year (seasonally adjusted) in 2015 Q1. In an environment of still low inflation, the forecast expects wage growth to increase only slightly in Q2, partly due to the subdued wage growth recorded in April and May. However, average wage growth will gradually pick up pace over the period ahead as domestic economic activity continues to grow and inflation gradually returns to the target (see Chart II.2.10). Wage growth will amount to 2.8% on average for this year as a whole. From 2016 Q2 to the end of the forecast horizon, it will fluctuate just above 4.5%. In full-year terms, wages in the business sector will grow by 4.6% and 4.7% in 2016 and 2017 respectively.

Average nominal **wage growth in the non-business sector** slowed to 2.9% year on year in 2015 Q1, despite a further rise in public sector wages in January 2015. The forecast expects wage growth in the non-business sector to outpace that in the business sector in the next two quarters as well (see Chart II.2.10). The forecast incorporates an increase in the wages of constitutional officials and continued growth in wages of other employees in 2016.[3] Annual wage growth in the non-business sector will be stable overall in 2015–2017, at around 2.8%.

Real GDP recorded a pronounced year-on-year acceleration to 4% and a quarter-on-quarter rise of 2.5% **in 2015 Q1** (see Chart II.2.11). All components of domestic demand made positive contributions to the annual growth, with inventories being the main driver. The contributions of household consumption and gross fixed capital formation were also significant. Conversely, the contribution of net exports was slightly negative (see Chart II.2.12). According to the forecast, annual growth saw a correction to 3.4% **in Q2**, with economic activity declining by 0.1% quarter on quarter. As regards the structure of the individual components, the contribution of change in inventories to annual GDP growth was negative; by contrast, the contributions of household consumption and gross fixed capital formation remained strongly positive. The contribution of net exports was also probably slightly positive in this period. Overall, **GDP** will grow by 3.8% **in 2015**. The economy will be boosted by an upswing

3 The assumed wage increase in 2016 may be rescheduled to November 2015, i.e. similarly as in 2014. However, given the uncertainty regarding the amount of this shift, the forecast does not assume this.

CHART II.2.10

AVERAGE NOMINAL WAGE

Wage growth in the business sector will pick up and will outpace wage growth in the non-business sector as from the end of this year

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

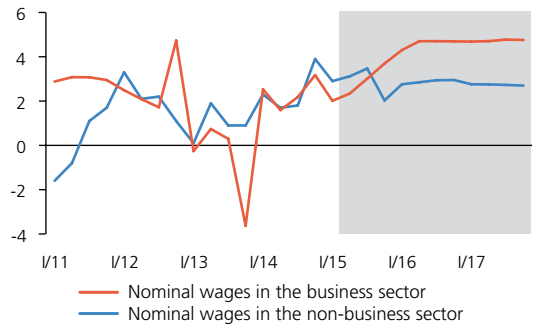


CHART II.2.11

GDP GROWTH FORECAST

Annual GDP growth will remain buoyant this year but will slow slightly in the next two years

(percentage changes; seasonally adjusted)

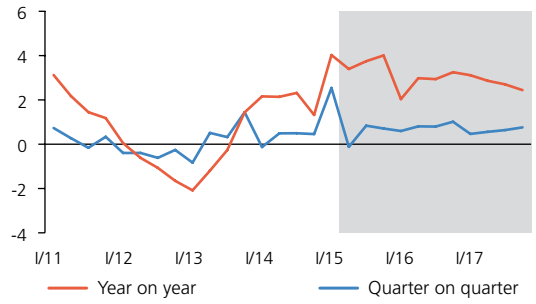
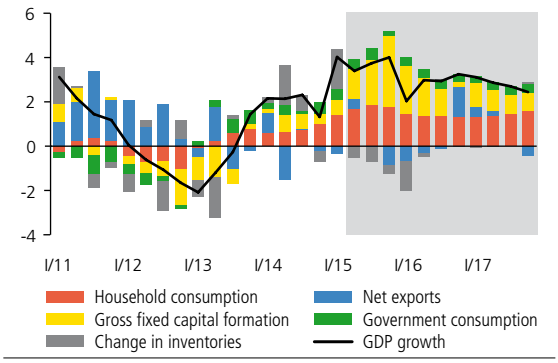


CHART II.2.12

ANNUAL GDP GROWTH STRUCTURE

Almost all the components of demand will contribute to GDP growth

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



in external demand, still easy monetary conditions, low oil prices[4] and expansionary fiscal policy. Underlying this will be an expected further pick-up in government investment financed from domestic and especially European sources. Household consumption and gross fixed capital formation will maintain positive contributions. Despite growing external demand, the contribution of net exports will be slightly negative on average due to continued growth in imports of consumer goods and machinery.[5]

GDP growth will slow to 2.8% **in 2016**, reflecting the unwinding of the effect of an extraordinary increase in inventories at the start of this year as well as the fall in oil prices. A decline in government investment and the recent appreciation of the koruna-euro exchange rate will also foster an economic slowdown. GDP growth will be fostered by household consumption and fixed investment, while net exports will continue to dampen the growth overall. Fiscal policy will have a slightly restrictive effect due to the end of possible drawdown of EU funds from the previous programme period and the only gradual start of the new programme period. **GDP growth** will remain at 2.8% **in 2017**, with positive contributions from all components of domestic demand and, to a small extent, also from net exports.

The continuing growth in economic activity is leading to a marked improvement in the labour market situation. Growth in the **number of employees converted into full-time equivalents** rose significantly to 2% in 2015 Q1. This was due to faster growth in the number of employees amid slightly shorter average hours worked per employee. The forecast also expects growth in the converted number of employees at the forecast horizon, albeit at a slower pace. This will initially be due mainly to a further increase in the number of employees, but the average number of hours worked will also contribute later on (see Chart II.2.13). Owing to fast growth in economic activity, **total employment** will continue to rise this year (by 1%). Its pace is expected to slow somewhat in the following two years, to 0.6% and 0.5% on average in 2016 and 2017 respectively (see Chart II.2.14).

The rapid decline in the seasonally adjusted **general unemployment rate** observed last year has slowed this year. The forecast expects that the seasonally adjusted general unemployment rate reached 5.9% in Q2 and thus went up slightly compared to the previous quarter. However, it will fall sharply again in the period ahead, due mainly to growth in employment associated with rising economic activity. The labour force will continue to grow year on year in 2015 and will be broadly flat in the years ahead. The general unemployment rate will thus decline to 4.7% at the end of 2017 (see Chart II.2.14). The seasonally adjusted **share of unemployed persons, as determined**

CHART II.2.13

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

The currently high growth in the converted number of employees will slow in the period ahead
(annual percentage changes; contributions in percentage points)

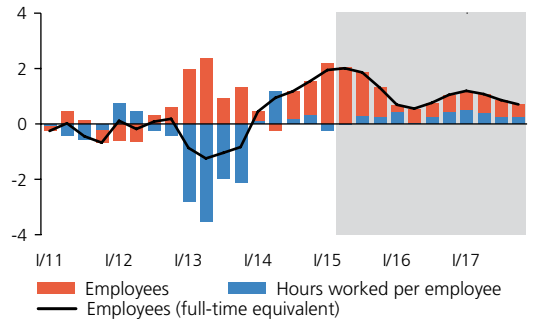
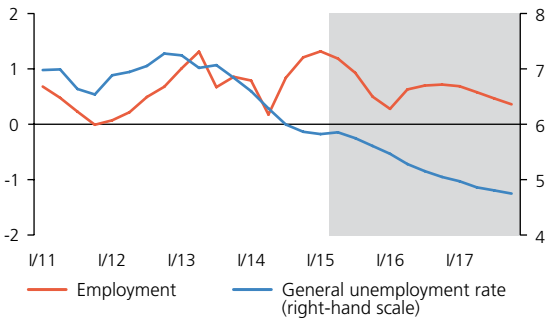


CHART II.2.14

LABOUR MARKET FORECAST

Total employment will continue to rise slowly, albeit at a lower pace than at present, while the unemployment rate will return to a downward trend
(annual percentage changes in employment; general unemployment rate in percentages; seasonally adjusted)



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

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

by the MLSA, will also gradually decline from its current level of 6.6% in 2015 Q2 over the entire forecast horizon. Owing to cyclicality, the supply of vacancies should edge up further. The seasonally adjusted share of unemployed persons will drop to 5.5% at the end of 2017, assuming a slight decline in the population aged 15–64.

Year-on-year growth in real **household consumption** accelerated to 2.9% in 2015 Q1 (see Chart II.2.15). This was fostered by all of its components broken down by kind, and most of all by short-term consumption. The forecast predicts that household consumption accelerated slightly further to 3.4% in Q2, consistent with the faster growth in retail sales amid persisting positive consumer confidence (see chapter III.3). Growth in household consumption will increase only negligibly in the second half of the year, to 3.5% in 2015 as a whole. This will be fostered by relatively high real growth in wages and salaries and favourable expectations regarding future economic developments. Growth in household consumption will fall slightly below 3% in 2016 and 2017.

Growth in **gross nominal disposable income** moderated to 2% at the start of this year, mainly as a result of operating surplus and mixed income switching to a year-on-year decline (see Chart II.2.16). Much faster growth in current transfers (other than social benefits) only partially offset this effect. However, annual growth in disposable income will strengthen over the forecast horizon, reaching 5% at the end of 2017. Although this will be due mainly to wages and salaries thanks to continued positive developments in the labour market, business income will also gradually start to contribute to an increasing extent. The contributions of social benefits will be broadly flat.

The seasonally adjusted **household saving rate** declined slightly in 2015 Q1. This decline should continue in the remainder of this year, with nominal consumption slightly outpacing household income. The saving rate will thus average 10.4% in 2015 as a whole. In 2016 and 2017, continued somewhat faster annual growth in household nominal consumption than in gross nominal disposable income amid still low real interest rates will result in a further gradual decline in the saving rate (see Chart II.2.17).

Annual growth in real **government consumption** slowed slightly to 2.5% in 2015 Q1. The forecast expects slightly lower growth on average in the remaining three quarters of 2015 (see Chart II.2.15). In 2015 as a whole, government consumption will rise by 2.2%. This will be fostered by growth in wages and salaries in the state sector and an increase in some government expenditure. Its growth rate will slow slightly further to around 2% in 2016 and 2017.

Annual growth in **gross capital formation** accelerated sharply in 2015 Q1, mainly as a result of a sizeable increase in inventories. Fixed investment growth also edged up. Growth in gross capital formation will slow in the following two quarters, with a decline in inventories outweighing a rising growth rate of fixed investment driven by the

CHART II.2.15

REAL HOUSEHOLD AND GOVERNMENT CONSUMPTION

Household consumption will continue to rise appreciably and rather faster than government consumption
(annual percentage changes; seasonally adjusted)

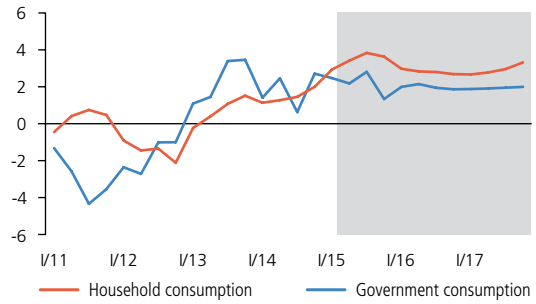


CHART II.2.16

NOMINAL DISPOSABLE INCOME

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

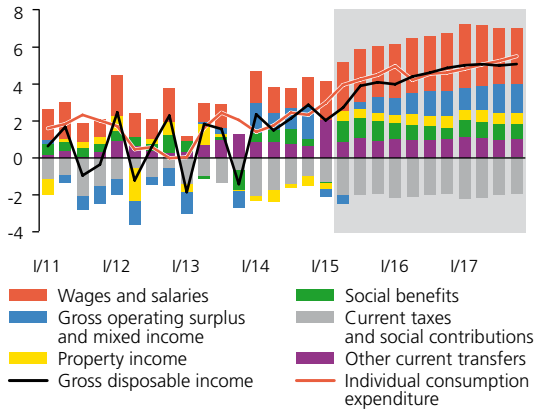


CHART II.2.17

HOUSEHOLD SAVING RATE

The household saving rate will gradually decline to just below 10% at the end of 2017
(percentages)

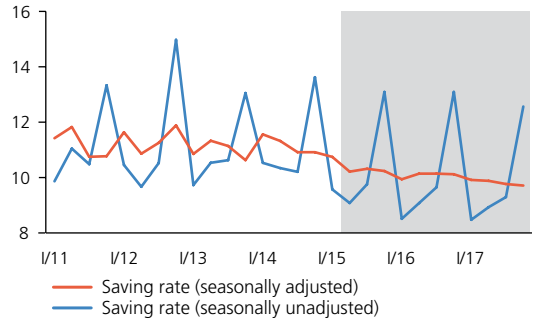


CHART II.2.18

GROSS CAPITAL FORMATION

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

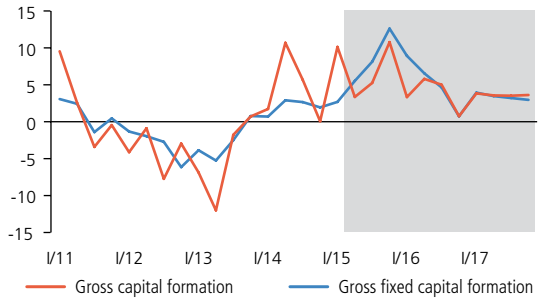


CHART II.2.19

REAL EXPORTS AND IMPORTS

Exports will increase noticeably thanks to growing external demand, while imports will rise slightly faster on the back of increasing domestic demand
(annual percentage changes; annual changes in CZK billions; seasonally adjusted)

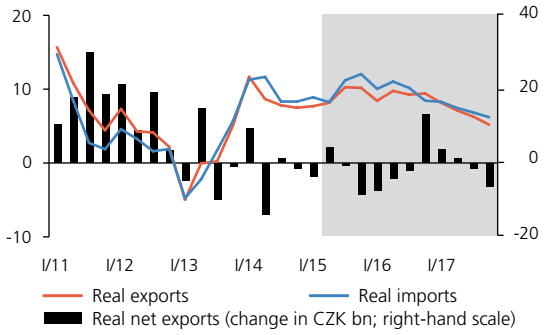


TABLE II.2.2

FORECASTS OF SELECTED VARIABLES

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

	2014 actual	2015 forec.	2016 forec.	2017 forec.
Real gross disposable income of households	1.7	2.8	2.7	2.8
Total employment	0.8	1.0	0.6	0.5
Unemployment rate (in per cent)[a]	6.2	5.8	5.2	4.8
Labour productivity	1.4	2.8	2.2	2.2
Average nominal wage	2.3	2.8	4.3	4.4
Average nominal wage in business sector	2.2	2.8	4.6	4.7
Current account balance (ratio to GDP in per cent)	0.6	1.1	1.1	0.7
M2	4.2	5.7	6.1	6.5

a) ILO methodology, 15–64 years

drawdown of EU funds from the 2007–2013 programme period.[6] Gross capital formation will increase by 7.3% in 2015 as a whole. It will remain positive in 2016 and 2017, but will slow slightly below 4% due to a fall in government investment (see Chart II.2.18).

Annual growth in real **exports of goods and services** edged up to 7.7% in 2015 Q1. The forecast expects a slightly higher rate of growth until the end of this year as a result of external demand developments (see Chart II.2.19). The growth rate of exports of goods and services will average 9.1% in 2015. The forecast expects similar growth in 2016, amid faster growth of external demand and a continued stable exchange rate of the koruna against the euro. The annual growth rate of exports will fall to 6.7% in 2017 as a result of slower growth in the openness of the Czech economy and gradual appreciation of the koruna after the exit from the CNB's exchange rate commitment.

The real annual growth rate of **imports of goods and services** also increased in 2015 Q1 on the back of buoyant growth in exports, investment and household consumption. Owing to a higher expected rate of export growth this year and continued growth in domestic demand, annual growth in imports of goods and services will also go up. It will average 10.1% in 2015. The forecast expects similar growth in 2016. Import growth will also slow (to 7.2%) in 2017 as exports slacken.

The contribution of **net exports** at constant prices to annual GDP growth was negative again in 2015 Q1. However, as a result of a decline in inventories, which tend to be import-intensive, the forecast expects the contribution to turn positive in the near future. After this effect unwinds in the second half of this year, the contribution of net exports will again be negative, at -0.2 percentage point in 2015 as a whole, as imports continue to outpace exports. In 2016, the contribution of net exports will be slightly positive (0.1 percentage point) owing to an upswing in external demand and slower growth in domestic investment (due to base effects linked with the extension of the lease of supersonic fighter aircraft at the end of this year). The forecast expects a similar contribution in 2017.

The **balance of payments** forecast expects the current account surplus to grow to 1.1% of GDP in 2015 (in 2014 the surplus was 0.6% of GDP), to remain flat in 2016 and to fall slightly to 0.7% of GDP in 2017 (see Table II.2.3).

The sizeable increase in the **current account surplus in 2015** will be due to a rise in the **goods** surplus associated mainly with the recent decline in prices of energy commodities, which will foster improved terms of trade (with a positive impact on the goods balance of around CZK 60 billion). By contrast, faster growth in domestic

6 In 2015 Q4, growth in fixed investment will see a one-off increase due to the accounting effect of an extension of the lease of supersonic fighter aircraft (see the previous footnote).

demand than external demand and a decrease in exports to Russia and Ukraine will act towards a lower goods surplus.[7] The increase in the current account surplus will also be due, albeit to a lesser extent, to **secondary income** switching from a slight deficit to a slight surplus as a result of higher drawdown of EU funds. A moderately rising **primary income** deficit, linked mainly with expected higher earnings of non-residents on foreign direct investment in the Czech Republic, will have the opposite effect on the current account balance than the goods and secondary income balances. The **services** surplus will remain approximately unchanged from last year, with a drop in net credits from travel (due to faster growth in debits than credits) being offset by a decrease in the other services deficit.

The **current account surplus in 2016** will remain unchanged at this year's level. It will come under upward pressure from the goods balance due to a fading decline in prices of energy commodities (the lagged reaction of gas prices to the previous fall in oil prices) and to an expected modest upswing in external demand. Secondary income should remain in a slight surplus (owing to payments related to the completion of projects from EU funds from the previous programme period). Continued growth in the primary income deficit, linked with a further deepening of the investment income deficit (expected growth in dividends and reinvested earnings of non-residents on direct investment), and a slight deterioration of the services balance (a decline in the travel surplus) will foster a lower current account surplus. The expected slight decrease in the current account surplus **in 2017** is linked mainly with expected significantly lower net drawdown from EU funds and a widening of the investment income deficit.

The forecasted sharp increase in the **capital account** surplus in 2015 and 2016 compared to last year is associated exclusively with payments from EU funds for the 2007–2013 programme period. In 2017, by contrast, this item will reflect only gradual drawdown from the programmes for 2014–2020.

The relatively high net inflow of **direct investment** in 2014 will be replaced by a slight outflow in 2015. This change will be linked solely with a turnaround in residents' international capital flows, with the withdrawal of funds back into the Czech Republic observed last year being replaced by renewed interest of residents in direct investment abroad.[8] The inflow of foreign direct investment into the Czech Republic will be approximately flat at last year's level. In 2016, the most significant factors of the expected increase in the net inflow of direct investment will include the unwinding of this year's one-off effects on the asset side and an already approved sizeable new investment in the automotive industry in the Czech Republic. However, the forecast

TABLE II.2.3

BALANCE OF PAYMENTS FORECAST

The current account surplus should increase this year and the next thanks mainly to falling prices of energy commodities and higher drawdown of EU funds

(CZK billions)

	2014	2015	2016	2017
	actual	forecast	forecast	forecast
A. CURRENT ACCOUNT	26.1	50.0	50.0	35.0
Goods	238.9	265.0	290.0	315.0
Services	55.9	55.0	50.0	50.0
Primary income	-259.0	-275.0	-295.0	-320.0
Secondary income	-9.7	5.0	5.0	-10.0
B. CAPITAL ACCOUNT	32.2	100.0	65.0	20.0
C. FINANCIAL ACCOUNT[a)]	48.0	350.0	192.0	112.0
Direct investment	-133.6	20.0	-70.0	-70.0
Portfolio investment	90.3	90.0	60.0	60.0
Financial derivatives	-6.0			
Other investment	24.2	90.0	70.0	50.0
Reserve assets	73.1	150.0	132.0	72.0

a) forecast excluding operations of banking sector and financial derivatives

7 The negative impact of the developments in these two countries on the goods balance is currently estimated at around CZK 40 billion.

8 An acquisition by Energetický a průmyslový holding in the Italian energy sector accounts for one-half of expected investment abroad by residents in 2015.

Table II.2.4

FISCAL FORECAST

The structural deficit will widen this year and then narrow again
(% of nominal GDP)

	2014 actual	2015 forec.	2016 forec.	2017 forec.
Government revenue	40.1	40.6	40.1	40.3
Government expenditure	42.1	41.9	40.7	40.5
of which: interest payments	1.3	1.2	1.1	1.0
GOVERNMENT BUDGET BALANCE	-2.0	-1.4	-0.6	-0.2
of which:				
primary balance[a)]	-0.7	-0.2	0.5	0.8
one-off measures[b)]	-0.6	-0.2	0.1	0.1
ADJUSTED BUDGET BALANCE[c)]	-1.4	-1.2	-0.6	-0.3
Cyclical component (ESCB method)[d)]	-0.8	-0.1	0.2	0.6
Structural balance (ESCB method)[d)]	-0.6	-1.1	-0.9	-0.9
Fiscal stance in pp (ESCB method)[e)]	-0.5	-0.4	0.2	0.0
Cyclical component (EC method)[d)]	-1.1	-0.4	-0.2	0.1
Structural balance (EC method)[d)]	-0.4	-0.8	-0.5	-0.4
Fiscal stance in pp (EC method)[e)]	-0.3	-0.4	0.3	0.1
Government debt	42.6	40.7	39.3	38.0

a) government budget balance minus interest payments
b) 2014–2017: sales of emission permits and subsidies for Green Savings Programme
2014: impact of auction of mobile frequencies, compensation payments to clients of bankrupt credit unions, shortfall in excise duties due to restriction of stockpiling
in 2015: impact of extension of lease of supersonic fighter aircraft
c) adjusted for one-off measures; CNB estimate
d) CNB estimate
e) year-on-year change in structural balance (positive value indicates fiscal restriction, negative value fiscal expansion)

Table II.2.5

FISCAL IMPULSE

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

	2014 actual	2015 forec.	2016 forec.	2017 forec.
Fiscal impulse[a)]	0.3	0.6	-0.3	0.3
of which impact through:				
private consumption	0.1	0.1	-0.1	0.0
private investment	0.0	0.0	0.0	0.0
government investment, domestic	0.1	0.1	0.0	0.1
government investment, EU funded	0.2	0.3	-0.2	0.2

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

predicts that direct investment in the Czech Republic will still primarily take the form of reinvested earnings. The structure and magnitude of direct investment in 2017 are forecasted to be the same as in 2016.

The net outflow of **portfolio investment** this year will be broadly unchanged from 2014 despite a significant year-on-year rise in residents' interest in investing abroad (especially in shares). This is because this year, unlike in 2014, there will be no one-off repayment of euro-denominated government bonds totalling several tens of billions of korunas. The net capital outflow should decrease in 2016 and 2017.

With regard to **other investment** (excluding banking sector operations), the forecast predicts a high – albeit falling – net outflow of capital from the corporate sector in the form of growth in residents' deposits abroad, growth in loans to non-residents and repayments of existing loans accepted from non-residents. The expected decline in the net outflow is due to an expected gradual recovery in investment in the Czech Republic.

Besides returns on international reserves, the forecast for **reserve assets** mainly reflects a surplus vis-à-vis the EU (drawdown of EU funds from the previous programme period and the only gradual start of the new programmes).

The future macroeconomic developments described above and the fiscal policy settings are reflected in the **government finance** outlook for 2015–2017 (see Table II.2.4).

The general government deficit is expected to drop to 1.4% of GDP **in 2015** owing to accelerating economic growth coupled with dissipation of the extraordinary factors that contributed to the one-off increase in the deficit in 2014.[9] However, the overall effect of fiscal policy will again be expansionary this year, making a positive contribution of around 0.6 percentage point to economic growth (see Table II.2.5). This will be due chiefly to stronger growth in government investment in an effort to draw as much EU money as possible from the previous programme period, which will be supported by increased use of domestic funds. In addition, investment expenditure will rise due to the accounting effect of an extension of the lease of JAS-39 Gripen aircraft of 0.2% of GDP, although this can be regarded as an extraordinary or one-off measure with no impact on the fiscal impulse. This year's increase in the growth rate of government expenditure will be amplified by a further acceleration of wage growth in the government sector and

9 The government finance results in 2014 were affected by methodological changes involving the inclusion of new institutions in the general government sector. This was reflected mainly in a rise in capital expenditure to include payments from the Deposit Insurance Fund to the clients of bankrupt credit unions (amounting to 0.3% of GDP). In addition, collection of excise duty on tobacco products saw a marked shortfall (of 0.5% of GDP) connected with legislative restrictions on the frontloading of tobacco products (effective from 1 December 2014).

an increase in pensions. This rise is due not only to the restoration of the policy to increase pensions fully in line with inflation plus one-third of real wage growth, including a one-off increase from January 2015, but also to an extraordinary contribution to be paid to pensioners at the end of the year. The general government revenue side is being adversely affected by the introduction of a second reduced VAT rate of 10% and an increase in the tax discount for dependent children in January 2015. Counteracting this is the impact of higher excise duty on tobacco products.

Amid continuing economic growth, the general government deficit will decline further to 0.6% of GDP **in 2016**. On the expenditure side, a marked year-on-year decrease in government investment can be expected owing to the end of the previous programme period for drawing down EU funds and the only gradual start of the new one, along with slightly lower debt service costs. At the same time, the general government revenue side will be bolstered by additional revenues from a further increase in excise duty on tobacco products and a rise in the rate of tax on lotteries and other similar games. Fiscal policy will therefore be slightly restrictive in 2016, making a contribution to economic growth of around -0.3 percentage point.

A decline in the general government deficit to 0.2% of GDP can be expected **in 2017**. This reduction will again be driven by favourable economic growth. Moreover, the revenue side will be positively affected by an expected increase in extraordinary revenues from sales of emission permits (totalling roughly 0.2% of GDP), which will be used only partly to fund the "New Green Savings" programme in 2017. However, the overall effect of fiscal policy will be slightly expansionary in 2017, making a contribution to economic growth of around 0.3 percentage point, due to expected renewed growth in government investment activity connected with the start of drawdown of EU funds from the new programme period.

The general government **structural deficit** will widen this year (to around 1% of GDP) and then narrow again. Given the current fiscal policy settings, the medium-term objective of 1% of GDP will thus be met in 2016 and 2017.

Owing to the use of excess Treasury liquidity as a source of funding, in combination with rapid economic growth, the **ratio of government debt to GDP** will decrease significantly to less than 41% this year. The forecast expects a further decrease in government debt relative to GDP in the next two years (to 38% in 2017). Amid low general government deficits or primary surpluses, this will be aided by further use of excess Treasury liquidity, accelerating nominal GDP growth and an expected further reduction in the effective interest rate on government debt owing to financial market developments and positive perceptions of the Czech Republic.

The **risks** to the fiscal forecast are tilted towards a slightly lower general government deficit, especially in 2016 and 2017. The forecast does not take into account any positive impacts of the proposed measures to reduce tax evasion, as their quantification and effectiveness are currently subject to a high degree of uncertainty.[10] In addition, there may be a rather larger-than-expected decline in government investment in 2016 and a lower-than-expected rise in 2017 owing to a delayed start to the drawdown of EU funds in the new programme period. Conversely, the possibility of an increase in public sector wages as early as November 2015 represents a slight risk to the fiscal forecast towards a higher deficit this year.

10 In the draft state budget of the Czech Republic for 2016, the Ministry of Finance expects these measures to have a positive year-on-year impact of 0.3% of GDP in 2016 and 0.1% of GDP in 2017 (see the document for the Government's meeting "Draft state budget of the Czech Republic for 2016 and the medium-term outlook for 2017 and 2018", June 2015).

II.3 COMPARISON WITH THE PREVIOUS FORECAST

Compared to the previous forecast, the predictions for headline and monetary policy-relevant inflation are higher until mid-2016 owing to higher observed inflation and a smaller decrease in administered prices. The forecasted levels of both these inflation indicators are slightly lower thereafter. Stronger GDP growth in 2015 Q1 and a faster labour market recovery have led to a marked upward revision of annual GDP growth this year; by contrast, the prediction for 2016 has been lowered slightly. Growth in nominal wages in the business sector has shifted upwards over the entire forecast horizon as a result of higher observed wage growth and a faster recovery in domestic economic activity. The assumption of flat market interest rates at their current very low level and the use of the exchange rate as a monetary policy instrument until the end of 2016 is unchanged.

The forecast for annual **headline inflation** is higher than in the previous forecast until mid-2016, but lower thereafter (see Chart II.3.1). This applies to both net inflation and administered prices. The path of net inflation (see Chart II.3.2) over the forecast horizon is affected by higher observed inflation in recent months (including higher food price inflation) and the current situation of the domestic economy. Compared to the previous forecast, the domestic economy in 2015 is characterised by slightly stronger cost-push pressures stemming from higher wage growth (reflected, among other things, in higher adjusted inflation excluding fuels). A stronger exchange rate of the koruna against the euro compared to the assumptions of the previous forecast is acting in the opposite direction. The fundamental upward pressures on costs remain broadly unchanged overall in 2016. However, the unwinding of the higher-than-expected inflation so far this year is fostering slightly lower annual net inflation (due to base effects for food and fuel prices). The revision of the administered price forecast reflects a postponed decrease in gas prices for households to the start of next year and a simultaneous reduction of that decrease compared to the previous prediction. The other administered price items remain almost unchanged. The outlook for **monetary policy-relevant inflation** has been revised similarly as that for headline inflation, as the estimated impacts of indirect tax changes remain in line with the previous forecast until the end of 2016.

Turning to the assumptions regarding the **external environment** (see the charts in chapter II.1), the outlook for producer prices in the effective euro area has been lowered significantly for this year compared to the previous forecast owing to lower observed levels at the beginning of this year. Only a moderate downward revision has been made for 2016. The prediction for external demand growth has been increased slightly for this year, whereas the changes for next year are negligible. The 3M EURIBOR market outlook changes only marginally until the end of 2016.

Chart II.3.1

CHANGE IN THE HEADLINE INFLATION FORECAST

The forecast for headline inflation is higher than in the previous forecast until mid-2016, but slightly lower thereafter
(year on year in %; differences in pp – right-hand scale)

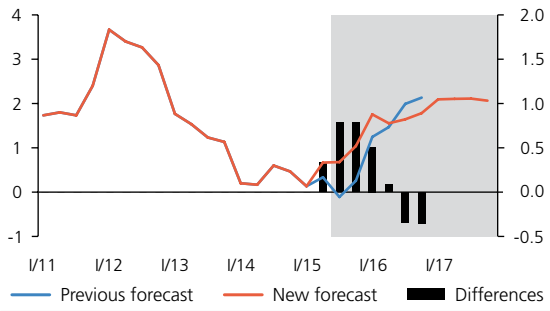


Chart II.3.2

CHANGE IN THE NET INFLATION FORECAST

The forecast for net inflation is higher until the start of next year, reflecting its trend in recent months and stronger inflationary pressures from the domestic economy
(year on year in %; differences in pp – right-hand scale)

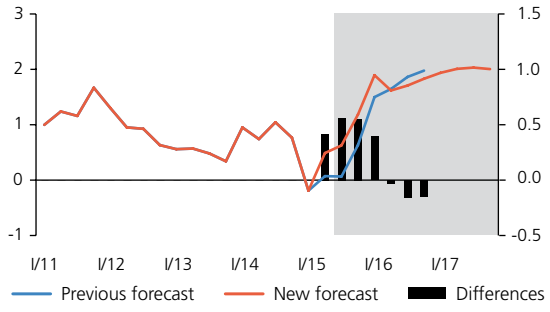


CHART II.3.3

CHANGE IN THE INTEREST RATE PATH

The interest rate path remains unchanged with an assumed stay in the regime of using the exchange rate as a monetary policy instrument until the end of 2016
(3M PRIBOR in %; differences in pp – right-hand scale)

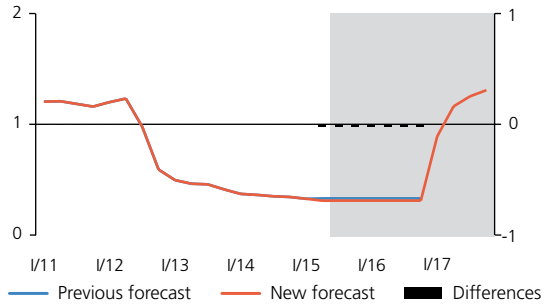


CHART II.3.4

CHANGE IN THE GDP FORECAST

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

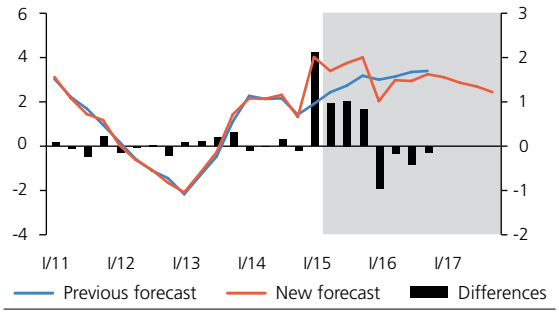
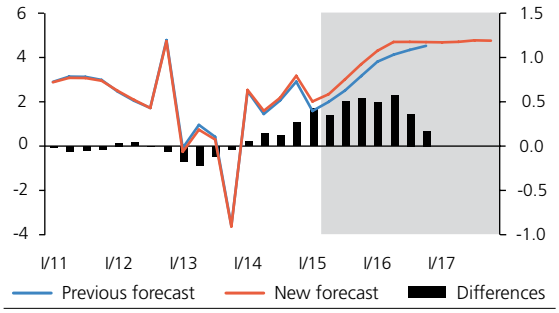


CHART II.3.5

CHANGE IN THE FORECAST FOR NOMINAL WAGES IN THE BUSINESS SECTOR

The nominal wage forecast has shifted to higher rates of growth
(annual percentage changes; differences in pp – right-hand scale, seasonally adjusted[a])



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

As a result of the only gradual future return of inflation to the CNB's target and the related need for a sustained easing of the domestic monetary conditions, the assumption of the use of the exchange rate as an additional monetary policy instrument until the end of 2016 is maintained as in the previous forecast. The expected **koruna-euro exchange rate** is at a stronger level than in the previous forecast. This level is only slightly weaker in the new forecast than the announced level of the CNB's exchange rate commitment. The path of domestic market **interest rates** is unchanged until the end of next year (see Chart II.3.3).

The forecast for annual **GDP** growth in 2015 is significantly above the previous prediction (see Chart II.3.4). The revision is due mainly to considerably stronger GDP growth in 2015 Q1 and slightly higher external demand. The GDP growth outlook for 2016 is slightly lower, primarily because of a higher base effect (especially in Q1) and stronger koruna-euro exchange rate. At the same time, there are changes in the individual demand components in both years. The forecast for household consumption in both 2015 and 2016 has been moved upwards on account of stronger growth in wages and employment coupled with a lower saving rate. At the forecast horizon, higher economic activity will also lead to a stronger rise in investment than expected by the previous forecast. Government consumption will grow at a similar pace as in the previous forecast, and the expected fiscal impulse in the individual years has not been significantly revised either.

The contribution of **net exports** to GDP growth in 2015 is less negative than in the previous forecast as a result of slightly higher growth in external demand and therefore faster export growth. In 2016, by contrast, the contribution of net exports will be less positive because of slightly stronger growth in domestic demand. Faster export and import growth will reflect a faster recovery in domestic demand and partly also in external demand.

Growth in the average **nominal wage** in the business sector has been increased compared to the previous forecast (see Chart II.3.5). This revision primarily reflects the observed higher growth in wages and faster recovery in domestic economic activity.

II.4 FORECASTS BY OTHER ENTITIES

Analysts' inflation expectations remain below the CNB's target at the one-year horizon and are stable at the target level at the three-year horizon. The indicator of inflation perceived by households is slightly negative, while the indicator of expected inflation is slightly positive. On average, the analysts expect the economy to grow by more than 3% this year and less than 3% next year. According to the analysts, the exchange rate of the koruna will be broadly stable just above CZK 27 to the euro, or only slightly weaker, at the one-year horizon. All the analysts expect that the exchange rate commitment will not be discontinued before 2016 H2. At the same time, they were all expecting key interest rates to be left unchanged both at the CNB Bank Board's August meeting and at the one-year horizon. The market outlook one year ahead indicates only a marginal decrease in interest rates and is therefore very close to the interest rate path in the new CNB forecast.

The downward trend in **inflation expected by financial market analysts** at the one-year horizon has come to a halt in recent months and this indicator edged up to 1.6%. Inflation expected at the three-year horizon has long been at the level of the CNB's 2% target or very close to it. The inflation expectations of business managers at the one-year horizon remain below the target (see Table II.4.1).

The indicator of **inflation perceived by households** was again slightly negative in 2015 Q2 (see Chart II.4.1). This means that households on average felt that prices did not increase over the last 12 months. By contrast, the indicator of **expected inflation** has long been slightly positive. This signals that the number of respondents who expect prices to rise more rapidly over the next 12 months is slightly higher than the number of those who expect prices to stay the same or increase more slowly than in the recent past. On average, this indicator increased somewhat in 2015 Q2.

Both the FMIE and CF analysts expect GDP to grow by more than 3% this year (see Tables II.4.1 and II.4.2). Next year, economic growth is expected to slow below this level. By contrast, a smooth increase in wage growth is predicted. At the one-year horizon, the koruna exchange rate is expected to be either approximately stable just above CZK 27 to the euro (FMIE analysts) or only slightly weaker compared to its current levels (CF analysts). In line with previous communications of the Bank Board, all the analysts also expect that the exchange rate commitment will not be discontinued before 2016 H2. The new CNB forecast assumes that the exchange rate will be used as a monetary policy instrument until the end of 2016. Before the CNB Bank Board meeting in August, all fourteen FMIE analysts were expecting no changes in key interest rates at this meeting. All the analysts also expect the 2W repo rate to be flat at its current level of 0.05% at the one-year horizon.

Table II.4.1

EXPECTED INDICATORS OF FMIE AND CORPORATIONS

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

	3/15	4/15	5/15	6/15	7/15
FMIE:					
CPI	1.4	1.4	1.5	1.6	1.6
CPI, 3Y horizon	1.9	1.9	2.0	2.0	2.0
Real GDP in 2015	2.4	2.5	2.8	3.3	3.3
Real GDP in 2016	2.6	2.6	2.8	2.7	2.7
Nominal wages in 2015	3.0	3.0	2.8	2.8	2.8
Nominal wages in 2016	3.1	3.1	3.5	3.4	3.7
CZK/EUR exchange rate (level)	27.4	27.4	27.5	27.3	27.1
2W repo rate (in per cent)	0.05	0.05	0.05	0.05	0.05
1Y PRIBOR (in per cent)	0.6	0.5	0.5	0.5	0.5
Corporations:					
CPI	1.5			1.5	

Chart II.4.1

PERCEIVED AND EXPECTED INFLATION

Perceived inflation stayed negative, while expected inflation increased somewhat
(source: European Commission Business and Consumer Survey)

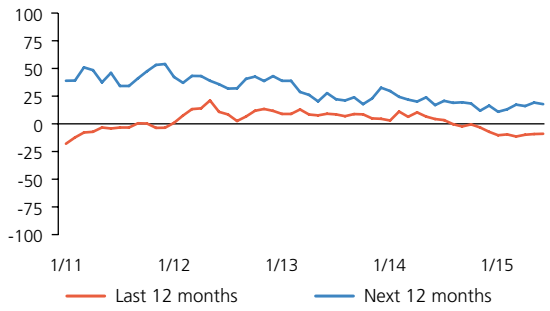


Table II.4.2

CF EXPECTED INDICATORS

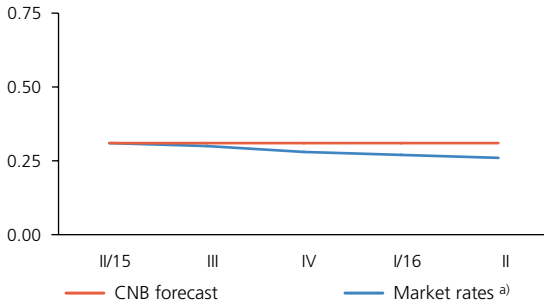
The CF analysts expect the economy to grow at a rate of more than 3% this year; next year the growth will slow below this level
(at 1Y; annual percentage changes unless otherwise indicated)

	3/15	4/15	5/15	6/15	7/15
Real GDP in 2015	2.5	2.5	2.7	3.0	3.3
Real GDP in 2016	2.7	2.7	2.7	2.7	2.7
Nominal wages in 2015	3.0	2.8	2.8	2.8	2.9
Nominal wages in 2016	3.4	3.4	3.4	3.4	3.6
CZK/EUR exchange rate (level)	27.4	27.5	27.4	27.3	27.3
3M PRIBOR (in per cent)	0.3	0.3	0.3	0.3	0.3

CHART II.4.2

FRA RATES VERSUS THE CNB FORECAST

Expected interest rates derived from FRA quotations are very close to the rates in the new CNB forecast
(percentages)



a) for 2015 Q2 and 2015 Q3 the 3M PRIBOR and for 2015 Q4–2016 Q2 the average values of the FRA 3*6, 6*9 and 9*12 rates for the last 10 trading days as of 24 July 2015

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

Chart II.4.2 provides a **comparison of expected 3M market rates** derived from FRA quotations and the interest rate path expected by the new CNB forecast. The current market outlook for 3M rates implies a marginal decrease at the one-year horizon. This is in line with expectations of flat monetary policy interest rates at least until the same date and a negligible decline in the money market premium. At the one-year horizon, the expected market rates are thus very close to the interest rate path expected by the new CNB forecast, which is based on stability of the money market premium.

III. CURRENT ECONOMIC DEVELOPMENTS

III.1 INFLATION

Annual headline inflation picked up noticeably in 2015 Q2, reaching 0.7% on average. Monetary policy-relevant inflation was 0.4%. Inflation was thus still well below the CNB's target. A renewed increase in food prices started to foster higher inflation, while the year-on-year decline in fuel prices slowed further. The fast-growing domestic economy and a continued improvement in the labour market situation pushed up costs and consequently also consumer prices. This was most apparent in adjusted inflation excluding fuels, which remained stable despite fade-out of the direct effect of the weakened exchange rate of the koruna against the euro and still subdued inflation abroad. Administered prices continued to show slight annual growth.

III.1.1 Fulfilment of the inflation target

In 2015 Q2, both **headline inflation and monetary policy-relevant inflation** were still well below the CNB's target, or below the lower boundary of the tolerance band around the target (see Chart III.1.1). This section of the Inflation Report briefly analyses the contribution of the CNB's monetary policy to this situation. In order to assess the effect of monetary policy on the fulfilment of the inflation target one needs to **analyse retrospectively the forecasts** and the Bank Board's decisions based thereon in the past. To assess the fulfilment of the inflation target in 2015 Q2, we have to examine the period roughly from October 2013 to March 2015, which takes into account the different lengths of transmission of interest rates and the exchange rate. This is because monetary policy starts to pass through to inflation with a substantially shorter lag in the regime where the exchange rate is used as a monetary policy instrument than when interest rates are used. For the sake of clarity, however, the analysis of the accuracy of the forecasts is limited here to a comparison of Inflation Report I/2014 with subsequent inflation.

The **Inflation Report I/2014 forecast** was based on the assumption that the exchange rate would be used as an instrument for easing monetary policy with an exchange rate commitment of CZK 27 to the euro until the start of 2015. Headline inflation was expected to decline at the start of 2014, with a modest increase in net inflation being outweighed by a sizeable fall in administered prices and the unwinding of the first-round effects of the VAT changes made in 2013. The weaker exchange rate was expected to be reflected in rising import prices and have a positive effect on domestic economic activity. Inflation pressures from the domestic economy were also expected to resurge and take over the main role in price developments. Inflation was expected to return to the CNB's 2% target at the end of 2014, then approach the upper boundary of the tolerance band around the inflation target and return to the target from above during 2015 (see Chart III.1.1). Monetary policy-relevant inflation was expected

CHART III.1.1

FORECAST VERSUS ACTUAL INFLATION

Inflation was well below the IR I/2014 forecast in 2015 Q2
(year on year in %)

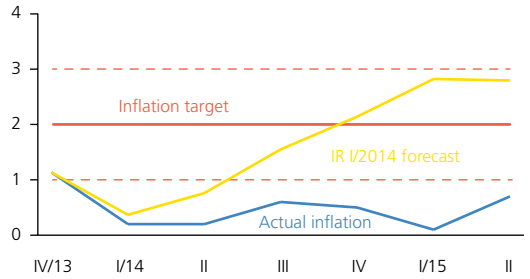


Table III.1.1

FULFILMENT OF THE INFLATION FORECAST

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

(annual percentage changes; contributions in percentage points)

	IR I/2014 forecast	2015 Q2 outturn	Contribution to total difference
CONSUMER PRICES	2.8	0.7	-2.1
Breakdown into contributions:			
administered prices	2.8	0.3	-0.5
first-round impacts of changes to indirect taxes[a)]	0.2	0.3	0.1
food prices[b)]	2.6	0.7	-0.5
fuel prices[b)]	2.8	-10.1	-0.4
adjusted inflation excl. fuels[b)]	2.4	1.1	-0.8

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

Table III.1.2

FULFILMENT OF THE EXTERNAL ASSUMPTIONS

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

(annual percentage changes unless otherwise indicated)

		I/14	II/14	III/14	IV/14	I/15	II/15
GDP in euro area[a), b), c)]	p	1.1	1.2	1.7	2.1	2.2	2.1
	o	1.4	0.9	0.8	1.0	1.2	-
PPI in euro area[b), c)]	p	-0.5	0.8	0.9	1.2	1.3	1.5
	o	-1.9	-1.6	-1.8	-2.1	-2.9	-
3M EURIBOR	p	0.3	0.3	0.3	0.3	0.4	0.4
(percentages)	o	0.3	0.3	0.2	0.1	0.0	0.0
USD/EUR exchange rate	p	1.35	1.33	1.31	1.30	1.29	1.28
(levels)	o	1.37	1.37	1.32	1.25	1.13	1.10
Brent crude oil price	p	106.1	104.9	103.7	102.5	101.4	100.2
(USD/barrel)	o	107.9	109.8	103.5	77.1	55.1	63.5

p – prediction, o – outturn
a) at constant prices
b) seasonally adjusted
c) IR I/2014 outlook for effective indicator

Table III.1.3

FULFILMENT OF THE FORECAST FOR KEY VARIABLES

Observed GDP growth was faster than forecasted except in 2014 H2, whereas wage growth gradually lagged behind forecast

		I/14	II/14	III/14	IV/14	I/15	II/15
3M PRIBOR	p	0.4	0.4	0.4	0.4	1.0	1.1
(percentages)	o	0.4	0.4	0.4	0.3	0.3	0.3
CZK/EUR exchange rate	p	The exchange rate commitment: close to CZK 27 to the euro					-
(levels)	o	27.4	27.4	27.6	27.6	27.6	27.4
Real GDP[a)]	p	1.1	2.1	3.1	2.7	3.5	2.8
(annual perc. changes)	o	2.2	2.1	2.6	1.0	4.0	-
Nominal wages[b)]	p	3.4	2.0	2.6	3.2	4.0	4.5
(annual perc. changes)	o	3.4	2.2	1.5	1.8	2.1	-

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

to fall close to zero initially and then gradually reach the target. The subsequent temporary overshooting of the inflation target was expected to foster an easing of the real monetary conditions through higher inflation expectations and at the same time facilitate a safe exit from the zero lower bound on interest rates and a return to conventional monetary policy.

Headline **inflation in reality** was well below the forecast over the entire period and the deviation increased gradually until the start of 2015. The 2.1 percentage point deviation of actual headline inflation from the forecast in 2015 Q2 was due to all inflation components except the first-round effects of changes to indirect taxes. Adjusted inflation excluding fuels picked up gradually and became noticeably positive thanks to the weaker exchange rate and renewed economic growth, but the acceleration was much slower than forecasted owing to deflation in the euro area and a slower recovery in domestic wage growth. The significant deviation in food prices was due to a stronger-than-expected fall in global agricultural commodity prices over the entire period under review and to the embargo on imports to Russia. Administered prices were affected by a deeper decline in health care prices at the start of 2014 and a fall in energy commodity prices in late 2014 and early 2015 (see Table III.1.1).

External economic factors contributed significantly to the substantially lower-than-forecasted domestic inflation. The biggest deviation was recorded by growth in external production prices, which, contrary to expectations, was strongly negative. External demand growth was also lower than expected. Foreign interest rates also started to decrease further in mid-2014, a trend which had not been expected by the forecast. Oil prices also dropped unexpectedly in late 2014 and early 2015 (see Table III.1.2). Overall, then, external developments had an anti-inflationary effect on domestic inflation, i.e. they acted towards a need for easier monetary conditions. **Domestic market interest rates**, however, were broadly stable (see Table III.1.3), as in reality the zero lower bound meant they could not be lowered. A marked deviation from the predicted values can only be seen in the first half of 2015, for which the forecast had assumed the exit from the use of the exchange rate as an additional monetary policy instrument and the return to the standard regime. However, this did not occur in reality. The **exchange rate** stayed at levels that were slightly weaker than the commitment announced by the CNB, but not weak enough to offset the deflationary pressures from abroad and deliver a return of inflation to the target. The impacts of the more anti-inflationary developments abroad on domestic inflation were thus much stronger than in an environment where the monetary policy is not constrained by the zero lower bound.

Based on the CNB's current knowledge, the **developments in the Czech economy since the forecast under review was drawn up** can be summed up in the following way. Actual domestic GDP growth was higher than forecasted, except in 2014 H2, when it was affected, among other things, by slower growth in external demand. On the

other hand, growth in real household consumption, investment and government consumption was faster than forecasted. Actual export and import growth rose noticeably above the forecast at the start of 2014 thanks to the weakened exchange rate of the koruna. The annual export and import growth rates then converged back to the forecast (with export growth even dipping below it). The slowdown reflected an unexpected decline in external demand growth. Nominal wage growth has been lagging behind the predicted figures since 2014 H2. This, together with strongly anti-inflationary price developments abroad, led to considerably lower inflation than forecasted.

In addition to the forecast, an assessment of the risks associated with this forecast is important for the Bank Board's decisions on **monetary policy settings**. The Bank Board assessed the risks of the forecasts as being either slightly on the downside or balanced over the entire key period. With the benefit of hindsight, it can be said that most of the identified risks materialised in the key period, with anti-inflationary risks (particularly subdued inflation in the euro area and the fall in global energy commodity prices) clearly prevailing overall. The weakened koruna, affected mainly by the CNB's exchange rate commitment, fostered an easing of the monetary conditions in a situation where the zero lower bound on monetary policy rates had been reached at the end of 2012. The direct pass-through of the weakened exchange rate to inflation through import prices has faded out, but the exchange rate is still contributing to growth in the domestic economy, which is fostering an increase in costs and consequently also consumer prices. The inflation target is being undershot at present. However, without the weakening of the koruna, headline inflation would still probably have been negative.

Overall, based on current knowledge, it seems that the monetary policy pursued between October 2013 and March 2015 should have been substantially easier, i.e. the monetary policy easing implemented via the exchange rate should have been made with greater force. Nonetheless, thanks to the action taken to weaken the koruna, monetary policy was eased sufficiently to avert the immediate threat of deflation linked with a drop in demand, and thus also to avert the threat of overall macroeconomic instability.

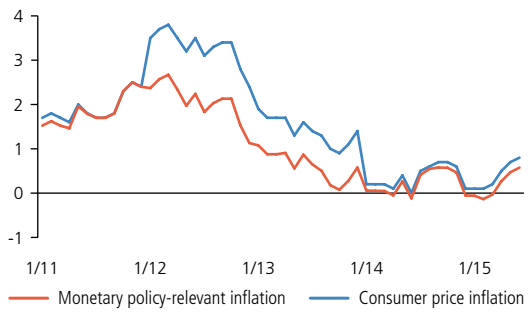
III.1.2 Current inflation

Annual inflation[11] was 0.7% on average in 2015 Q2. It picked up gradually during the quarter, reaching 0.8% in June (see Chart III.1.2). However, it was still well below the CNB's target. Its increase was chiefly due to food prices, which returned to annual growth. The annual decline in fuel prices meanwhile continued to moderate. Adjusted inflation remained at the previous quarter's figures despite

CHART III.1.2

INFLATION

Annual inflation went up noticeably in 2015 Q2
(year on year in %)



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

CHART III.1.3

STRUCTURE OF INFLATION

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

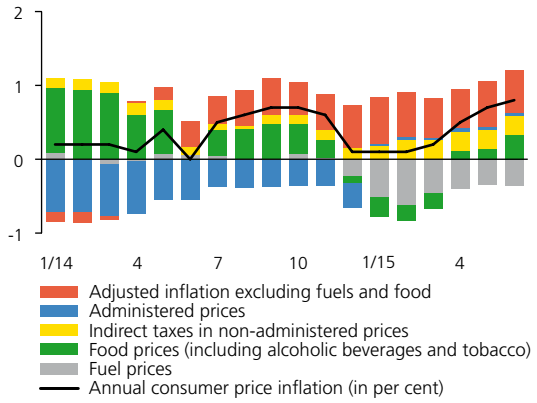


CHART III.1.4

INFLATION COMPONENTS

Adjusted inflation excluding fuels stayed markedly positive, while food prices returned to growth
(annual percentage changes; excluding indirect tax changes except for administered prices)

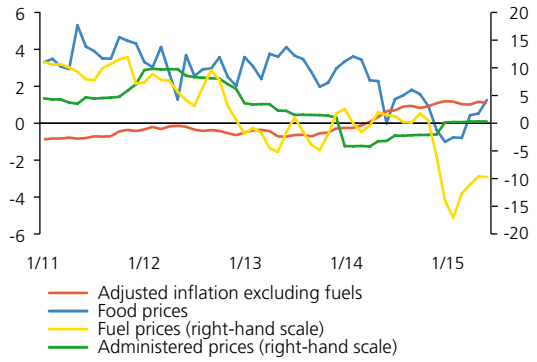
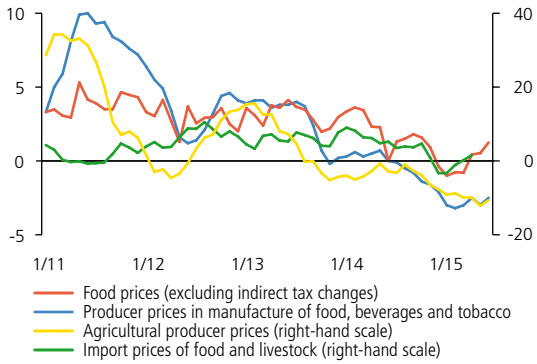


CHART III.1.5

FOOD PRICES

Food prices saw renewed growth due to rising import prices, while domestic agricultural producer prices continued to fall
(annual percentage changes)



subdued inflation abroad and the fading out of the direct effect of the weakened exchange rate of the koruna against the euro. Administered prices continued to show slight annual growth as recorded since the start of this year.

Turning to the **structure of annual inflation**, the continuing, although slower, decline in fuel prices was more than offset in 2015 Q2 by stable adjusted inflation excluding fuels, renewed growth in food prices and the contribution of tax changes in non-administered prices (see Chart III.1.3). The contribution of administered prices to inflation was negligible.

The contribution of changes to **indirect taxes** to annual consumer price inflation was 0.2 percentage point in 2015 Q2. The higher inflation was due to two harmonisation adjustments made to excise duty on cigarettes and tobacco in 2014 with an overall impact on headline inflation of 0.3 percentage point. The introduction at the start of this year of a second reduced VAT rate of 10% on medicines, books and irreplaceable infant food, which had an impact of almost -0.1 percentage point, acted in the opposite direction.

Monetary policy-relevant inflation, i.e. inflation adjusted for the first-round effects of changes to indirect taxes, rebounded from zero in 2015 Q2, averaging 0.4%. It showed an upward tendency, reaching 0.6% in June. Monetary policy-relevant inflation was nonetheless still well below the CNB's target, or below the lower boundary of the tolerance band around the target.

Administered prices continued to show slight annual growth in 2015 Q2, picking up only slightly compared to Q1 and averaging 0.3% (see Chart III.1.4). This was mostly due to rising prices of heat for households. The increase in administered prices continued to reflect the January rise in prices of natural gas for households as a result of an increase in gas supply fees and water supply and sewerage collection charges. By contrast, the abolition of the remaining regulatory fees in health care except for the emergency fee and, to a lesser extent, a slight decline in prices of electricity for households had an anti-inflationary effect.

Annual **net inflation**[12] turned positive again in 2015 Q2, averaging 0.5%. It accelerated during the quarter, reaching 0.7% in June. Market prices thus reflected the renewed growth in food prices and the more modest decline in fuel prices. Adjusted inflation excluding fuels was stable on average.

Food prices saw renewed annual growth in 2015 Q2. The growth was 0.7% on average and rose to 1.3% in June (see Chart III.1.5). This reflected the evolution of import prices, which recorded sizeable

12 The following text describes the year-on-year evolution of the main components of market price inflation adjusted for tax changes.

increases in the same items as in domestic consumer food prices (fruit and vegetables in particular). This effect thus outweighed the anti-inflationary impact of the continuing annual decline in agricultural producer prices.

The annual decline in **fuel prices**, resulting mainly from the decrease in oil prices in the second half of last year, slowed further in 2015 Q2 (see Chart III.1.6). It stood at about 10% on average. At the same time, petrol prices abroad deviated slightly from Brent crude oil prices, with the correction of the annual decline in petrol prices and subsequently also in domestic fuel prices being rather more significant compared to that in oil prices.

Adjusted inflation excluding fuels stayed positive, averaging 1.1% year on year in 2015 Q2 (see Chart III.1.7). The fading out of the direct effects of the earlier depreciation of the koruna-euro exchange rate and the continuing fall in foreign producer prices passed through to **prices of other tradables**, whose annual growth slowed to 0.4% in June. By contrast, the weakened koruna-dollar rate fostered higher growth in prices of other tradables (see Box 1 for more details). On the other hand, growth in domestic **prices of non-tradables**[13] remained relatively high and picked up further in 2015 Q2 (to 1.6% in June). The evolution of these prices primarily reflected the continuing growth in domestic economic activity and the improving labour market situation. The increase in prices of non-tradable commodities was fostered above all by net rents, package holiday prices and prices of insurance and financial services.

BOX 1
The pass-through of the koruna-dollar exchange rate to prices of tradable goods

The sharp depreciation of the euro against the dollar in late 2014 and early 2015 led the koruna to depreciate by as much as 28% against the US dollar (in April 2015). The concurrent rise in annual growth in prices of tradable goods (see Chart III.1.7) brought back to the fore the question of **quantifying the pass-through of the koruna-dollar exchange rate to domestic inflation** going beyond administered energy prices and fuel prices. For these prices, the effect of the koruna-dollar exchange rate is traditionally well mapped and routinely incorporated into the forecast.

This box therefore analyses the impact of the koruna-dollar exchange rate on prices of tradable goods as a component of adjusted inflation excluding fuels. Here, according to historical data, the effect of changes in the dollar's exchange rate has

CHART III.1.6

FUEL PRICES

The decline in fuel prices continued to moderate in line with foreign petrol prices
(annual percentage changes)

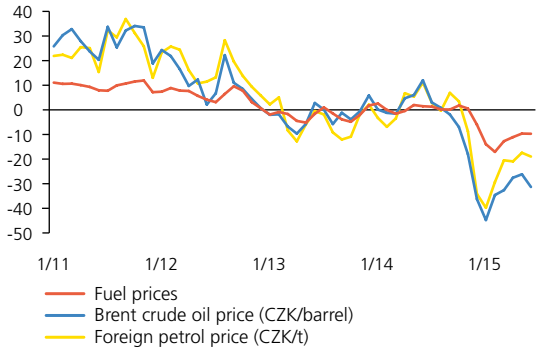


CHART III.1.7

ADJUSTED INFLATION EXCLUDING FUELS

Adjusted inflation excluding fuels remained stable, with both of its components making positive contributions
(annual percentage changes)

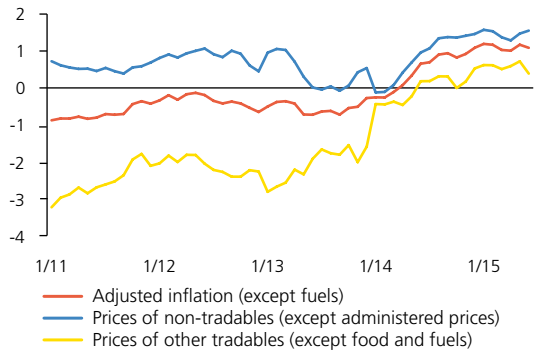


TABLE 1 (BOX)

ESTIMATED IMPORT SHARES IN EUR AND USD

Dollar regions have a weight of more than 50% in imports of electronics, clothing and footwear
(percentages; CNB estimate; 2014)

	USD [1]	CPI weight
Electronics[2]	67	2.7
Clothing	54	2.4
Footwear	59	0.9

1) These estimates are based on the shares of imports from individual countries, for which the dominant currency denomination of contracts is determined by expert judgement.
2) This category consists mainly of computers weighing up to 10kg, televisions, telephones (including mobile phones) and domestic appliances.

13 This segment consists mainly of services.

CHART 1 (BOX)

PRICES OF ELECTRONICS AND CZK/EUR AND CZK/USD EXCHANGE RATES

There is a clear correlation between the CZK/USD exchange rate and prices of electronics, clothing and footwear in recent years

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

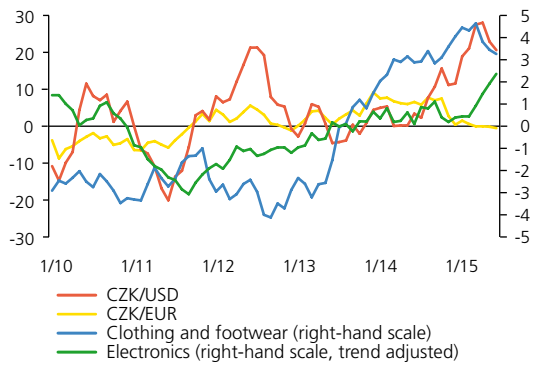
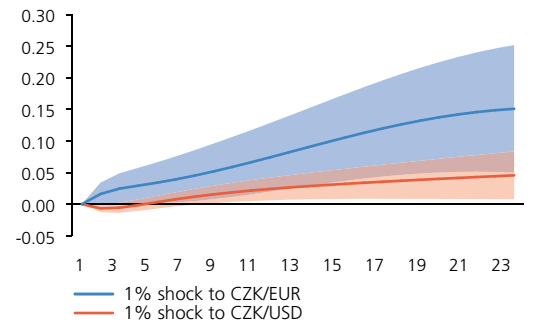


CHART 2 (BOX)

IMPULSE RESPONSES OF PRICES OF TRADABLES EXCLUDING FUELS TO EXCHANGE RATE SHOCKS

The pass-through of the CZK/USD rate to prices is roughly one-quarter of that of the CZK/EUR rate and moreover occurs with a longer lag

(percentage response of tradables prices to 1% shock to relevant variable; coloured area denotes 90% confidence interval; x-axis in months; CNB calculation)



empirically tended to be rather weak and volatile. The observed combination of depreciation of the koruna-dollar exchange rate and growth in prices of other tradables excluding fuels can be illustrated on the categories of clothing and footwear and electronics[14] (see Chart 1). In these categories, the estimated share of imports from dollar regions (see Table 1) is much higher than their estimated average share in total imports into the Czech Republic (20%–30% depending on the estimation method[15]). Chart 1 shows the concurrent weakening of the koruna-dollar rate and rise in prices of electronics and clothing and footwear. However, this positive correlation holds primarily in recent years and was previously not so apparent. In addition, it concerns only a limited part of the consumer basket (the electronics sub-index has a weight of 2.7% and the clothing and footwear sub-index another 3.3%, as compared to the total weight of tradables in adjusted inflation excluding fuels of 21.2%).

An **analysis of the behaviour of the tradables price index based on an empirical vector autoregression (VAR) model** offers a more comprehensive view. The VAR model contains foreign and administered prices, the output gap, prices of other non-tradables and tradables within adjusted inflation excluding fuels and the koruna-dollar and koruna-euro exchange rates (all at monthly frequency). This ordering of the variables is used to identify structural shocks using the Cholesky decomposition. The estimate was performed on the logarithms of levels (with the exception of the output gap, which is in per cent). The impulse responses (see Chart 2) can thus be interpreted as the percentage response of prices of other tradables to a 1% shock to the relevant variable. The results reveal that the koruna-dollar rate passes through to tradables prices with a longer lag than the koruna-euro rate, with the statistically significant price impact occurring after roughly six months (see Chart 2). In addition, the intensity of the pass-through of the change in the koruna-dollar rate is roughly one-quarter of that in the koruna-euro rate.[16]

14 Electronics comprises not only computer and audiovisual technology, but also large household appliances ("white goods").

15 Based on the geographical distribution of international trade, the share of imports from dollar regions is estimated at 30%. According to a 2014 study by Lai and Yu ("Invoicing Currency in International Trade: An Empirical Investigation and Some Implications for the Renminbi"), the share is about 20%.

16 The other properties of the estimated model include a positive response of tradables prices to a shock to the output gap (peaking after about one year) and a negative response of tradables prices to a shock to administered prices, with the increase in regular household expenses leading via lower disposable income to downward pressure on prices of other tradables.

As a result of the depreciation of the koruna-dollar exchange rate in late 2014 and early 2015, it can thus be expected that the effect on tradables prices within adjusted inflation excluding fuels will be roughly 1.5% (with a 0.3 percentage point impact on headline inflation). About half of this has already passed through to consumer prices, and the remainder will pass through in the coming quarters.

CHART III.2.1

IMPORT PRICES AND PRODUCER PRICES

Import prices started to rise again, industrial and agricultural producer prices continued to fall and prices in construction and market services rose only modestly in 2015 Q2
(annual percentage changes)

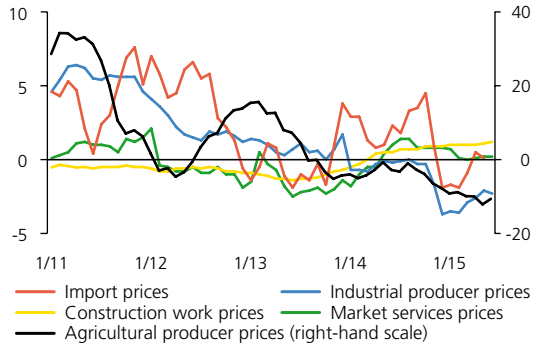


CHART III.2.2

IMPORT PRICES

Higher growth in prices of commodities with a high degree of processing and a smaller decline in prices of mineral fuels contributed to the renewed growth in import prices
(annual percentage changes; contributions in percentage points)

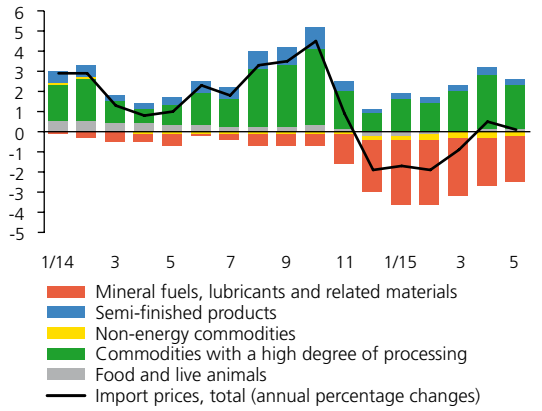
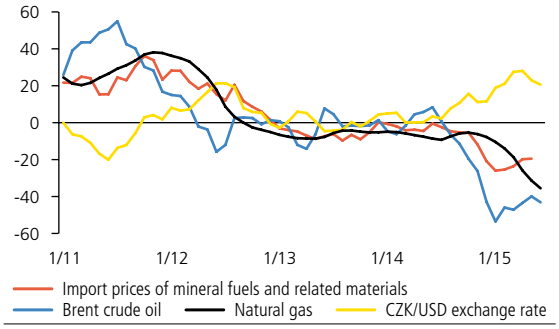


CHART III.2.3

MINERAL FUELS AND LUBRICANTS

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



III.2 IMPORT PRICES AND PRODUCER PRICES

Import prices started rising again year on year in April and May, mainly because of a slower decline in prices of energy commodities and faster growth in import prices of products with a high degree of processing. At the same time, the year-on-year decline in industrial producer prices continued to moderate in 2015 Q2, largely due to a slower fall in import prices of mineral fuels (crude oil). The decline in prices of agricultural commodities deepened further in year-on-year terms, whereas the fall in prices in the food industry slowed. Construction work prices continued to show gradually accelerating growth. Prices of market services for the business sector also recorded renewed annual growth.

III.2.1 Import prices

The decline in **import prices**, which had been falling since the end of 2014, slowed in March 2015. In April and May, import prices showed year-on-year increases (of 0.5% and 0.1% respectively; see Chart III.2.1). The change in their dynamics was due primarily to a pick-up in growth in import prices of products with a high degree of processing and a simultaneous moderation of the decline in prices of mineral fuels and lubricants.

The annual decline in import prices of **mineral fuels** moderated gradually in April and May. Their negative contribution to annual import price inflation decreased by almost one percentage point between January and May (see Chart III.2.2). Their decline was closely linked with a noticeable slowdown of the year-on-year decline in global oil prices of more than 10 percentage points compared to the start of 2015 (see Chart III.2.3). By contrast, the annual decline in global natural gas prices, which tend to follow oil price changes with a lag, deepened further (to 31.4% in May). The impact of the still sharply falling global prices of energy commodities on domestic prices continued to be considerably dampened by year-on-year depreciation of the koruna-dollar exchange rate. In these circumstances, the annual decline in import prices of mineral fuels moderated to less than 20% (19.5% in May; see Table III.2.1).

Import prices of **non-energy commodities** and **chemicals and related products** moved in the same direction in the period under review. Their annual decline slowed as well (to 9.4% and 0.6% respectively in May). After a decline, import prices of **food and live animals** started to go up again in March, mainly due to prices of imported fruit and vegetables (see Table III.2.1).

Prices of **commodities with a high degree of processing** recorded relatively fast growth in April and May. Their annual rate of growth mostly exceeded 5% (see Table III.2.1). However, import prices in this category showed very mixed trends. This is evidenced mainly by a large double-digit increase in import prices in the category of

office machines and automatic data processing machines, which reached 11.5% in May, whereas import prices in the machinery and equipment category continued to fall slightly. Import prices of electrical equipment, machinery and appliances and industrial consumer goods also saw a strong increase (5.7%). Import prices of **semi-finished products** also grew faster in April and May than in the previous quarter, although more slowly than those of products with a high degree of processing.

III.2.2 Producer prices

Industrial producer prices

The decline in **industrial producer prices** moderated noticeably in 2015 Q2, reaching -2.3% year on year in June, 0.6 percentage point less than in March (see Chart III.2.4). This was due chiefly to prices of imported inputs, in particular a slower decline in global oil prices, which producers in some industries incorporated into their prices with a relatively short lag.

The moderation of the annual decline in industrial producer prices was most pronounced in the **composite indicator of energy producer prices and prices of water-related services**[17] (see Chart III.2.4). However, a closer look at the structure of this indicator reveals very mixed trends in its individual components in the course of this year.

The price trends in industries where producer prices are usually adjusted at the start of the year were stable. This was true of the **electricity, gas, steam and air-conditioned air** industry, where prices have been declining at a rate of less than 1% year on year since the start of the year, and of the **water supply and sewerage-related services** industry, where prices have been maintaining stable growth of 3.4% in the same period (see Chart III.2.5). Producer prices in **mining and quarrying** started rising again in May (by 0.6% in June) after almost two years of decline, but the low weight of this industry meant that this change had little effect on the composite indicator. The continued annual decline in the composite indicator was therefore probably due most of all to prices in the manufacture of **coke and refined petroleum products** owing to the persisting annual decline in oil prices on global markets. However, this decline moderated noticeably on average in 2015 Q2, as also evidenced by the evolution of energy prices (see Chart III.2.6).

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

TABLE III.2.1

STRUCTURE OF IMPORT PRICE INFLATION

Import prices of energy and non-energy commodities continued to go down, although more moderately than in the previous quarter
(annual percentage changes)

	2/15	3/15	4/15	5/15
IMPORTS, TOTAL	-1.9	-0.9	0.5	0.1
of which:				
food and live animals	-1.1	0.2	1.6	2.5
beverages and tobacco	0.2	0.9	0.2	1.1
crude materials inedible, except fuels	-12.1	-10.9	-10.7	-9.4
mineral fuels and related products	-25.4	-23.6	-19.8	-19.5
animal and vegetable oils	1.0	2.1	1.1	1.4
chemicals and related products	-3.4	-2.8	-1.1	-0.6
manufactured goods classified chiefly by material	1.4	1.6	2.1	1.8
machinery and transport equipment	3.4	4.5	5.5	4.2
miscellaneous manufactured articles	4.8	5.2	6.5	5.7

CHART III.2.4

INDUSTRIAL PRODUCER PRICES

The decline in industrial producer prices moderated in 2015 Q2
(annual percentage changes; contributions in percentage points)

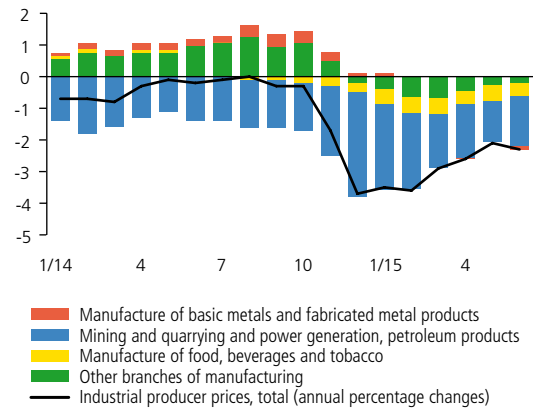


CHART III.2.5

PRICES OF ENERGY AND WATER-RELATED SERVICES

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

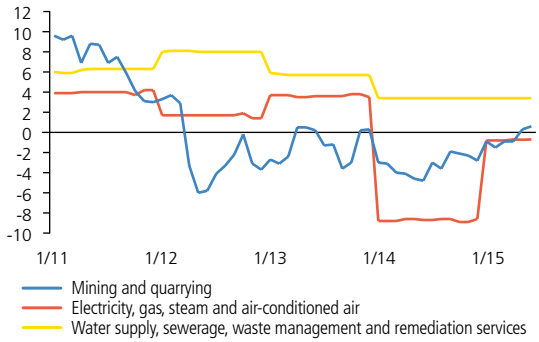


CHART III.2.6

PRODUCER PRICES BY MAIN INDUSTRIAL GROUPINGS

The decline in energy prices moderated significantly on average
(annual percentage changes)

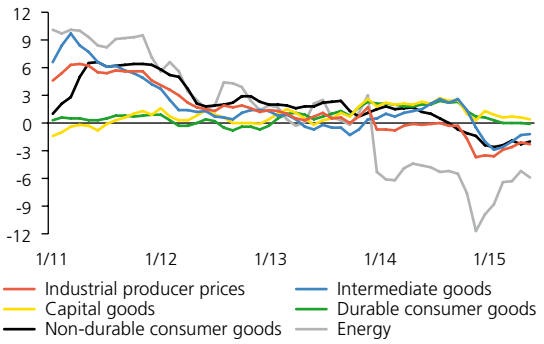
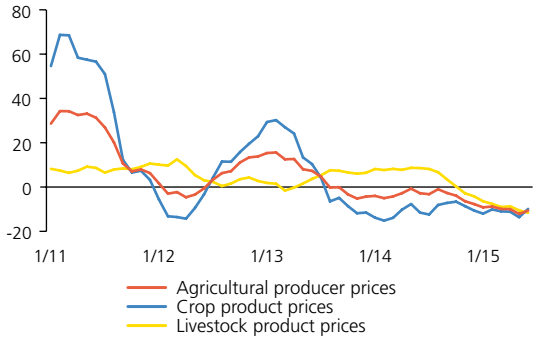


CHART III.2.7

AGRICULTURAL PRODUCER PRICES

The deepening decline in agricultural producer prices in 2015 Q2 was due to both crop and livestock product prices
(annual percentage changes)



The ongoing changes in global oil prices were also reflected in producer prices of chemical products and rubber and plastic products, whose decline moderated gradually (to 6.3% and 0.3% respectively in June). The decline in prices in the food industry also slowed somewhat on average. Prices in the manufacture of basic metals and fabricated metal products dropped only slightly. By contrast, producer prices in the remaining branches of manufacturing rose slightly year on year overall,[18] although their growth did not exceed 2%. Overall, the annual decline in **producer prices in manufacturing** moderated in 2015 Q2 (to 2.8% in June). This was due to a less pronounced decrease in global oil prices and producer prices in the effective euro area.

Agricultural producer prices

The gradually deepening annual decline in **agricultural producer prices** observed since 2014 H2 continued into 2015 Q2 (see Chart III.2.7). The decline in these prices has been in double figures since April this year (10.6% in June). This was a result of a strengthening decline in both components of the agricultural producer price index – livestock and crop products. According to the latest data for June, prices of livestock products dropped more sharply than those of crop products. The deepening annual decline in livestock product prices was mostly a result of a strengthening decrease in prices of milk and pigs, whereas prices of cattle went up. Prices of most crop products decreased. The decline in prices of cereals, oil crops and vegetables deepened and prices of potatoes continued to fall significantly (by more than 56%); the fall in fruit prices slowed only slightly.

The trend of a gradually deepening decline in agricultural producer prices in the above period was due to several **factors**. The first of these was an above-average harvest worldwide in 2014, which led to a gradual decline in global prices of cereals and oil crops. This trend was not changed even by information on a possible weaker harvest this year owing to worse weather in North America and later also in Europe and the Black Sea region, as this was outweighed by a dip in global demand, especially in some North African and East Asian countries (except China). Another important factor was the retaliatory trade sanctions imposed by Russia on the EU in August 2014. These sanctions mainly affected livestock product prices; prices of pigs and milk went down in particular. Prices of fruit and vegetables were also affected indirectly. The continuing year-on-year depreciation of the koruna against the dollar served only to moderate the above anti-inflationary effects.

18 Except for textile, clothing and leather products, wood, paper and printing and transport equipment, where producer prices saw a modest annual decline.

Other producer prices

Growth in **construction work prices** is rising slowly amid a continuing recovery in construction output (see Chart III.2.8). In 2015 Q2, their annual growth rose by 0.2 percentage point to 1.2%. The annual decline in prices of materials and products consumed in the construction industry halted and their renewed growth reached 0.2% in June.

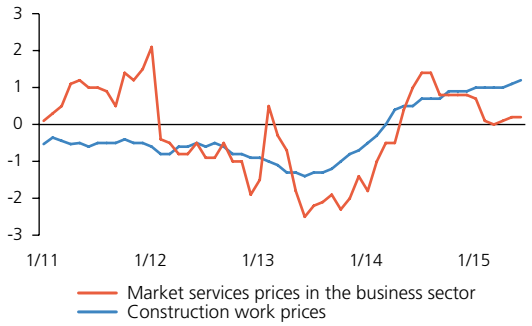
After stagnating in March 2015, **prices of market services for the business sector** returned to modest growth, rising by 0.2% year on year in June (see Chart III.2.8). Only three industries – postal and courier services, financial services except insurance and pension financing, and publishing services – recorded price growth exceeding 3%.[19] By contrast, prices in the other branches of market services recorded only modest growth or decreased.[20]

CHART III.2.8

PRICES OF MARKET SERVICES FOR THE BUSINESS SECTOR

Growth in construction work prices continued to strengthen gradually, while market services prices returned to modest growth

(annual percentage changes)



19 Prices went up by 6.9% in postal and courier services, by 4.3% in financial services and by 3.5% in publishing services in June.

20 Annual price declines were observed in one-third of the branches of market services under review in June.

CHART III.3.1

GROSS DOMESTIC PRODUCT

Annual and quarterly GDP growth picked up significantly in 2015 Q1

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

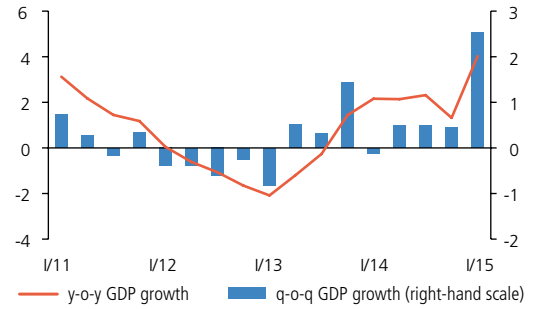


CHART III.3.2

STRUCTURE OF ANNUAL GDP GROWTH

Inventories and household consumption contributed the most to the pick-up in GDP growth in 2015 Q1

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

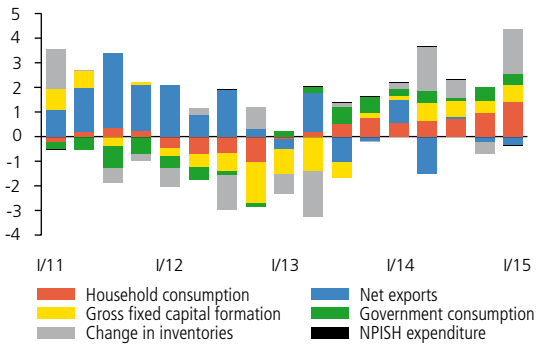
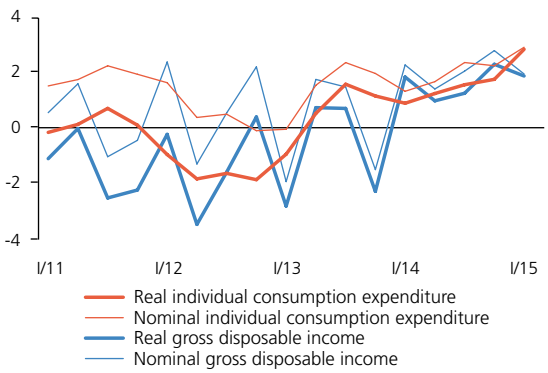


CHART III.3.3

HOUSEHOLD CONSUMPTION EXPENDITURE

Growth in gross disposable income slowed modestly at the start of 2015

(annual percentage changes; seasonally unadjusted data)



III.3 DEMAND AND OUTPUT

Annual real GDP growth picked up significantly to 4% in 2015 Q1. In quarter-on-quarter terms, economic activity increased by 2.5%. All components of domestic demand contributed to the annual output growth. The contribution of net exports was negative amid a persisting lead of import growth over export growth. On the supply side, gross value added growth accelerated further, while industry and services contributed mostly to its growth. The negative output gap is closing gradually.

III.3.1 Domestic demand

Annual **domestic demand** growth rose noticeably in 2015 Q1 (to 4.7%). This was primarily due to a large annual increase in inventories following a previous slight decline. The positive contribution of household consumption, which increased markedly, was also significant. Fixed investment rose faster than in the previous quarter as well. Only annual growth in government consumption slowed somewhat (see Chart III.3.2).

Final consumption

Real final consumption expenditure of households confirmed a continuing growth trend in 2015 Q1, which accelerated noticeably further year on year (see Chart III.3.2). At 2.9%, the growth was almost 1 percentage point higher than in the previous quarter. This relatively dynamic increase in household consumption occurred despite slower growth in gross disposable income, which resulted in a drop in the saving rate.

Annual growth in **nominal gross disposable income** slowed to 2% in 2015 Q1, down by 0.9 percentage point from the previous quarter (see Chart III.3.3). With the household consumption deflator stagnating in year-on-year terms, its real purchasing power also rose by 2%. Overall, both nominal and real growth in households' gross disposable income was still modest, with quite mixed trends recorded across its components.

Annual growth in **wages and salaries**, which are the main component of household income, intensified at the start of 2015 thanks to a sizeable pick-up in employment amid continued economic growth.[21] The positive contribution of wages and salaries to annual disposable income growth was still the highest and increased compared to the previous quarter (to 2.1 percentage points; see Chart III.3.4). The growth in gross disposable income was also due significantly to transfers (other than social benefits). The other components of disposable income made negative contributions to

21 Year-on-year growth in the average wage in the economy as a whole was flat at 2.2% in this period. For details see section III.4 *The labour market.*

its annual growth. Business income (gross operating surplus plus mixed income) decreased slightly year on year in 2015 Q1 (by 0.5%) following a period of marked growth. Property income also continued to decrease. However, the slowdown in disposable income growth continued to be mostly due to the negative contribution of taxes and social contributions paid on rising income (see Chart III.3.4).

Amid slower growth in gross disposable income than household consumption expenditure,[22] the seasonally unadjusted **saving rate** fell by almost 1 percentage point year on year to 9.6% in 2015 Q1. A slight slowdown in the annual growth rate of consumer credit (to 1.6% in 2015 Q1) meanwhile still indicated weak household interest in credit financing of consumption (see section III.5). In this situation, households saved less in the period under review and used the major part of their income to finance increased consumption compared to the same period a year earlier.[23]

The **structure of consumption expenditure**[24] reveals that households channelled their increased spending into all the monitored categories in 2015 Q1. The sizeable annual increase in household consumption was due chiefly to increased expenditure on services which had fallen in the previous quarter (see Chart III.3.5). With a weight of around 40%, non-durable goods were the largest contributor to the growth in consumption. However, expenditure on durable goods rose the fastest (by 9% year on year), although its share in total consumption expenditure remains relatively low.[25]

According to the latest available **monthly indicators**, annual growth in seasonally adjusted retail sales stayed high in April and May 2015 both in the automotive segment and in the rest of the retail sector. The consumer confidence indicator fell back slightly in 2015 Q2 and July from the high levels recorded in the previous two quarters, mainly due to less favourable perceptions of the economic situation in the next twelve months, probably as a result of developments in Greece (see Chart III.3.6).

Annual growth in real **government final consumption expenditure** slowed slightly to 2.5% in 2015 Q1 from 2.7% in the previous quarter. Its positive contribution to annual GDP growth was thus unchanged (0.5 percentage point).

22 According to seasonally unadjusted data at constant prices.
23 The saving rate was strongly affected by a data revision.
24 According to seasonally unadjusted data at constant prices.
25 In 2015 Q1 it had accounted for almost 8.9%.

CHART III.3.4

DISPOSABLE INCOME

The slowdown in disposable income growth was mostly due to gross operating surplus and mixed income, whereas growth in wages and salaries strengthened

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

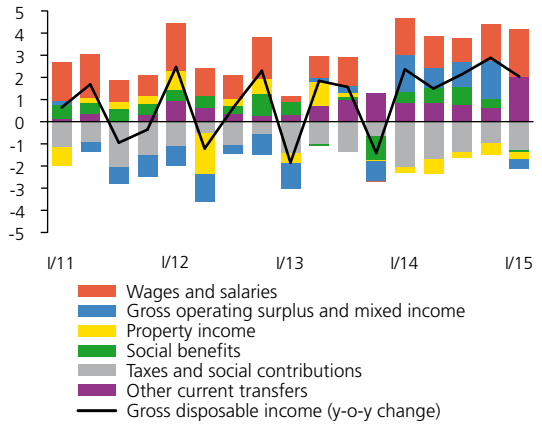


CHART III.3.5

STRUCTURE OF HOUSEHOLD CONSUMPTION

Household consumption expenditure increased in all categories in 2015 Q1

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

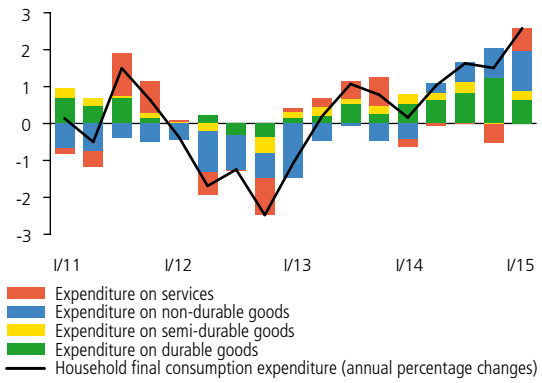


CHART III.3.6

CONFIDENCE INDICATORS

Consumer confidence fell slightly on average in 2015 Q2

(2005 average = 100; source: CZSO)

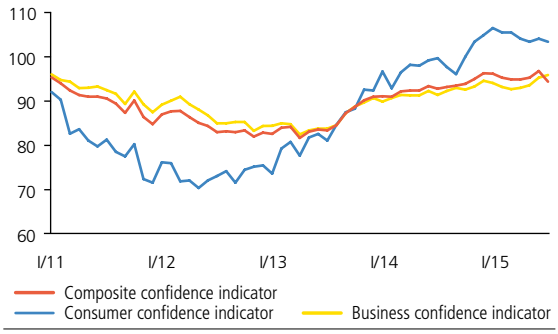


CHART III.3.7

INVESTMENT BY SECTOR

The growth in fixed investment in 2015 Q1 was due mostly to non-financial corporations and households
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)

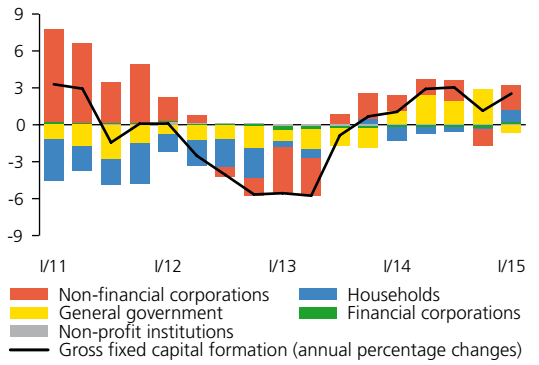


CHART III.3.8

FIXED CAPITAL FORMATION

Investment in transport equipment increased in particular
(annual percentage changes; contributions in percentage points; constant prices; seasonally unadjusted data)

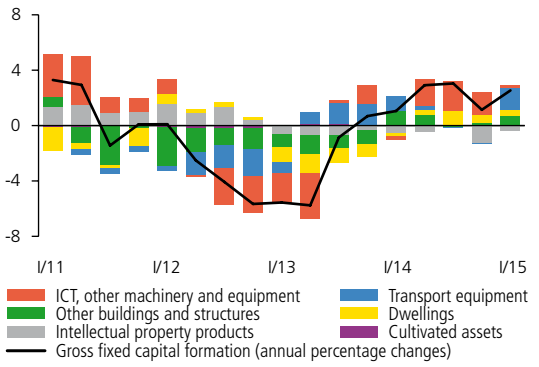
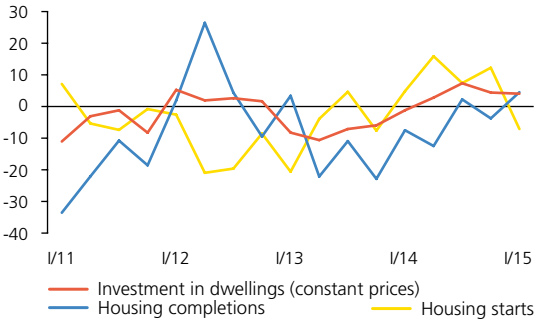


CHART III.3.9

INVESTMENT IN DWELLINGS

Investment in dwellings continued to rise in 2015 Q1, but the number of housing starts fell
(annual percentage changes)



Investment

The growth in **fixed investment** observed since the end of 2013 continued into 2015 Q1 (see Chart III.3.7). Following a slowdown in the previous quarter, its annual growth rate picked up again, reaching 2.7% according to seasonally adjusted data.

The surge in investment activity in 2015 Q1 was linked mainly with renewed annual growth in fixed investment in the **non-financial corporations** sector (see Chart III.3.7). However, the structure of fixed investment indicated that the increased investment had been channelled not into machinery and equipment – traditionally the main component of investment by non-financial corporations – but into transport equipment (see Chart III.3.8). Non-financial corporations' view of future demand remains positive according to the CZSO's business survey indicators. The same view is offered by the latest survey conducted by the CNB and the Confederation of Industry for 2015 Q2, according to which non-financial corporations expect investment to increase at the six-month and twelve-month horizons.

The contribution of investment by the **household sector** (see Chart III.3.7) was also relatively significant in 2015 Q1, with investment growth reaching 6.3% year on year. Investment in dwellings, which accounts for a significant proportion of the total fixed investment of households, showed further growth (of 4%; see Chart III.3.9). Some indicators are indicating a possible further pick-up in household investment in dwellings. Households' confidence in future growth of the economy and employment, which is back at the high pre-crisis levels, is the main factor. Financing conditions for investment in dwellings also improved slightly further and growth in mortgage loans increased. However, the latest data on a falling number of housing starts (down by 7.1% in 2015 Q1) do not confirm a future accelerating trend in investment in dwellings.

Unlike in the previous three quarters, when it had been the biggest contributor to the growth in fixed investment, **government investment** fell year on year in 2015 Q1 (by 4.1%, following a rise of 22.4% in 2014 Q4; see Chart III.3.7). Given the marked increase in public contracts assigned throughout 2014 and efforts to draw down EU funds, however, part of these contracts in progress may have been included in inventories of work in progress.

The significant increase in economic growth in 2015 Q1 was to a large extent due to noticeable growth in **inventories**. This was reflected in a large positive contribution to annual GDP growth (1.8 percentage points; see Chart III.3.2). According to CZSO data, year-on-year growth in inventories was observed in manufacturing, most notably with regard to materials and work in progress.

III.3.2 Net external demand

Net exports of goods and services[26] declined in year-on-year terms for the second consecutive quarter (see Chart III.3.10). The net export surplus dropped by CZK 3.6 billion in 2015 Q1, despite increasing in quarter-on-quarter terms (by CZK 6.4 billion). The year-on-year decline was due mainly to the balance of services, whose surplus has been narrowing since the start of 2014. The decline in net exports in Q1 was also due to a decrease in the goods surplus. The contribution of net exports to annual GDP growth was thus slightly negative (-0.3 percentage point).

The continuing year-on-year decline in net exports was a result of import growth outpacing export growth. This lead widened somewhat compared to the previous quarter (to 1.2 percentage points; see Chart III.3.11). However, annual growth in total trade turnover picked up slightly, due mainly to an increase in imports. **Exports** rose by 7.7% year on year, up by 0.2 percentage point on the previous quarter. This modest upswing was related to slightly stronger growth in external demand. The faster annual growth in total exports was due solely to growth in goods exports (of 8.3%). Services exports slowed noticeably by comparison with the previous quarter.

The pick-up in growth in **imports** in 2015 Q1 was more pronounced than that in exports. Imports recorded annual growth of 8.9%, representing a rise of 0.6 percentage point on a quarter earlier. The relatively fast growth in imports was associated mainly with growth in domestic demand, which intensified significantly. However, the faster growth in total imports was due solely to imports of goods. Services imports rose much more slowly than in the previous quarter.

III.3.3 Output

Growth in **gross value added** at basic prices continued to accelerate gradually in 2015 Q1 (see Chart III.3.12). Its annual growth rate was 3.5%, up by 0.1 percentage points on the previous quarter. Gross value added growth also accelerated in quarter-on-quarter terms (to 1.3%). This was due to rising external and domestic demand, whose growth strengthened.

As in previous quarters, the pass-through of the rising demand to output was apparent in **industry** and, within it, in manufacturing, where gross value added growth slowed slightly in 2015 Q1 but still amounted to a sizeable 6.3% (see Chart III.3.12). The contribution of this sector to overall annual growth in gross value added remained high, at 1.7 percentage points. Gross value added in mining and energy supply continued to fall year on year, but its negative contribution was insignificant.

26 At 2010 prices, seasonally adjusted.

CHART III.3.10

NET EXPORTS

The year-on-year decline in net exports strengthened slightly in 2015 Q1
(seasonally adjusted data; constant prices)

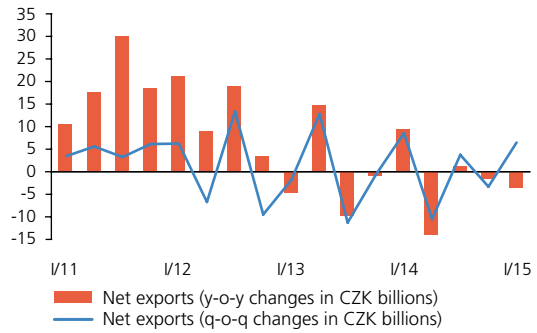


CHART III.3.11

EXPORTS AND IMPORTS

Growth in trade turnover rose slightly in 2015 Q1, with import growth continuing to outpace export growth
(annual percentage changes; percentage points; constant prices; seasonally adjusted data)

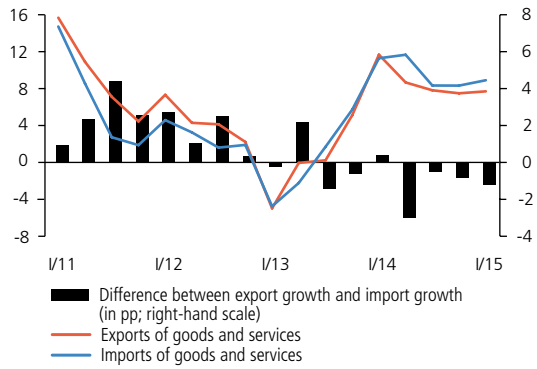


CHART III.3.12

CONTRIBUTIONS OF BRANCHES TO GVA GROWTH

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

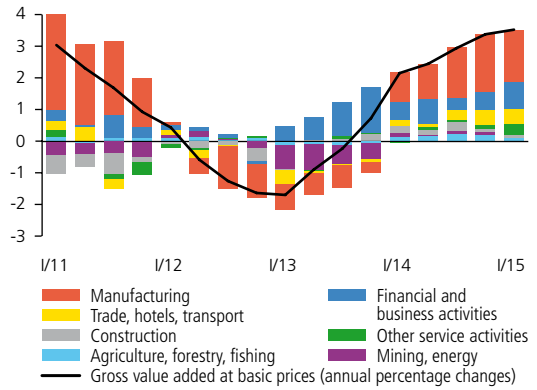


CHART III.3.13

INDUSTRIAL PRODUCTION

Growth in industrial production slowed on average in the first two months of 2015 Q2
(basic index; year 2010 = 100)

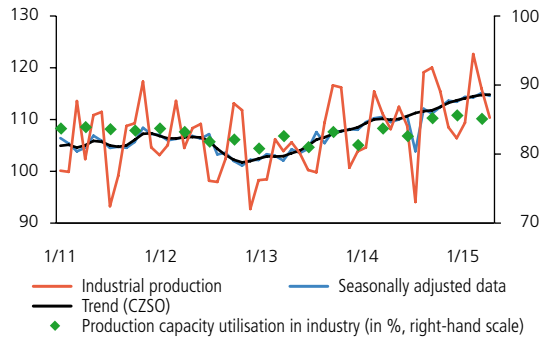


CHART III.3.14

NEW ORDERS IN INDUSTRY

Growth in new orders in industry slowed, as orders from abroad fell in May
(annual percentage changes)

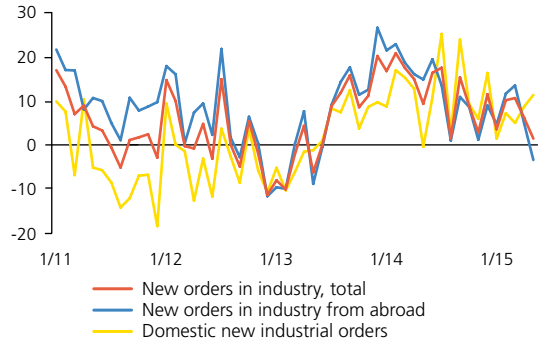
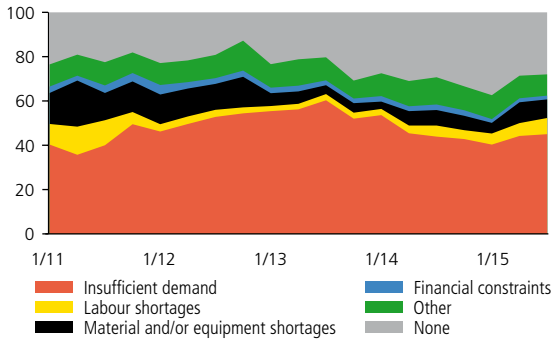


CHART III.3.15

BARRIERS TO GROWTH IN INDUSTRY

The effect of insufficient demand as the main barrier to growth in industrial production increased, and labour shortages also grew slightly in significance
(percentages)



The continuing gross value added growth in industry in 2015 Q1 was consistent with the data on **industrial production**, which grew by 4.4% year on year in real terms (according to seasonally adjusted data). This rise was mostly due to fast-growing production in **manufacturing**, whose year-on-year growth reached 5.2%. In terms of use, production for investment continued to rise the fastest. Although its annual growth rate slowed slightly, it remained high (6.3%). Growth in production for long-term and intermediate consumption went up at the same time (to 3.2% and 5.7% respectively). By contrast, annual growth in production for short-term consumption slowed sharply (from 4.1% in the previous quarter to 2.4%). The growth in manufacturing output was still quite broad-based, with most of the industries under review contributing to it.

According to the latest available **monthly indicators**, annual industrial production growth was lower on average in April and May 2015 than in the previous quarter (see Chart III.3.13). At the same time, total **sales from industrial activity** (at current prices) slowed to significantly lower levels (1.3% in May) by comparison with industrial production. New **industrial orders** also showed slower growth than in the previous quarter (1.4% in May). Their growth was driven primarily by domestic orders, as growth in foreign orders slowed in April and foreign orders even fell year on year in May (by 3.4%; see Chart III.3.14).

According to the July results of the CZSO's business survey, the number of businesses in industry reporting **insufficient demand as a barrier to growth** increased slightly (see Chart III.3.15). This indicator increased for the second consecutive quarter, after having declined for the most part in the previous two years. Increases were also recorded for the other barriers to growth, relating mainly to shortages of labour and material and equipment. Capacity utilisation in manufacturing fell slightly in July but remained very high. The stronger perceived barriers in the form of insufficient demand in the latest July survey thus probably reflected uncertainties relating to the sharp decrease in growth and subsequent decline in foreign industrial orders in 2015 Q2.

The overall contribution of **trade and other services** to annual gross value added growth equalled that of manufacturing in 2015 Q1 (1.7 percentage points; see Chart III.3.12). The growth was due to all services sectors, most notably trade, transport, hotels and restaurants, where annual value added growth rose to 2.7%. The latest May data on retail sales indicate a further possible pick-up in growth in value added in both the automotive and non-automotive segments.

The contribution of **construction** to value added growth was negligible in 2015 Q1, even though annual growth in gross value added edged up in this sector (to 2.1%). According to the latest available monthly CZSO data, construction production grew faster in building construction and civil engineering in April and May, with the growth rate in the latter category being significantly higher (23.4% in May). The fall in the approximate value of building notifications (of -7.2% in May), even though their number is rising, remains a risk to the recovery in construction output.

An **international comparison of economic sentiment** reveals a renewed increase in the business indicator for the Czech Republic in 2015 Q2. In June, following a decline in 2015 Q1, this indicator returned to the level observed in late 2014 and early 2015. In Germany and the EU, by contrast, the growth in this indicator has halted in recent months, and the EU even recorded a decline in June (see Chart III.3.16).

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

According to the **Cobb-Douglas production function** calculation, potential output grew by 1.8% year on year in 2015 Q1 (see Chart III.3.17). The sizeable pick-up in annual growth in economic activity observed in 2015 Q1 resulted in partial closure of the output gap, which, however, remained significantly negative (-1.7% of potential output; see Chart III.3.18). This method suggests a further slight pick-up in potential output growth to 2.1% in the remainder of this year and in 2016; potential output will rise at this pace in 2017, too.

The contribution of productivity to potential output growth will increase **over the forecast horizon**, amid a broadly flat contribution of capital and a declining contribution of employment (see Chart III.3.19). According to the production function, the output gap will thus gradually close and turn positive at the start of 2017.

An alternative estimate using the HP filter[27] indicates a slightly higher growth rate of potential output (2% in 2015 Q1) than that calculated using the production function. Under this method, the output gap is significantly less negative (at -0.3% in 2015 Q1) and will turn positive in 2015 Q3. The calculation of potential output using the **Kalman filter** suggests the same annual growth rate of potential output in 2015 Q1 as that using the production function calculation.

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

CHART III.3.16

ECONOMIC SENTIMENT

Economic sentiment went up again in the Czech Republic, but was flat in Germany and even went down in the EU
(long-term average = 100; seasonally adjusted data; source: Eurostat)

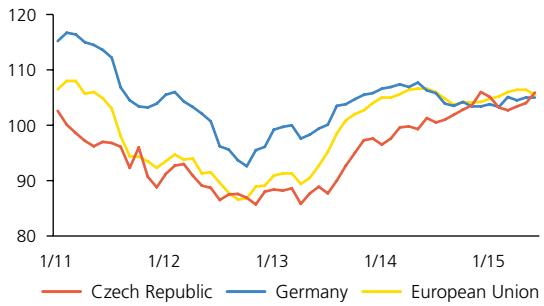


CHART III.3.17

POTENTIAL OUTPUT

The rate of growth of potential output was close to 2% in 2015 Q1 according to all the methods used
(annual percentage changes)

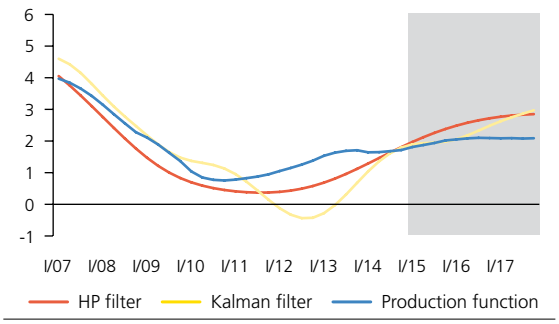


CHART III.3.18

OUTPUT GAP

According to the production function estimate, the output gap will close at the end of 2016, but according to the other methods it will close this year
(in % of potential output)

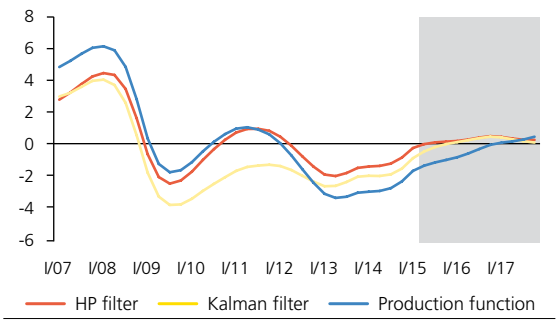
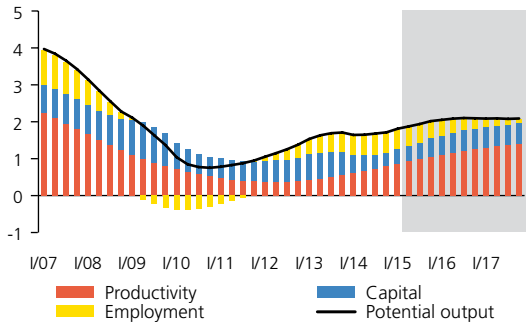


CHART III.3.19

CONTRIBUTIONS TO POTENTIAL OUTPUT GROWTH

The contribution of productivity will gradually increase over the forecast horizon

(production function baseline variant; annual percentage changes)



At the forecast horizon, however, it accelerates more significantly and converges to the HP filter calculation. Compared to the production function calculation, the Kalman filter also indicates a less negative output gap at present and faster closure at the end of this year.

III.4 THE LABOUR MARKET

The labour market saw a continuing rise in labour demand on the back of strengthening economic growth. Growth in total employment and the number of employees converted into full-time equivalents picked up further in 2015 Q1. This, coupled with only a slight increase in the labour force, led to a further decline in the general unemployment rate. The share of unemployed persons declined in 2015 Q2, too. Nonetheless, year-on-year average wage growth remained subdued, especially in the business sector, where, however, it rose slightly. Whole-economy labour productivity surged and unit labour costs declined thanks to the pronounced upswing in economic activity.

III.4.1 Employment and unemployment

Total employment continued to record year-on-year growth in 2015 Q1. The growth increased slightly further compared to the previous quarter (to 1.3%; see Chart III.4.1). Employment also increased in quarter-on-quarter terms (by 0.4% when adjusted for seasonal effects). Only the category of employees saw an increase; the number of entrepreneurs decreased. Given the observed growth in economic activity, this drop seems to have been related to a return of a proportion of entrepreneurs into employment.

Employment continued to grow fastest in the secondary sector (see Chart III.4.2), most notably in industry. As in the previous quarter, the tertiary sector also contributed relatively significantly to the growth in employment. The **primary sector**, where employment had been gradually declining since the second half of 2013, saw a return to growth in 2015 Q1.

Employment in the **secondary sector** continued to grow at a similar rate in 2015 Q1 as in the previous quarter (1.7% year on year). Owing to the relatively strong growth in industrial production, the number of employed persons increased most of all in manufacturing and also rose rapidly in the water supply and sewerage-related services industry. According to the latest data for April and May, the registered number of employees[28] rose further in industry (by 3.3% year on year in both months), while recording a deepening decline in construction (of 2.2% and 2.8% respectively).

Continued annual employment growth in the **tertiary sector** was mainly due to renewed growth in employment in market services, as employment growth in non-market services slowed noticeably (see Chart III.4.2). As regards market services, the number of employed persons increased most of all in trade. Accommodation and food services activities and professional and scientific activities also made

CHART III.4.1

LABOUR MARKET INDICATORS

Growth in total employment and in the number of employees converted into full-time equivalents picked up, while nominal unit labour costs went down
(annual percentage changes)

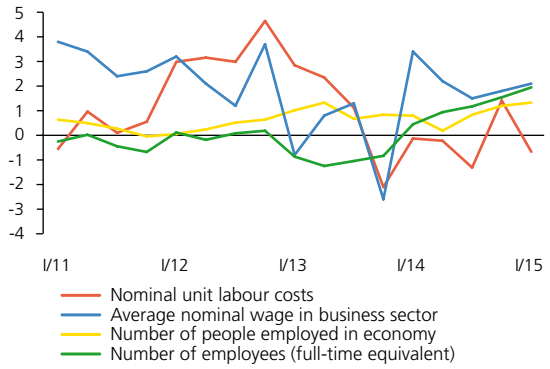
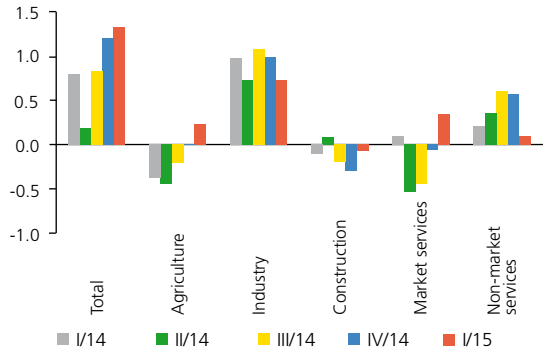


CHART III.4.2

EMPLOYMENT BREAKDOWN BY BRANCHES

The continuing growth in employment was due mostly to industry and newly also to market services
(contributions in percentage points to annual change; selected branches; source: LFS)



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

CHART III.4.3

NUMBER OF EMPLOYEES (FULL-TIME EQUIVALENT)

Faster growth in the converted number of employees was accompanied by a slightly shorter average number of hours worked per employee
(annual percentage changes; contributions in percentage points)

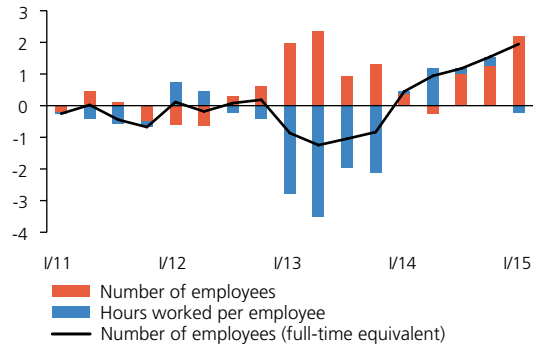


CHART III.4.4

UNEMPLOYMENT INDICATORS

The share of unemployed persons decreased appreciably further, while the general unemployment rate was virtually flat
(percentages; seasonally adjusted data; source: MLSA, CZSO)

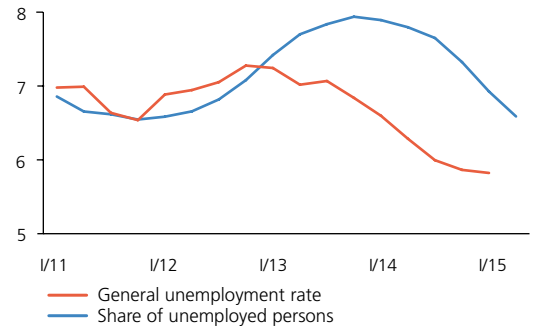
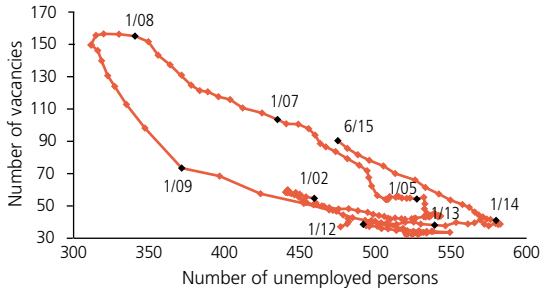


CHART III.4.5

BEVERIDGE CURVE

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



significant contributions. The pronounced slowdown in annual growth in employment in non-market services in 2015 Q1 was due mainly to a decline in the number of persons employed in education and to a lesser extent to slower employment growth in health and public administration and defence.

With economic activity continuing to rise, year-on-year growth in the **number of employees converted into full-time equivalents**[29] recorded a further marked increase in 2015 Q1 (from 1.5% in 2014 Q4 to 1.9%; see Chart III.4.3). As in previous quarters, this was due mainly to the business sector and, within it, manufacturing in particular, which accounted for roughly half of the total annual growth in this indicator. The contribution of the converted number of employees in administration and supporting services and trade was also significant. In the non-business sector, growth in the converted number of employees rose further in public administration and defence and in education.

Overall, the increase in the converted number of employees in 2015 Q1 was due exclusively to growth in the number of employees amid slightly shorter average hours worked per employee. This was observed **in most sectors** of the national economy. By contrast, in **non-market services**, where the number of employees fell year on year, average hours worked per employee increased.

Amid much faster growth in employment than in the labour force, the **general unemployment rate**[30] continued to fall year on year in 2015 Q1 (to 5.8%; see Chart III.4.4). Compared to the previous quarter, though, its decline was negligible and, according to the latest May data, the general unemployment rate even went up slightly. The year-on-year rise in the labour force coupled with a continued decline in the working-age population resulted in a further increase in the **rate of economic activity**[31] to the highest level in the history of the Czech Republic (74.1% after seasonal adjustment). This increase, which continued into 2015 Q2 according to the latest data, was due, among other things, to an increase in the retirement age.

Unlike the general unemployment rate, the **share of unemployed persons**[32] (MLSA) decreased again in 2015 Q2 (see Chart III.4.4). With the number of available job applicants registered with labour offices continuing to decline and the population in the given age group shrinking slightly, this unemployment indicator decreased to 6.6% on average in 2015 Q2 (according to seasonally adjusted data).

29 This time series was subject to a data revision that shifted its annual growth since 2013 upwards.
30 In the 15–64 age category. Measured by the ILO methodology (LFS). The data are seasonally adjusted.
31 The rate of economic activity is defined as the ratio of employed and unemployed persons to the population in each age category.
32 The share of persons unemployed is the ratio of available job applicants aged 15–64 to the population of the same age.

A pronounced improvement of the labour market situation was also indicated by a continued shift along the **Beveridge curve**[33] in the north-westerly direction. This shift is due to a cyclical decrease in the seasonally adjusted number of registered job applicants coupled with growth in the number of vacancies (see Chart III.4.5).

III.4.2 Wages and productivity

The **average nominal wage** grew at the same pace in 2015 Q1 as in the previous quarter (by 2.2% year on year; see Chart III.4.6). The average nominal wage in the non-business sector rose faster than in the business sector for the third consecutive quarter, recording annual growth of 2.9%. Although average wage growth in the business sector edged up at the start of this year, it only slightly exceeded 2% (see Table III.4.1). With annual inflation low, the **real average wage** increased by 2.1% overall (see Table III.4.1).

Annual growth in the average wage in the **business sector** remained subdued in 2015 Q1 and was no longer affected by the tax optimisation observed in 2012 Q4 and 2013–2014. However, the generally low annual growth in the average wage in the business sector concealed very mixed wage growth across **individual branches of the sector**. The fastest average wage growth was recorded in accommodation and food services activities (4.5%) and cultural, entertainment and recreational activities (4.3%), whereas manufacturing saw noticeably slower annual growth (2.6%). On the other hand, wages fell year on year in financial intermediation and insurance, ICT, mining and quarrying and energy. The latest April and May figures on wages in industry suggest continued subdued average wage growth in 2015 Q2. Real wage growth in the business sector amounted to 2.0% in 2015 Q1 (see Chart III.4.1).

Annual average wage growth in the **non-business sector** slowed in 2015 Q1 (from 3.9% in 2014 Q4 to 2.9%), mainly due to slower wage growth in public administration and defence and in education. By contrast, wages in health grew faster than in the previous quarter (by 3.6% year on year). Owing to low inflation, annual growth in the real average wage in the non-business sector amounted to 2.8% in 2015 Q1 (see Table III.4.1).

The marked pick-up in annual real GDP growth and the only modest upswing in employment growth[34] were reflected in a significant annual rise in **whole-economy labour productivity**[35] in 2015 Q1 (of 2.9%; see Chart III.4.6). Labour productivity rose fastest in construction

33 The Beveridge curve has been affected by legislative changes in effect since 1 January 2012. Since that date, corporations have not been obliged to report the number of vacancies to labour offices.
34 According to the CZSO's national accounts.
35 Productivity is calculated on the basis of seasonally unadjusted data. 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).

Chart III.4.6

AVERAGE WAGE AND WHOLE-ECONOMY LABOUR PRODUCTIVITY

Productivity growth rose significantly in 2015 Q1, while average nominal wage growth stayed at the previous quarter's level
(annual percentage changes)

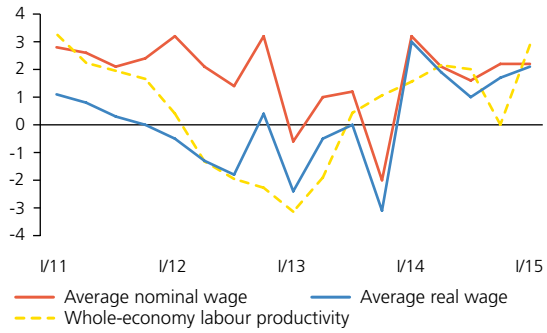


Table III.4.1

WAGES, PRODUCTIVITY, UNIT LABOUR COSTS

Average nominal wage growth remained subdued, but rose slightly in the business sector
(annual percentage changes)

	II/14	III/14	IV/14	I/15
Average wage in Czech Republic				
nominal	2.1	1.6	2.2	2.2
real	1.9	1.0	1.7	2.1
Average wage in business sector				
nominal	2.2	1.5	1.8	2.1
real	2.0	0.9	1.3	2.0
Average wage in non-business sector				
nominal	1.7	1.8	3.9	2.9
real	1.5	1.2	3.4	2.8
Whole-economy labour productivity	2.1	2.0	0.0	2.9
Nominal unit labour costs	-0.2	-1.3	1.4	-0.7

Chart III.4.7

PRODUCTIVITY IN BRANCHES

Labour productivity rose in all branches except non-market services in 2015 Q1
(annual percentage changes)

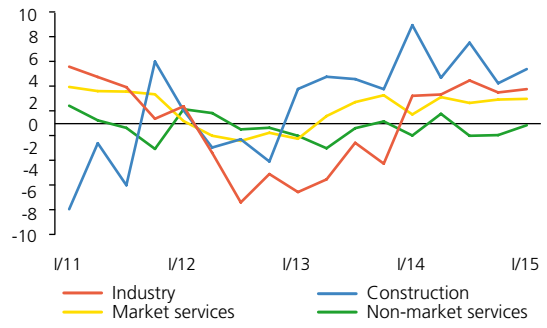
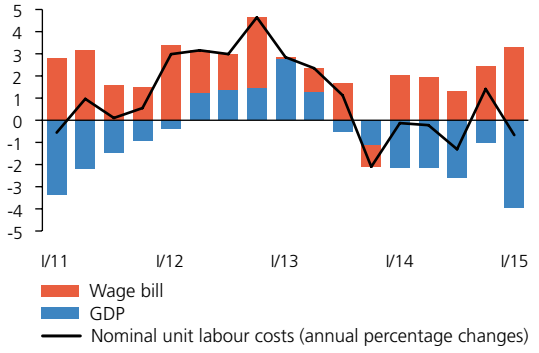


CHART III.4.8

UNIT LABOUR COSTS

The fall in nominal unit labour costs in 2015 Q1 was due to a surge in economic activity
(contributions in percentage points; annual percentage changes)



(by 4.9%), where an increase in value added was accompanied by a decline in employment. Productivity also increased noticeably in industry (by 3.1%; see Chart III.4.7). **Hourly labour productivity** grew faster than whole-economy productivity in 2015 Q1 (by 4.1%). All the sectors under review contributed positively to this.

The sizeable acceleration in economic activity coupled with a more moderate pick-up in the wage bill[36] resulted in a renewed annual decline in **nominal unit wage costs** in 2015 Q1 (of 0.7%; see Chart III.4.8). Nominal unit wage costs declined year on year in all the branches under review except non-market services. This was most apparent in construction, although the decrease there was more moderate than in the previous quarter. Nominal unit wage costs dropped by 0.5% in both industry and market services in 2015 Q1. This was a result of a pronounced increase in value added, which outpaced growth in the wage bill in these sectors.

36 The wage cost-output ratio as measured by nominal unit wage costs was calculated on the basis of seasonally unadjusted data.

III.5 FINANCIAL AND MONETARY DEVELOPMENTS

The annual growth rates of M2 and M3 increased further during 2015 Q2. The growth in monetary aggregates was due mainly to household deposits. This was reflected in continued growth in households' net financial assets. However, the contribution of deposits of non-financial corporations, accompanied by continued growth in the acid-test ratio of corporations, was also significant. Growth in loans to corporations and households intensified. Banks further eased their credit standards and conditions, mainly due to favourable risk perceptions and increased competition. This was reflected most strongly in a decline in interest margins. Client interest rates on new loans mostly fell slightly. The koruna appreciated slightly against both the euro and the dollar in 2015 Q2. Asking and transaction prices of residential property recorded further annual growth.

III.5.1 Money

M2 growth picked up further. The annual growth rate of M2 increased to 5.6% in May 2015, the highest level in three years (see Chart III.5.1). On the bank asset side, the faster M2 growth was due mainly to higher growth in domestic loans amid a persisting slight decline in net external assets. This primarily reflected a continuing outflow of portfolio investment capital as a result of purchases of foreign debt securities, shares and investment fund units by residents. The money stock grew slightly more slowly than nominal GDP in 2015 Q1. This was reflected in a slight rise in the velocity of money. The annual growth rate of **M3** has also increased recently (to 6.3% in May) and was roughly 1 percentage point above the euro area average.

As in the euro area, growth in broader money in the Czech Republic is being fostered by an increase in the **highly liquid money aggregate M1**. The annual growth rate of M1 increased further, reaching a sizeable 12.1% in May (see Chart III.5.1). This mainly reflected increased demand for overnight deposits among households and non-financial corporations (see Chart III.5.2). Within M1, however, the growth rate of currency is also gradually increasing. This is consistent mainly with the growth in household consumption. Other short-term and long-term deposits continued to decline year on year.

Turning to the **sector structure of deposits**, deposits of households and non-financial corporations contributed to the M2 growth (see Chart III.5.3). The growth in household deposits, which reflects the positive labour market situation, reached 5.4% in May. The growth in corporate deposits was consistent with companies' favourable (operating and financial) profits and manifested itself in a persisting elevated acid-test ratio of corporations. The decline in deposits of non-monetary financial institutions simultaneously slowed. Despite increasing slightly further, the share of foreign currency deposits in total resident deposits is still only around 10%.

CHART III.5.1

MONETARY AGGREGATES

Money aggregate growth continued to rise in 2015 Q2
(annual percentage rates of growth)

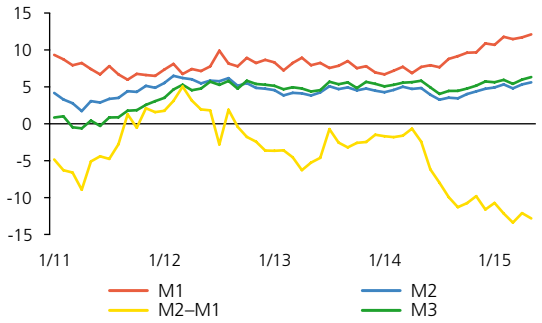


CHART III.5.2

MAIN COMPONENTS OF M2

Overnight deposits are rising in conditions of low interest rates and a growing economy
(annual flows in CZK billions)

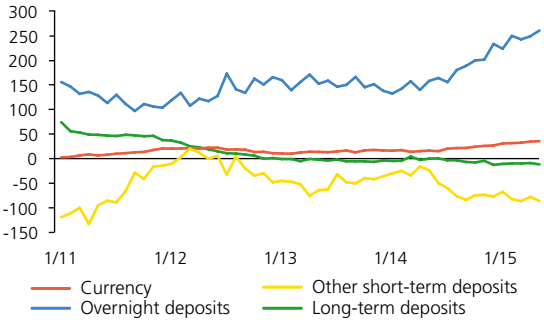


CHART III.5.3

DEPOSIT STRUCTURE OF M2

M2 growth was fostered by deposits of households and non-financial corporations
(contributions in percentage points; annual percentage rates of growth)

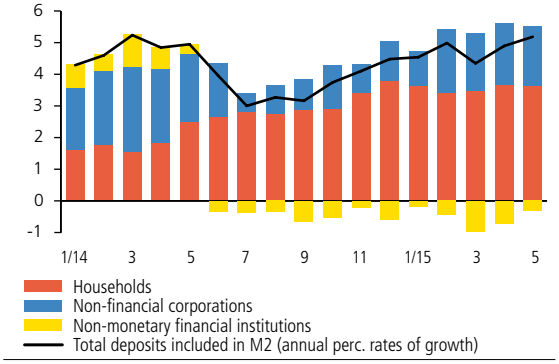


TABLE III.5.1

CHANGES IN BANKS' CREDIT CONDITIONS

Banks further relaxed their credit standards and perceived growth in loan demand in all segments of the credit market in 2015 Q2

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

	Credit supply: of which			Demand for loans
	Credit standards	Average margin for loans	Margin on riskier loans	
Loans to non-financial corporations				
I/14	0 (2)	0	20	-26 (29)
II/14	-28 (-16)	-29	3	30 (54)
III/14	-21 (-32)	-46	-18	36 (56)
IV/14	-35 (-38)	-46	-6	55 (51)
I/15	-44 (-61)	-46	-24	33 (1)
II/15	-36 (-41)	-57	-15	14 (72)
III/15	(-35)			(34)
Loans for house purchase				
I/14	-4 (-4)	-2	36	-11 (-2)
II/14	4 (4)	-37	-33	57 (35)
III/14	1 (-42)	-25	-4	-29 (31)
IV/14	-9 (-11)	-46	24	24 (8)
I/15	-17 (-18)	-41	22	62 (0)
II/15	-23 (-31)	-26	0	69 (22)
III/15	(0)			(47)
Consumer credit				
I/14	-18 (16)	-25	-25	76 (-28)
II/14	35 (22)	0	4	-5 (69)
III/14	25 (9)	-9	0	-21 (-12)
IV/14	-47 (-27)	-40	-25	4 (-28)
I/15	-56 (-31)	-34	25	30 (20)
II/15	-31 (-40)	-70	-25	12 (26)
III/15	(-31)			(7)

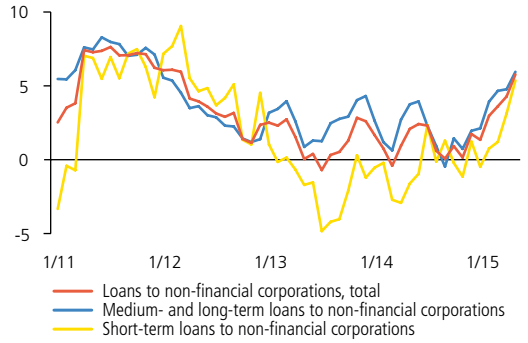
Note: Net percentages are calculated as the difference between the percentage share of loans provided by banks reporting that standards/conditions have been tightened (or demand increased) and the percentage share of loans provided by banks reporting that standards/conditions have been eased (or demand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

CHART III.5.4

LOANS TO NON-FINANCIAL CORPORATIONS

Growth in corporate loans increased perceptibly

(annual percentage rates of growth)



III.5.2 Credit

The growth in economic activity and easier lending conditions of banks are being reflected in a continued rise in lending. The annual growth rate of **loans to the private sector** increased further in 2015 Q2. In May it stood at 6%, up by 2 percentage points on the same period a year earlier and around 1 percentage point higher than at the start of the year. According to the bank lending survey, demand for loans increased in all segments of the credit market in 2015 Q2. At the same time, banks further eased their credit standards and reduced their average interest margins, due mainly to more favourable risk perceptions and growing competition (see Table III.5.1).

Growth in loans to the private sector is also gradually recovering in the **euro area** on the back of very low interest rates, easier standards and growing demand for loans. However, the annual growth rate of loans remains relatively low (1% in May 2015 when adjusted for securitisation). Loans to non-financial corporations started to show weak growth and the growth rate of loans to households for house purchase rose slightly. Banks in the euro area further eased their credit standards for corporate loans and loans to households for house purchase in 2015 Q2. This was due mainly to increased competition, manifesting itself in a decline in average interest margins. Demand for loans rose mainly because of low interest rates. It was also affected by fixed investment financing in the case of corporations and by the outlook for the residential property market in the case of households. The introduction of unconventional monetary policy measures by the ECB continued to push down client interest rates. Interest rates on loans to non-financial corporations and households (as expressed by the cost-of-borrowing indicator) have fallen by more than 0.5 percentage point since mid-2014 (see section III.5.3 and Chart III.5.14). At the same time, divergences in bank lending rates across euro area countries have narrowed.

Annual growth in **loans to non-financial corporations** in the Czech Republic surged, reaching 5.8% in May 2015 (see Chart III.5.4). This mainly reflected higher growth in loans with longer maturities. Growth in the stock of koruna loans accelerated. At the same time, the interest of Czech corporations in foreign currency loans persists. Such loans are used by some corporations as a form of natural hedging against exchange rate risk. The share of foreign currency loans in total corporate loans has recently been fluctuating above its long-term average, at 22%. As a result of the economic growth and the related improvement in the financial condition of corporations, the share of non-performing loans dropped further to around 6%. The solvency ratio of corporations increased further.

Growth in **investment loans**, which account for more than half of total corporate loans, rose to 3.7% in May (see Chart III.5.5). This rise was fostered mainly by growth in loans to industry (manufacturing and energy). Loans to other sectors (e.g. professional, scientific, information and administrative activities) and trade also went up.

By contrast, investment loans to developers decreased (in this sector, however, non-specific financial loans with longer maturities have recently increased, probably as a consequence of mergers and acquisitions).

Banks perceived an increase in **demand for loans by corporations** in 2015 Q2 and also expect similar demand developments in the period ahead (see Table III.5.1). This was due to financing of fixed investment, mergers and acquisitions, corporate and debt restructuring, and working capital and inventories.

For financing purposes, corporations primarily used loans from domestic banks, while **loans from abroad** declined. This reflected a year-on-year decrease in loans drawn by non-financial corporations from non-resident banks. **Loans from domestic non-banks** increased slightly and related mainly to financial leasing. The volume of **insurance of corporate bonds**, which are usually used for financing by large corporations, recorded a year-on-year rise of only around 3% in 2015 Q1, following double-digit increases in the previous period.

Banks' **credit standards** applied to corporate loans were eased further in 2015 Q2, due mainly to competition and more favourable risk perceptions (see Table III.5.2). The easing of standards was reflected in more favourable interest and non-interest terms and conditions offered by some banks on new loans. This was recorded both in large corporations and in small and medium-sized enterprises. Average interest margins for large corporations decreased most widely. Banks expect a further easing of credit standards in 2015 Q3, to a similar extent for both large and smaller corporations.

The annual growth rate of **loans to households** rose further in 2015 Q2, reaching 5.3% in May 2015 (see Chart III.5.6). In an environment of historically low interest rates on mortgages, this mainly reflected fast growing demand for **loans for house purchase**. Mortgages grew at the fastest rate in three years amid a slowing decline in building society loans. Double-digit growth was observed for "net" new loans, while refinanced loans decreased year on year in May for the first time since the start of the year and other renegotiated loans (refixations) rose only moderately. The share of new loans thus increased year on year to around 61% (see Chart III.5.7). According to the bank lending survey, households' demand for loans for house purchase increased across the board in 2015 Q2. Banks' credit standards eased further, due mainly to competition. This was reflected in a decline in average interest margins and an easing of banks' LTV requirements. Increased demand for mortgages is confirmed by the June Hypoindex data.

The annual growth rate of **consumer credit** edged up in 2015 Q2, reaching 1.7% in May 2015 (see Chart III.5.6). For the first time this year, growth in new consumer credit was fostered by increased growth in "net" new loans amid persisting growth in other renegotiations, consisting mainly of consolidation of old consumer credit.

Chart III.5.5

LOANS TO CORPORATIONS FOR FUNDING FIXED INVESTMENT

Growth in investment loans increased further in 2015 Q2
(contributions in percentage points; annual percentage rates of growth; annual percentage changes)

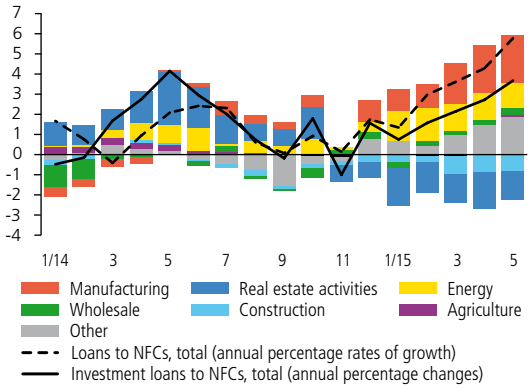


Table III.5.2

CREDIT STANDARDS AND SELECTED CREDIT CONDITIONS BY CORPORATION SIZE

Average interest margins – especially those applying to large corporations – decreased due to competition and more favourable risk perceptions
(net percentages; positive value = tightening standards/conditions; negative value = easing standards/conditions)

	Quarterly averages					
	2012	2013	2014	I/15	II/15	III/15[a)]
Credit standards						
Small and medium-sized enterprises	13	4	-17	-44	-18	(-35)
Large corporations	22	0	-28	-44	-46	(-35)
Banks' average margin on loans						
Small and medium-sized enterprises	-1	-16	-21	-44		
Large corporations	18	-8	-39	-46		
Size of loans						
Small and medium-sized enterprises	13	3	-7	-18		
Large corporations	29	10	-18	-18		
Collateral requirements						
Small and medium-sized enterprises	26	9	-12	-18		
Large corporations	25	1	-28	-18		

Note: Net percentages are calculated as the difference between the percentage share of loans provided by banks reporting that standards/conditions have been tightened and the percentage share of loans provided by banks reporting that standards/conditions have been eased. The individual responses are thus weighted by the volumes of loans of a given type.
a) Banks' expectations for the current period reported in the II/15 survey are given in parentheses.

Chart III.5.6

LOANS TO HOUSEHOLDS

Growth in loans to households for house purchase increased in an environment of low interest rates and economic growth
(annual percentage rates of growth; annual percentage changes)

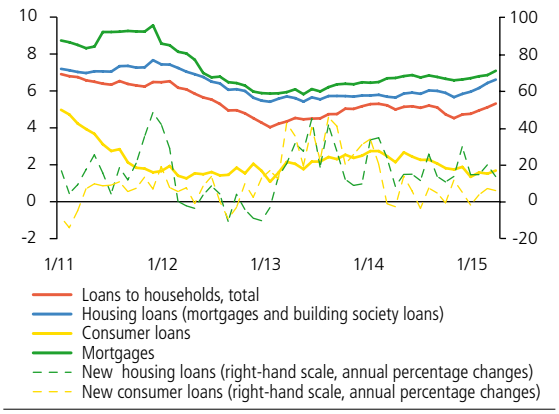


CHART III.5.7

STRUCTURE OF NEW LOANS FOR HOUSE PURCHASE

The share of new loans for house purchase net of refinancing and other renegotiation increased year on year
(new business; shares in %)

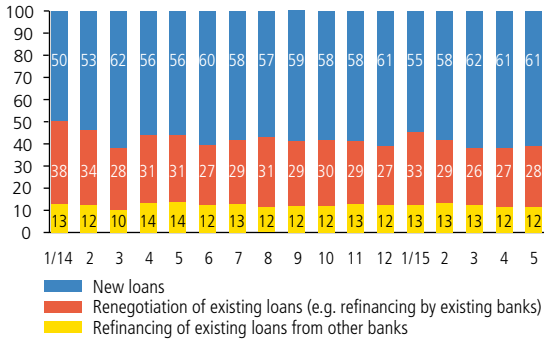
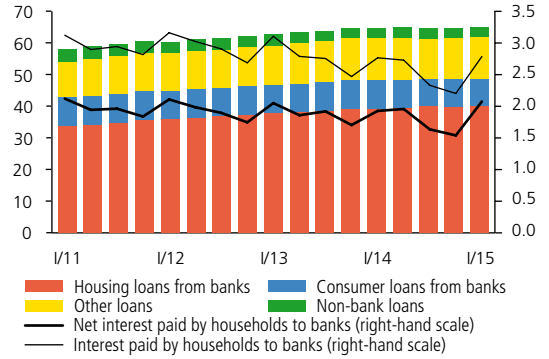


CHART III.5.8

HOUSEHOLD DEBT

Households' debt-to-income ratio was virtually unchanged in 2015 Q1 and their interest burden increased
(quarterly data; percentage ratios to gross disposable income)

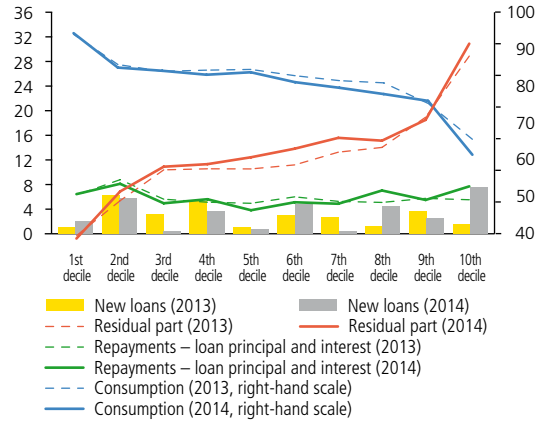


Note: Net interest paid represents the difference between households' loan interest expenses and bank deposit interest income. Interest paid consists of households' borrowing-related interest expenses.

CHART III.5.9

HOUSEHOLDS' INCOME BURDEN BY CONSUMER EXPENDITURES AND LOAN REPAYMENTS

In 2014, the majority of households had a rather larger proportion of their income left after covering consumption and loan repayments
(percentage ratios to net money income)



Banks further eased their credit standards for consumer credit. This was reflected in a broad decline in average interest margins and, to a lesser extent, margins on riskier credit. Credit from non-banks decreased in year-on-year terms in 2015 Q1.

Total household debt has recently stabilised at 65% of total annual aggregate nominal disposable income (see Chart III.5.8). This reflects a similar growth rate of income and financial liabilities of households. The net bank interest burden on Czech households (comprising interest expenses and income on bank loans and deposits) increased to 2.1% of disposable income in 2015 Q1, close to the average for the last four years. This reflected an increase in interest expenses due to higher indebtedness arising from house purchase loans.

The debt burden (the ratio of interest and principal to income) fell slightly in most **household income groups** in 2014 compared to a year earlier, with increases being recorded only by some high-income households. This probably reflected new borrowing, which decreased in most income deciles but increased in the 6th, 8th and 10th income deciles (see Chart III.5.9). The consumption-to-income ratio was lower in most income groups due to higher growth in income than consumption last year. In 2014, the majority of households had a rather larger proportion of their income left after covering consumption and loan repayments than in 2013. This indicates room for a further rise in household consumption. The shape of the Lorenz curve indicates that households with above-median incomes accounted for around 80% of loans and savings in 2014.

III.5.3 Interest rates

Monetary policy interest rates

The **monetary policy decision-making** of the CNB Bank Board in 2015 Q2 was based on the macroeconomic forecast published in the previous Inflation Report. The forecast assumed that market interest rates would be flat at their current very low level and the exchange rate would be used as a monetary policy instrument until the end of 2016, i.e. over the entire forecast horizon.

At its **May meeting**, the Bank Board decided unanimously to leave **key interest rates** unchanged at their current level, i.e. at technical zero[37] (see Chart III.5.10). The Board also decided to continue using the **exchange rate as an additional instrument** for easing the monetary conditions. It also confirmed the CNB's commitment to intervene on the foreign exchange market if needed to weaken the koruna against the euro so that the exchange rate of the koruna is kept close to CZK 27 to the euro. At the Bank Board meeting in May, the risks of the previous forecast were assessed as being anti-inflationary, as

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

domestic wages and the koruna-euro exchange rate had been moving in this direction. In this situation, the Bank Board stated that the CNB would not discontinue the use of the exchange rate as a monetary policy instrument before the second half of 2016 and that it remained ready to move the level of the exchange rate commitment if there were to be a long-term increase in deflation pressures capable, among other things, of causing a slump in domestic demand or a systematic decrease in inflation expectations.

At its **meeting in June**, the Bank Board also decided unanimously to leave key interest rates unchanged. At the same time, it confirmed the above exchange rate commitment. In June, the balance of risks to the previous forecast at the monetary policy horizon was assessed by the Bank Board as being balanced. Positive data from the domestic economy represented an upside risk, while appreciation of the koruna against the euro was an anti-inflationary risk. The Bank Board stated again that the Czech National Bank would not discontinue the use of the exchange rate as a monetary policy instrument before the second half of 2016 and that it remained ready to move the level of the exchange rate commitment if needed. However, the probability of such a step had decreased since the Bank Board's previous monetary policy meeting.

At its monetary policy meeting on 6 August 2015, the Bank Board decided unanimously to keep interest rates unchanged at technical zero. The Bank Board also decided to continue **using the exchange rate as an additional instrument for easing the monetary conditions** and confirmed the CNB's commitment to intervene on the foreign exchange market if needed to weaken the koruna against the euro so that the exchange rate of the koruna is kept close to CZK 27 to the euro. In line with this, the Czech National Bank still stands ready to intervene automatically, i.e. without the need for an additional decision of the Bank Board, and without any time or volume limits. The asymmetric nature of this exchange rate commitment is unchanged. The Bank Board assessed the risks to the forecast as being broadly balanced at the monetary policy horizon; a modest downside risk may arise from the decline in oil prices. In this situation, the Bank Board emphasised that the Czech National Bank would not discontinue the use of the exchange rate as a monetary policy instrument before the second half of 2016. The exchange rate will therefore be at CZK 27 to the euro or weaker at least until mid-2016. A need to maintain significantly expansionary monetary conditions persists. In this respect, the recent exchange rate appreciation is thus an unfavourable factor that is tightening the monetary conditions and hence postponing achievement of the inflation target.

CHART III.5.10

CNB KEY RATES

The CNB left its key interest rates at "technical zero" in 2015 Q2
(percentages)

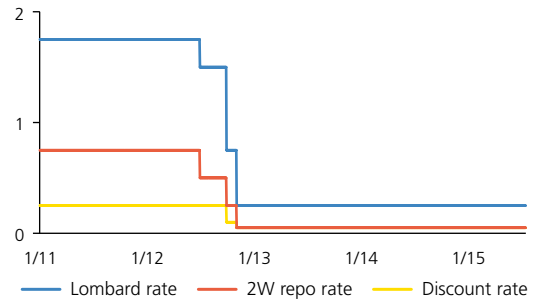


CHART III.5.11

MARKET INTEREST RATES

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

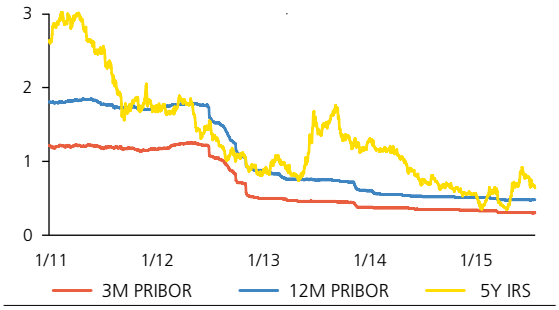
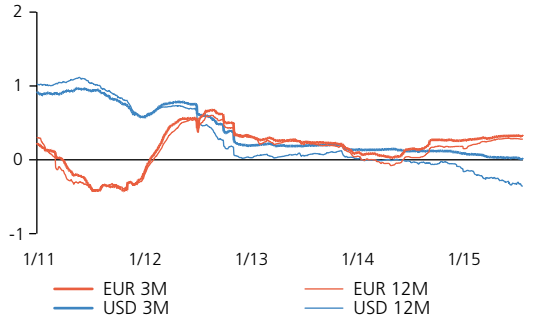


CHART III.5.12

INTEREST RATE DIFFERENTIALS

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



Financial market interest rates

PRIBOR rates remained at historical lows at all maturities in 2015 Q2 (see Chart III.5.11). They thus reflected the setting of the CNB's key interest rates at technical zero. The average 3M PRIBOR rate remained stable at 0.3% in line with the assumption of the previous forecast. The premium on the money market, as measured by the spread between the 3M PRIBOR and the 2W repo rate, remained at just below 0.3 percentage point.

FRA derivative rates initially edged up at all maturities, probably in response to the published domestic macroeconomic data (see below), but fell back slightly in late June and early July. The market outlook for 3M rates according to end-July FRA quotations thus implies a marginal decrease in the 3M PRIBOR rate at the one-year horizon. This is broadly in line with expectations of stable monetary policy interest rates at least until the same date and a negligible decline in the money market premium. The expected market rates are thus very close to the interest rate path expected in the new CNB forecast over the entire horizon (see section II).

Short-term **interest rate differentials** vis-à-vis both major world currencies (PRIBOR/CZK–EURIBOR/EUR and LIBOR/USD) reflected opposite movements in money markets in the euro area and the USA amid interest rate stability in the Czech Republic. However, the changes were not big: the differentials vis-à-vis euro rate increased slightly, while those vis-à-vis the dollar decreased slightly (see Chart III.5.12). The 3M PRIBOR–3M EURIBOR differential was 0.3 percentage point on average in 2015 Q2 and recorded the same figure at the end of July.

The long-running downward trend in domestic **interest rates with longer maturities** to historical lows halted at the end of April, and these rates subsequently started to increase in line with rates abroad. Long-term rates in the euro area quite quickly reversed their previous decline to extremely low levels. Given the published data and leading indicators, the market seems to no longer consider the scenario of sustained deflation and recession to be likely for the euro area. Later, the rates were also affected by fluctuations in the risk premium related to the lengthy negotiations on the Greek debt crisis. Volatility simultaneously increased in the market, but there was no contagion in the financial markets. Turning to domestic factors, the rise in rates was fostered by published macroeconomic data, most notably higher-than-expected GDP and inflation figures and an unexpectedly fast decline in the share of unemployed persons. Overall, domestic IRS rates and government bond yields increased by 0.6 percentage point compared to the start of April. However, this related solely to longer maturities (from around 5Y upwards); the changes at the shorter end of the yield curve were negligible (see Chart III.5.11). The positive slope of the yield curve thus increased noticeably. In June, the average 5Y–1Y spread on IRS rates was 0.5 percentage point and the 10Y–1Y spread 0.9 percentage point.

Six auctions of fixed coupon bonds and two auctions of variable coupon bonds were held on the primary **government bond market** in 2015 Q2. The total volume of bonds issued was CZK 45.3 billion.[38] Demand exceeded supply in almost all the auctions, although not as strongly as in the previous period given the very low yields; the average bid-to-cover ratio was 1.6. Demand from foreign investors remained high; they have accounted for around half of domestic bonds sold since the launch of the programme of purchases of government bonds and other securities in the euro area. There was an increase in average yields at the auctions,[39] reflecting developments in the secondary market. The government bond yield curve – like the IRS curve – moved upwards and its positive slope increased (see Chart III.5.13).

Client interest rates

Client interest rates on new loans mostly fell slightly in nominal terms in 2015 Q2. In a situation of a stable 3M PRIBOR and a low ten-year government bond yield (1% in June 2015 despite a current increase), this reflected increased competition among banks and a continued decline in the perceived riskiness of clients from the real economy due to the favourable economic situation.

The **interest rate on loans to non-financial corporations** in nominal terms remains close to 2% on average (see Chart III.5.14). As regards its structure, rates with longer fixations have come down over the last two years, while short-term rates have remained essentially unchanged. The interest rates on small loans and large loans were 2.7% and 1.8% respectively. The spread between these rates is slightly below the average recorded since 2007. The spread between the short-term rate on corporate loans and the 3M PRIBOR narrowed somewhat. The interest rate on new domestic euro-denominated corporate loans showed similar developments and was slightly lower than that on koruna loans (1.8%; see Chart III.5.15). Rates on corporate loans in the euro area went down further (averaging 2.2%), due mainly to the ECB's monetary policy measures, and moved closer to the rates in the Czech Republic.

The **interest rate on loans for house purchase** for households decreased slightly further to 2.6% in May 2015 (reaching a new historical low of 2.3% for mortgages). The rate on loans fixed over one year and up to five years, which account for 67% of all house purchase loans, fell slightly to 2.3%. The rate on loans fixed for over five years and up to ten years followed a similar trend. This was accompanied by a further increase in the share of these loans to 17% (see Chart III.5.16). According to Hypoindex, however, some banks started to raise their mortgage rates in June. Bank financing costs increased for longer rates in Q2, but the increase in rates should

38 The Czech Republic's Funding and Debt Management Strategy for 2015 assumes issues of medium- and long-term government bonds amounting to CZK 130–180 billion.

39 A 10-year bond with an average yield of 0.35% was issued at the end of April, and an 11-year bond was subscribed at a yield of 1.38% at the end of June.

CHART III.5.13

GOVERNMENT BOND YIELD CURVE

The government bond yield curve moved upwards
(percentages)

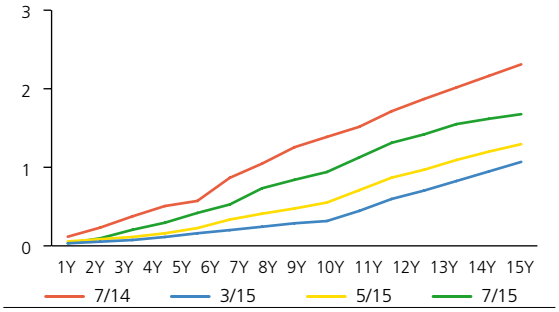


CHART III.5.14

CLIENT INTEREST RATES IN THE CZECH REPUBLIC AND THE EURO AREA

The interest rate on loans to non-financial corporations in the euro area has recently been falling and moved closer to the rates in the Czech Republic
(cost of borrowing indicators; new business; percentages)

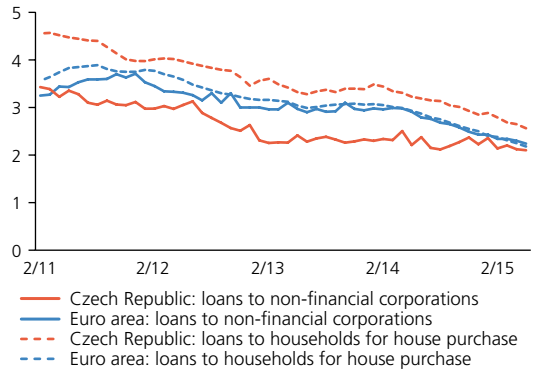


CHART III.5.15

INTEREST RATES ON LOANS TO CORPORATIONS

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

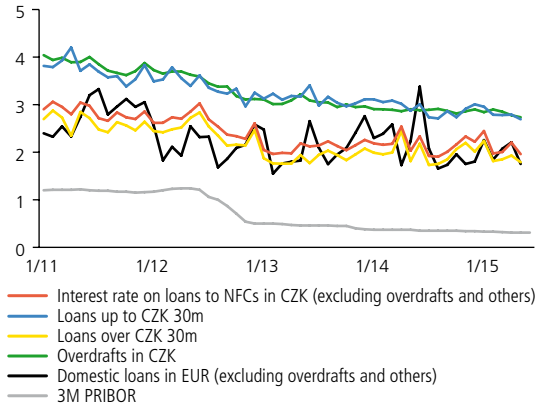


CHART III.5.16

INTEREST RATES ON LOANS TO HOUSEHOLDS

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

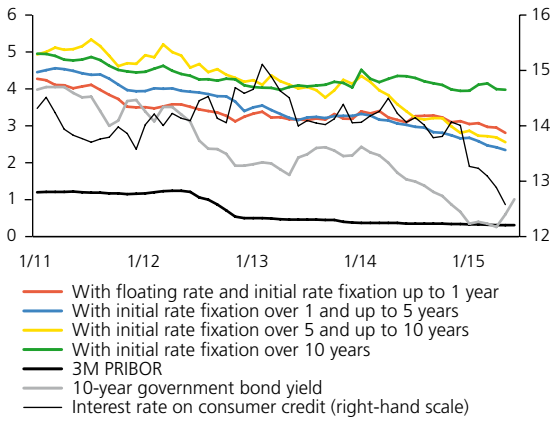


CHART III.5.17

CLIENT AND MARKET INTEREST RATE SPREADS

The spread between client and market rates on loans to households for house purchase and to non-financial corporations fell slightly
(percentage points)

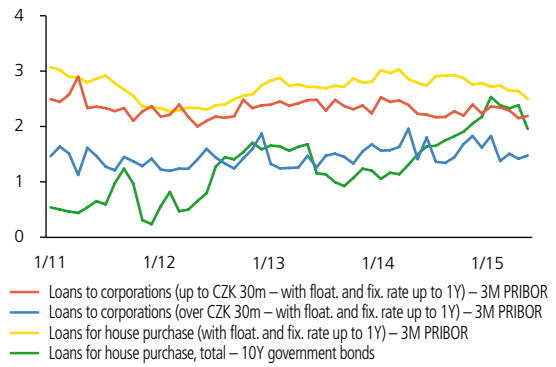
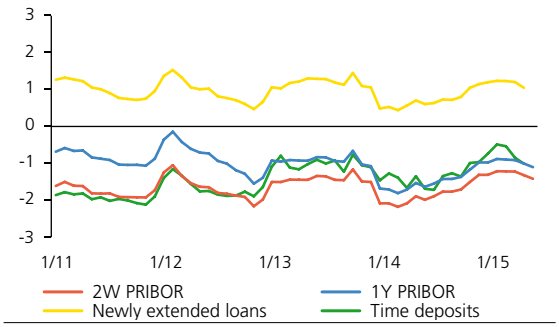


CHART III.5.18

EX ANTE REAL RATES

Ex ante real interest rates on new loans were slightly above 1%, while rates on time deposits were negative
(percentages)



continue to be dampened by competition and a continued decline in riskiness of clients. The spread between short-term client and market rates edged down (see Chart III.5.17). The interest rate on house purchase loans in the euro area also fell further (to 2.2%). This rate is persistently rather lower than that in the Czech Republic.

The **interest rate on consumer credit** dropped further in Q2, reaching 12.6% in May (see Chart III.5.16). This was due to increased competition among banks and non-bank institutions and by more favourable risk perceptions regarding the overall economic situation and the creditworthiness of some clients. Due probably to higher credit risk, the rate on consumer credit remains well above that in the euro area, where it is close to 6% on average.

Interest rates on client deposits were broadly unchanged. Only the rates on short-term and long-term household deposits with agreed maturity declined to 1.2% and 2.0% respectively in 2015 Q2, following efforts by some banks to make them more attractive. Rates on overnight deposits remained at 0.1% for corporations and 0.3% for households. The rate on deposits redeemable at notice of up to three months, comprising building society deposits, stood at 1.6%. The equivalent rates in the euro area remained mostly flat and tend to be lower than those in the Czech Republic.

Real client interest rates[40] have gone down slightly in recent months owing to a decrease in nominal rates, while expected inflation has increased slightly. Real rates on new loans averaged 1% in May (see Chart III.5.18). The real interest rate on corporate loans was 0.5%, that on house purchase loans for households was 1.0% and that on consumer credit was 10.9%. Real rates on time deposits remained negative.

III.5.4 The exchange rate

The average **exchange rate of the koruna against the euro** was CZK 27.4 in 2015 Q2. This represents a year-on-year appreciation of 0.2% and a quarter-on-quarter appreciation of 0.9% (see Chart III.5.19). The koruna's exchange rate fluctuated around either side of this level for most of the quarter. In mid-June, the koruna appreciated slightly to CZK 27.2 to the euro. During July, it tended to appreciate further towards the exchange rate commitment level of CZK 27 to the euro.

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

European currencies (except the Hungarian forint) appreciated **on world financial markets** in 2015 Q2, at the expense of the US dollar and other major non-European currencies. The British pound appreciated the most. By contrast, the New Zealand dollar recorded a sharp decline (of 10%–15%). However, the US dollar started to appreciate again in mid-June.

Despite better-than-expected results from the domestic economy (GDP, retail sales, construction), the **exchange rate of the koruna against the euro remained relatively stable for most of 2015 Q2**. The koruna's gradual appreciation tendency, which began in mid-June, was probably a response to the higher-than-expected inflation in the Czech Republic in May combined with the previously published high GDP growth in 2015 Q1. This led to a major change in market sentiment and, from the financial markets' perspective, virtually eliminated the risk of the CNB further weakening the koruna. On the other hand, the Czech koruna was not visibly affected by the renewed escalation of the financial crisis in Greece (although this may have played a minor role in the strengthening of the exchange rate, as the Swedish krona, for example, also displayed a modest appreciation tendency). As the exchange rate neared CZK 27 to the euro, the market and analysts started to turn their attention to a possible testing of the CNB's exchange rate commitment. This, too, probably contributed to the further strengthening of the koruna.

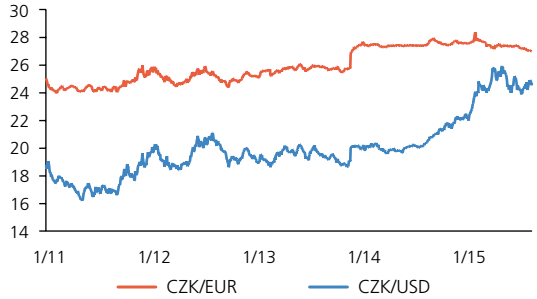
As in the whole of 2014, the CNB made no actual **foreign exchange interventions** affecting the koruna exchange rate in the first half of 2015. In the second half of July, however, the CNB intervened in the market for the first time since November 2013, in line with its commitment to intervene in the foreign exchange market automatically and potentially in unlimited amounts as needed to maintain the exchange rate close to CZK 27 to the euro.

The average **exchange rate of the koruna against the dollar** was CZK 24.8 in 2015 Q2. This represents a year-on-year depreciation of 23.8% and a quarter-on-quarter depreciation of 1.0%. During the quarter, however, the koruna gradually appreciated against the dollar from around CZK 25.5 to CZK 24 in mid-June. The koruna later depreciated again, reaching CZK 24.9 in mid-July. The renewed depreciation of the koruna against the dollar was connected with the depreciation of the euro and related currencies due to the renewed escalation of the financial crisis in Greece and later to financial market expectations that the Federal Reserve would start raising interest rates.

CHART III.5.19

CZK/EUR AND CZK/USD EXCHANGE RATES

The koruna appreciated slightly against the euro and the dollar in 2015 Q2



BOX 2
The equilibrium koruna-euro exchange rate

Equilibrium exchange rate estimates are important for central banks above all because deviations of the exchange rate from its equilibrium level affect the exchange rate component of the monetary conditions.[41] If the exchange rate is overvalued relative to its equilibrium level, it reduces the price competitiveness of the domestic economy, slows its growth and ultimately causes inflation to decline. An undervalued exchange rate acts in the opposite direction.

Economic theory offers a whole range of approaches to determining equilibrium exchange rate levels. The **BEER (behavioural equilibrium exchange rate)** approach takes into account a set of key variables affecting the long-run real exchange rate, for example the productivity differential and the inflow of foreign investment, which expands production capacity. The **FEER (fundamental equilibrium exchange rate)** approach is based on the condition of identifying both the internal and external equilibrium of the economy simultaneously.[42]

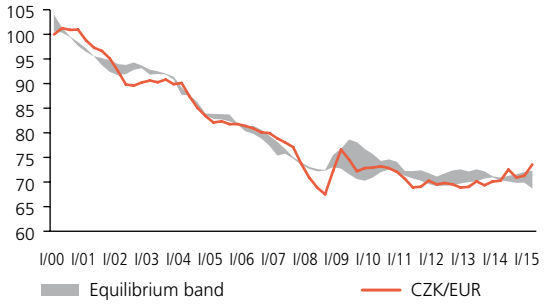
The **range of the real equilibrium exchange rate estimates** is obtained as the range of the midpoints of the estimates according to the BEER and FEER models (see Chart 1).[43] A significant trend of real equilibrium appreciation of the koruna was observed in 2000–2008. In this period, the Czech economy recorded higher economic growth rates than the euro area, supported by massive inflows of foreign investment. This was reflected in visible convergence towards the euro area level. At the same time, successful implementation of monetary policy led to low inflation rates, so the equilibrium real appreciation of the koruna was reflected in nominal appreciation against the euro.

The **strongest overvaluation** of the koruna-euro exchange rate was observed in 2002 and 2008. By contrast, the exchange rate was **undervalued** in 2000–2001 and again in 2006–2007. The pace of real convergence almost halted after the onset of the global financial, economic and subsequently also European debt crisis, but the exchange rate returned to an appreciating trend following a temporary weakening in late 2008 and early 2009. From 2011 to November 2013, this led to slight overvaluation of the koruna in both real and nominal terms (see Chart 2).

CHART 1 (BOX)

CZK/EUR REAL EQUILIBRIUM EXCHANGE RATE

The long-term trend of real appreciation of the koruna exchange rate halted after 2011 at a level that showed signs of slight overvaluation until November 2013
(first quarter = 100; CNB calculation)

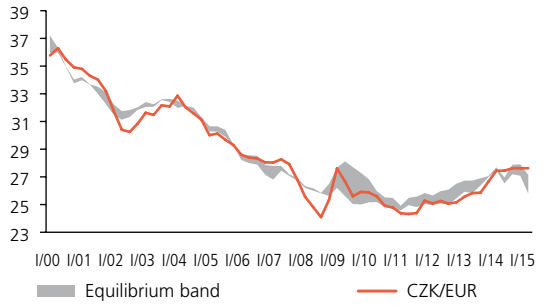


Note: Equilibrium estimates according to the BEER and FEER models deflated by the index of producer prices in manufacturing.

CHART 2 (BOX)

CZK/EUR NOMINAL EQUILIBRIUM EXCHANGE RATE

After the CNB adopted its exchange rate commitment of CZK 27 to the euro in November 2013, the exchange rate weakened to its equilibrium level; according to one method it is currently still at its equilibrium level and according to another it is slightly undervalued
(CNB calculation)



Note: Equilibrium estimates according to the BEER and FEER models.

41 See Box 3 in Inflation Report II/2015.
42 Internal equilibrium corresponds to the potential output path calculated using the Cobb-Douglas production function. External equilibrium corresponds to the sustainable path of the ratio of the current account deficit to GDP.
43 In reality, however, the degree of uncertainty of these estimates is considerably higher than that indicated by the range shown, as both methods have relatively wide confidence intervals.

The decision of the CNB Bank Board to start using the exchange rate as an additional monetary policy instrument (as from 7 November 2013) and the **adoption of an asymmetric exchange rate commitment at CZK 27 to the euro caused the exchange rate to return to its equilibrium levels** (see Charts 1 and 2). According to the BEER method, the equilibrium exchange rate is currently at levels corresponding to the exchange rate commitment. The FEER-based estimate points to slight undervaluation of the exchange rate, reflecting the Czech Republic's slight current account surplus as opposed to the assumed sustainable deficit of 2.5% of GDP.[44, 45]

Overall, the estimates show that no strong fundamental pressures for the exchange rate to appreciate to the levels seen before the CNB adopted its exchange rate commitment should arise following the return to the standard monetary policy regime.

III.5.5 Economic results of non-financial corporations

The **financial results** of non-financial corporations with 50 employees or more[46] in 2015 Q1 indicated a further slowdown in the annual growth rate of output (to 4.8%). This was related mainly to the unwinding of the direct effect of the year-on-year weakening of the koruna in November 2013 (see Chart III.5.20). However, growth in gross operating surplus (operating profit) accelerated slightly again (to 7.1%) following a previous slowdown, driven primarily by a decline in the material cost-output ratio.[47] This also led to an increase in the annual growth rate of book value added and a rise in its share in output (see Table III.5.3).

With output rising faster than intermediate consumption, the **material cost-output ratio** fell by 0.3 percentage point year on year in 2015 Q1, in contrast to a slight increase in the previous quarter (see Table III.5.3). This change was due above all to a marked drop in prices of imported production inputs (energy and non-energy commodities) observed since the end of last year. By contrast, the

44 In its Article IV consultation in spring 2015, the IMF arrived at qualitatively the same conclusions. It stated that "the current account balance is stronger than the norm of 1 percent of GDP deficit, indicating a marginal undervaluation of 3 percent in 2014". At the same time, however, a calculation using a different method indicated that the koruna was overvalued by more than 10%, so overall the IMF assessed the koruna exchange rate as being "broadly in line with fundamentals".

45 The estimate also does not take into account the fact that the current account surplus reflects, among other things, a strong inflow of money from EU funds, which, however, is as a rule converted into CNB international reserves and so does not affect real flows on the forex market.

46 The segment of corporations with 50 employees or more consisted of more than 9,000 non-financial corporations at the end of 2015 Q1.

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

Chart III.5.20

KEY FINANCIAL INDICATORS

Growth in gross operating surplus and book value added increased in 2015 Q1
(annual percentage changes)

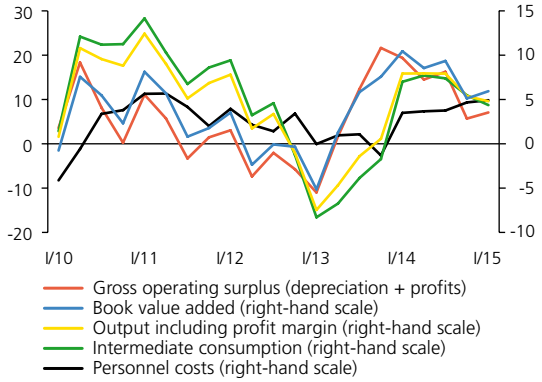


Table III.5.3

PERFORMANCE INDICATORS OF NON-FINANCIAL CORPORATIONS

The material cost-output ratio decreased slightly, while the personnel cost-output ratio was unchanged year on year

	2014 Q1 CZK billions	2015 Q1 CZK billions	Annual percentage changes
Output incl. profit margin[a)]	1,405.6	1,473.1	4.8
Personnel costs	204.7	214.8	4.9
Intermediate consumption	1,017.1	1,061.5	4.4
Book value added	388.5	411.6	5.9
Sales	1,844.7	1,952.0	5.8
Gross operating surplus	183.8	196.8	7.1
	%	%	Annual changes in pp
Material cost-output ratio	72.4	72.1	-0.3
Personnel cost-output ratio	14.6	14.6	0.0
Ratio of book value added to output	27.6	27.9	0.3
Ratio of personnel costs to value added[a)]	52.7	52.2	-0.5
Ratio of gross operating surplus to value added	47.3	47.8	0.5

a) CNB calculation

CHART III.5.21

OPERATING PROFIT BY SECTOR

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

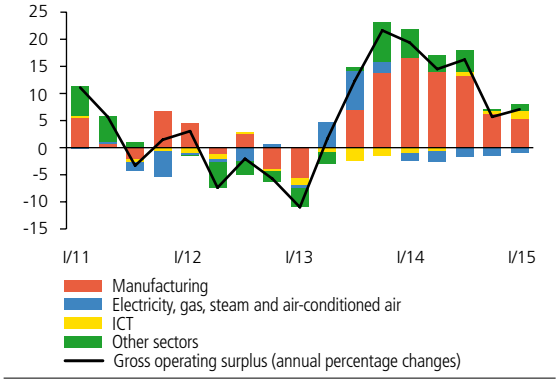
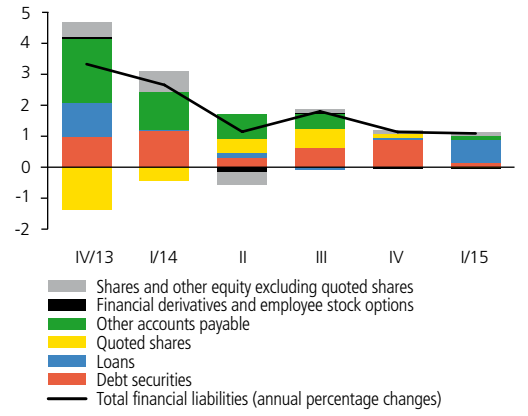


CHART III.5.22

FINANCIAL LIABILITIES OF NON-FINANCIAL CORPORATIONS

Growth in the financial liabilities of corporations was due primarily to loans in 2015 Q1
(annual percentage changes; contributions in percentage points)



wage cost-output ratio[48] was flat year on year following roughly a year of decline. Growth in personnel costs, driven by growth in both the number of employees and wages, accelerated slightly to almost the same levels as output, which by contrast recorded a slowdown in growth.

From the sectoral perspective, the annual growth in sales, output and operating profit in 2015 Q1 was again driven chiefly by corporations in manufacturing, albeit to a smaller extent than in the previous quarter (see Chart III.5.21). Other sectors, in particular information and communication activities, were thus the biggest contributors to the increase in the annual growth rate of operating surplus in the period under review.[49] With regard to the **ownership structure of corporations**, the growth in this indicator was affected above all by foreign-owned corporations, whose production is mostly export-oriented.

Data for the narrower **segment of large corporations** (with 250 employees or more)[50] indicate somewhat different trends in the main financial indicators in 2015 Q1 than in the larger segment of corporations. In particular, annual growth in the gross operating surplus of corporations with 250 employees or more moderated further (to 5.8%), unlike in the larger segment of corporations. As in the broader segment, however, this growth continued to be driven by manufacturing firms.

III.5.6 Financial position of corporations and households

The annual growth rate of **financial liabilities of non-financial corporations** remained unchanged at the low level of 1.1% in 2015 Q1 (see Chart III.5.22). However, the structure of this growth changed. Loans were the biggest contributor, reflecting the observed increase in their growth rate. All the other categories, especially debt securities and quoted shares, recorded small positive contributions. Annual growth in the **financial assets of non-financial corporations** rose to 2.9% in Q1. This was primarily due to currency and deposits. On the other hand, the contributions of shares, loans and other accounts receivable decreased. Financial assets again increased faster than liabilities, resulting in a further reduction in the overall negative net financial position of corporations.

48 The personnel cost-output ratio defined as the ratio of personnel costs to output.
49 Operating surplus increased by a sizeable 23% in this sector.
50 The segment of corporations with 250 employees or more consisted of more than 1,700 non-financial corporations at the end of 2015 Q1.

The main **trends in the balance sheets** of non-financial corporations are reflected in their financial indicators. The acid-test ratio[51] of corporations saw a slight correction of its previous high levels, falling from 232% in 2014 Q4 to 223% in 2015 Q1. The market-based financing ratio[52] also decreased quarter on quarter (from 9.9% to 9.6%). Corporate solvency – as measured by the ratio of total financial assets to liabilities excluding shares and other equity – rose from 113.1% at the close of last year to 116.2% at the start of this year.

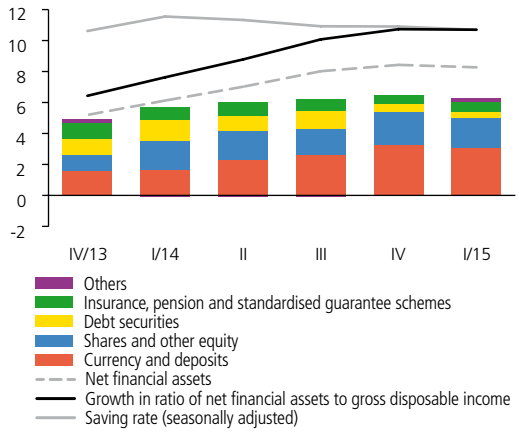
The **net financial assets of households** continued to show strong growth of 8.3% year on year in 2015 Q1. Growth in the net financial assets compared to the same period of 2014 was almost 11% of the annual gross disposable income of households (see Chart III.5.23). Gross financial assets increased by 6.3% year on year, the same pace as a quarter earlier. Currency and deposits were the biggest contributors to the growth in financial assets, with household deposits again rising by almost 6% year on year in 2015 Q1. The growth in financial assets was also aided by shares and other equity, in particular growth in the value of investment fund shares and units held by households. At 2.2%, annual growth in the **financial liabilities of households** was almost unchanged from the previous quarter. Long-term loans are traditionally the dominant contributor.

CHART III.5.23

STRUCTURE OF HOUSEHOLD FINANCIAL ASSETS

The gross and net financial assets of households continued to show strong growth

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



III.5.7 The property market

According to the CZSO, **asking prices of apartments** continued to increase year on year in 2015 Q2. The strongest growth was recorded in Prague, up from 5.8% in 2015 Q1 to 6.5% (see Chart III.5.24). The previously only very modest rate of growth in these prices in the rest of the Czech Republic also went up, from 1.2% to 3.3%. That apartment prices are rising is also confirmed by data on **transaction prices of older apartments from the CZSO survey**, available for 2015 Q1. Following a revision of the end-2014 estimate, however, annual growth in these prices fell from 5.2% in 2014 Q4 to 5.0% in 2015 Q1 in Prague and from 5.9% to 3.7% respectively in the rest of the Czech Republic.

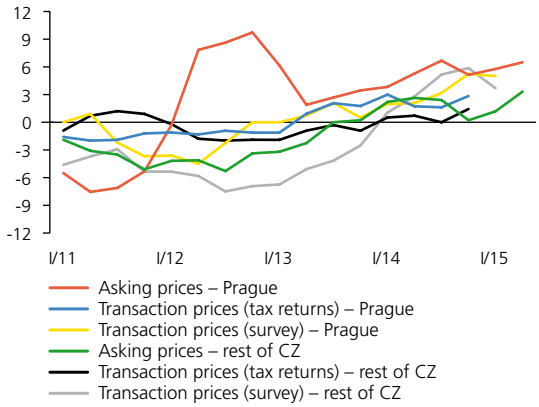
According to new CZSO estimates of **transaction prices based on tax returns**,[53] apartment prices in Prague recorded year-on-year increases of 1.6% and 2.9% respectively in 2014 Q3 and Q4, while in the rest of the Czech Republic they were unchanged and rose by 1.4% respectively. These figures are lower than the survey estimates for the

CHART III.5.24

TRANSACTION AND ASKING PRICES OF APARTMENTS

Apartment prices went up in 2015 Q1

(annual percentage changes; source: CZSO)



51 A ratio with currency in circulation, transferable deposits, short-term debt securities and short-term loans provided in the numerator and short-term debt securities issued and short-term loans accepted in the denominator.

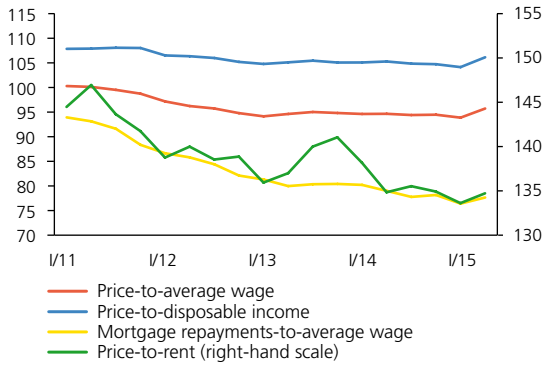
52 A ratio of the sum of bonds issued and quoted shares issued to total liabilities.

53 CZSO transaction prices based on tax returns are considered to be the most representative data source for property transaction prices. However, the CZSO cannot process these prices until several months after the sale of the property, or rather the date of filing of the tax return. As a result, these data have the longest lag and their six-monthly estimates may be subject to significant revisions.

Chart III.5.25

APARTMENT PRICE SUSTAINABILITY INDICATORS

The affordability and profitability of buying an apartment deteriorated slightly following a long period of improvement
(2000–2007 = 100 and 2004–2007 = 100 for mortgage repayments-to-average wage respectively; source: CZSO, CNB, Institute for Regional Information)



same period. In addition, the CZSO significantly revised its previous estimates of these prices for 2014 H1. The estimate of growth in Prague in 2014 Q2 was lowered from 7.2% to 1.7%. Conversely, the estimated decrease of 1.9% outside Prague was corrected to modest growth of 0.7%.

The indicators of housing affordability, i.e. the **price-to-average wage ratio** and the **price-to-disposable income ratio**, recorded very small year-on-year increases, i.e. a deterioration in affordability, of 1.1% and 0.8% respectively in 2015 Q2 (see Chart III.5.25). It should be taken into account that previous estimates of these indicators have been affected by revisions and newly available data on apartment prices.[54] These indicators declined in the previous three quarters and did not bottom out until the beginning of 2015.[55]

The **mortgage repayments-to-average wage ratio**[56] fell by 1.7% year on year in 2015 Q2, but in quarter-on-quarter terms it rose by 1.6%. The quarterly increase was due to higher apartment prices. Moderate wage growth and a further drop in interest rates on new loans for house purchase acted in the opposite direction. According to IRI data, the **price-to-rent ratio** was unchanged year on year in 2015 Q2 following previous declines, but it too increased in quarter-on-quarter terms (by 0.8%).

An assessment of the available data suggests a robust **recovery in apartment prices** in Prague and the rest of the Czech Republic. Due to the differences between the estimates, however, the pace of this price growth remains subject to data uncertainty. Nevertheless, property prices are still in line with fundamentals, in particular growth in domestic economic activity and the improving labour market situation.

54 To calculate these indicators, apartment prices are approximated by tax return and survey-based transaction prices and by asking prices, depending on availability.
55 These indicators are available since 2000.
56 A mortgage with fixed parameters of an LTV of 65% and a maturity of 20 years was considered in the calculation of this indicator. The data available for the first two months of the quarter were taken as the interest rates on new loans for house purchase in 2015 Q2.

III.6 THE BALANCE OF PAYMENTS

The balance of payments in 2015 Q1 was characterised by a large goods and services surplus, which, however, fell marginally after two years of year-on-year growth. Its effect on the current account was partly offset by a primary income deficit, associated mainly with direct investment income in the form of dividends paid to non-residents and earnings reinvested in the Czech Republic. Net lending abroad (i.e. a net outflow) on other investment, linked mainly with a change in the corporate sector's international position, was the largest financial account item. The net outflow of other investment, coupled with net lending abroad on portfolio investment and a rise in reserve assets, was offset to only a small extent by net borrowing from abroad (i.e. a net inflow) on direct investment.

III.6.1 The current account

The **current account** recorded a large surplus of CZK 91.5 billion in 2015 Q1, up by CZK 8 billion year on year owing chiefly to a switch of secondary income from deficit to surplus (see Chart III.6.1). The ratio of the annual moving current account surplus to GDP increased slightly to 0.8%.

The **goods** balance ended 2015 Q1 in a surplus of CZK 78.9 billion, representing a further slight year-on-year increase (of almost CZK 2 billion). This was due solely to a price effect associated with a positive year-on-year change in the terms of trade, roughly two-thirds of which, however, was offset by developments in real terms. Annual growth in nominal trade turnover was unchanged from the previous quarter at just below 8%. The further moderation in the year-on-year weakening of the koruna against the euro and a persisting decrease in exports to Russia and Ukraine led to a decrease in nominal export growth to below 8% despite slightly stronger euro area demand growth. Conversely, nominal goods import growth accelerated to more than 8% as a result of robust growth in total domestic demand. In addition, the sizeable year-on-year weakening of the koruna against the dollar had a stronger effect than it did on exports. By contrast, the drop in oil prices acted against faster nominal growth in imports. Turning to the commodity structure, a moderation of the mineral fuels deficit was therefore the biggest contributor to the year-on-year rise in the overall trade surplus (see Chart III.6.2). The overall surplus continued to rise year on year during 2015 Q2, growing by more than CZK 6 billion in April–May.

The goods and services surplus was also due to a surplus on **services** totalling CZK 17.8 billion (see Chart III.6.3). All four component balances contributed to the surplus in this quarter. Production and repair services recorded the largest surplus (CZK 7.8 billion). However, the services surplus declined again year on year (by almost CZK 3 billion). This was due to travel and transport as a result of

CHART III.6.1

CURRENT ACCOUNT

The current account surplus increased year on year in 2015 Q1, mainly due to developments in secondary income
(CZK billions)

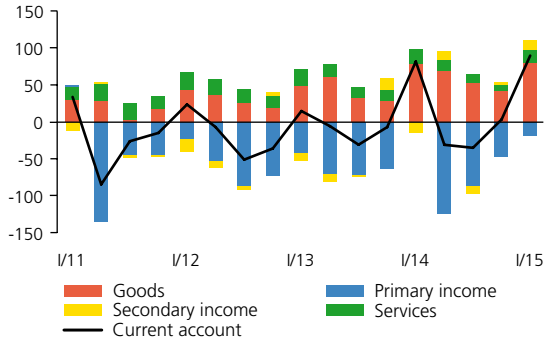


CHART III.6.2

EXTERNAL TRADE IN GOODS

The year-on-year growth in the surplus on external trade in goods was affected most strongly in 2015 Q1 by a decrease in the mineral fuels deficit
(Q1 of relevant year in CZK billions; national concept)

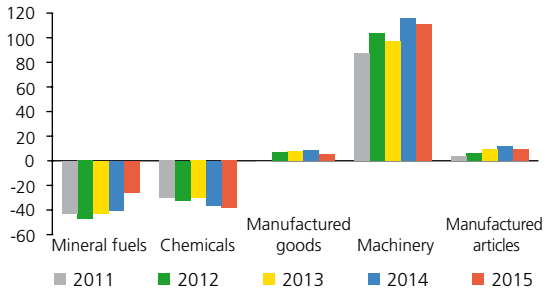


CHART III.6.3

SERVICES

All four sub-balances contributed to the services surplus in 2015 Q1
(CZK billions)

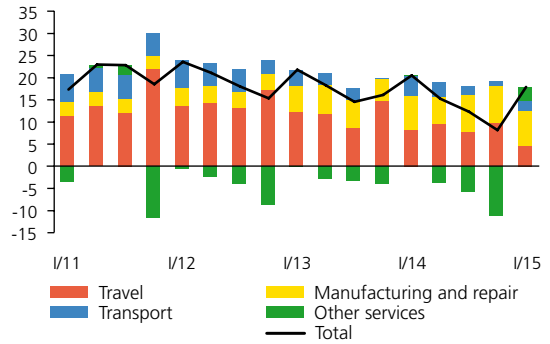


CHART III.6.4

PRIMARY INCOME

Within primary income, the investment income deficit increased year on year in 2015 Q1
(CZK billions)

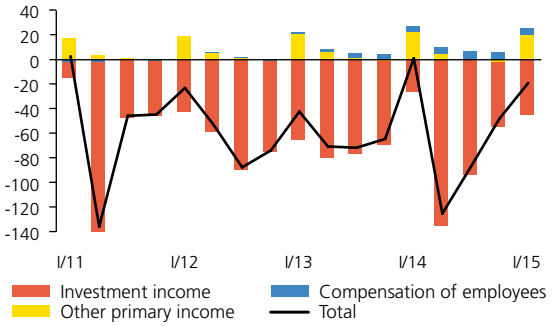


CHART III.6.5

FINANCIAL ACCOUNT

Net lending on other investment was the largest item on the financial account in 2015 Q1
(CZK billions)

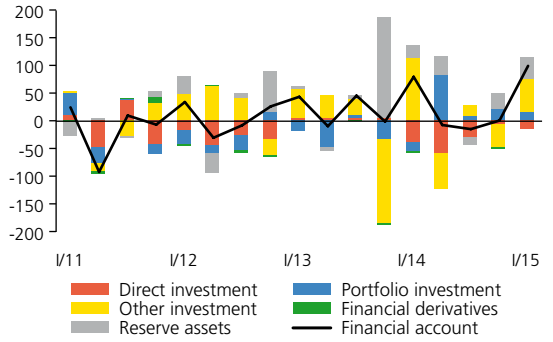
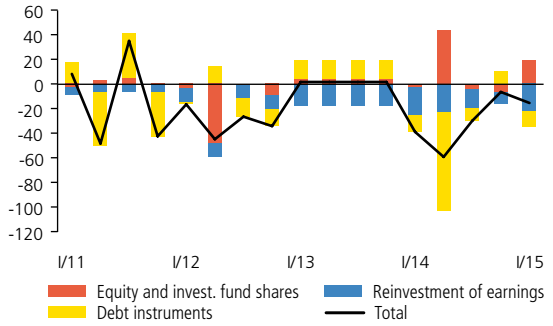


CHART III.6.6

DIRECT INVESTMENT

Reinvestment of earnings contributed the most to net borrowing on direct investment in 2015 Q1
(CZK billions)



a sharp rise in debits and only moderate growth in credits. Growth in the other services surplus, linked chiefly with rising credits from information services and construction work, acted in the opposite direction.

In contrast to the goods and services surplus, **primary income** ended 2015 Q1 in a deficit of CZK 19.1 billion, down by more than CZK 20 billion year on year amid a switch from surplus to deficit. The largest component of the overall balance was still the investment income deficit (see Chart III.6.4), stemming mainly from a direct investment income deficit of CZK 51.1 billion. It widened in year-on-year terms and was associated with income in the form of dividends paid to non-residents and with estimated reinvested earnings in the Czech Republic. However, the investment income deficit was offset to a significant extent in this quarter by a surplus on other primary income (of CZK 19.4 billion), which includes net income from the EU budget. A surplus on compensation of employees also helped reduce the overall deficit.

By contrast, **secondary income** ended in a surplus of CZK 13.9 billion, with the balance rising by more than CZK 29 billion amid a switch from deficit to surplus. Its main component was net income on current international cooperation, which exceeded CZK 31 billion. However, roughly one-half of it was offset by deficits on the other components, above all VAT- and GNI-based payments to the EU budget. Net drawdown of funds from the EU budget recorded under secondary income totalled CZK 20.1 billion, up by more than 30 billion year on year amid a switch from deficit to surplus. The year-on-year change in secondary income was therefore linked mainly with considerably higher income from the EU budget.

III.6.2 The capital account

The **capital account** also recorded a surplus (CZK 30.6 billion), resulting almost exclusively from drawdown of funds from the EU budget totalling CZK 30 billion. As in the case of secondary income, its year-on-year increase of more than CZK 9 billion was linked with higher drawdown of funds from the EU budget.

III.6.3 The financial account

The **financial account** recorded net lending abroad (a net outflow) of CZK 96.8 billion in 2015 Q1, linked above all with a net outflow of other investment. The overall net lending on the financial account was also due to a rise in reserve assets and a net outflow of portfolio investment. Only net borrowing from abroad (a net inflow) on direct investment had a significant effect in terms of reducing the overall net outflow (see Chart III.6.5).

The net inflow of **direct investment** visible during the previous year continued into 2015 Q1. It reached CZK 15.2 billion, down by more than CZK 23 billion year on year (see Chart III.6.6). The year-on-year decline in net borrowing was due mainly to slower growth in foreign investment in the Czech Republic. The inflow of foreign investment into the Czech Republic amounted to almost CZK 26 billion. It was driven mainly by reinvestment of earnings (CZK 27 billion), but was also due to a net increase in liabilities from debt instruments (net drawdown of loans), whereas shares and other equity (under equity capital) recorded a net outflow of funds. Czech investment abroad was linked mainly with an increase in net acquisition of assets in shares and other equity and with reinvestment of earnings.

Unlike direct investment, **portfolio investment** recorded net lending abroad (a net outflow) for the fourth consecutive quarter. It amounted to CZK 13.8 billion in 2015 Q1, in contrast to a net inflow in the same period of 2014 (see Chart III.6.7). The biggest transactions were purchases of foreign securities by residents, which amounted to CZK 43 billion amid broadly balanced purchases of equity and debt securities. Purchases also dominated trading in domestic securities by foreign investors. However, they were almost exclusively related to purchases of Czech government bonds. The year-on-year change in portfolio investment flows of almost CZK 31 billion was due primarily to stronger interest of domestic investors in foreign shares and bonds.

Settlement of **financial derivatives and employee stock options** led to net borrowing (a net inflow) of CZK 0.6 billion, down by more than CZK 2 billion from a year earlier.

Other investment recorded net lending abroad (a net outflow) of CZK 60.8 billion. The overall net lending was due mainly to a net outflow of CZK 49.4 billion via the corporate sector. This was related to the provision of trade credits and simultaneous repayments of financial loans to non-residents. Net lending, driven above all by repayments of long-term deposits to non-residents, was also recorded by the banking sector including the CNB. General government also showed a moderate net outflow.

As in the previous quarter, **reserve assets** increased by CZK 38 billion in 2015 Q1 due to a surplus on transactions executed for CNB clients (see Chart III.6.8).

CHART III.6.7

PORTFOLIO INVESTMENT

Portfolio investment recorded net lending in 2015 Q1 due to purchases of foreign equity and debt securities by residents
(CZK billions)

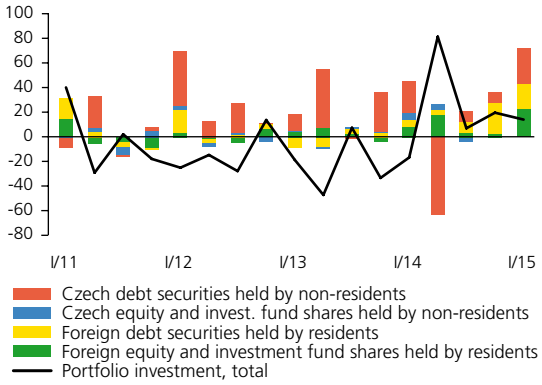


CHART III.6.8

RESERVE ASSETS

Reserve assets increased in 2015 Q1 due to a surplus on transactions for CNB clients
(CZK billions)

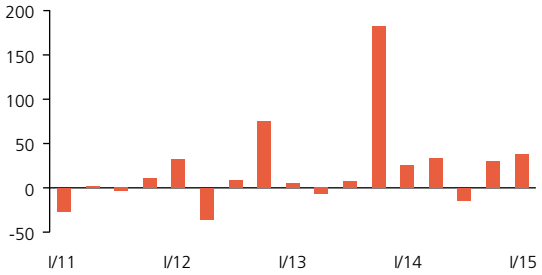


CHART III.7.1

GDP IN THE EURO AREA

GDP growth increased in 2015 Q1 and was driven mainly by household consumption

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

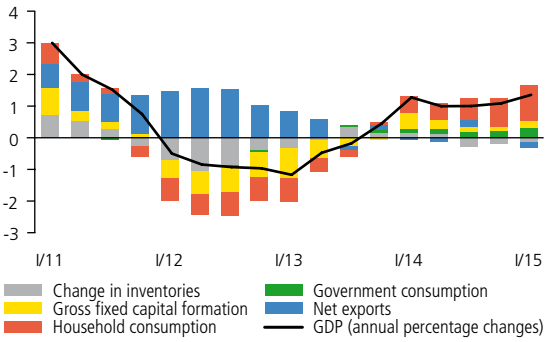
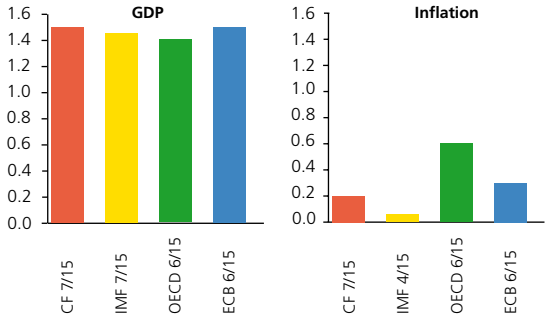


CHART III.7.2

EURO AREA GDP AND INFLATION OUTLOOKS FOR 2015

Euro area GDP growth is expected to accelerate further to 1.5% in 2015, while inflation is expected to remain low

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



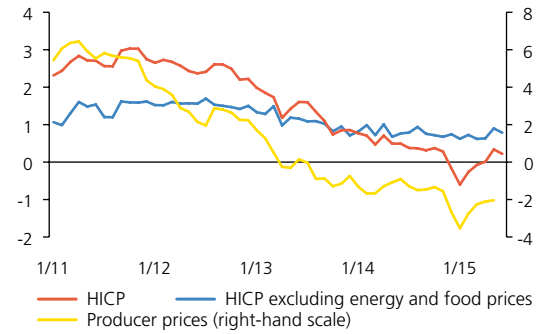
Note: Horizontal axis shows most recent forecast data in format "Source month/ year of publication". Midpoint of range for ECB.

CHART III.7.3

INFLATION AND PRODUCER PRICES IN THE EURO AREA

Consumer prices rose by 0.2% year on year in 2015 Q2 and the decline in producer prices slowed

(annual percentage changes; source: Datastream)



III.7 THE EXTERNAL ENVIRONMENT

Economic growth in the euro area accelerated in 2015 Q1, driven chiefly by household consumption. The economy was favourably affected by a weaker euro, due partly to the ECB's easy monetary policy, and by low oil prices. Economic growth in the USA accelerated year on year, but was dampened by a strong dollar, which was reflected in a decline in net exports. In quarter-on-quarter terms, US economic activity decreased. Continuing growth and very low inflation is expected in both these economies in 2015. At the one-year horizon, the euro is expected to depreciate further against the other major currencies, including the US dollar. Owing to excess supply on the oil market and the reaching of an agreement with Iran, oil prices fell markedly below USD 60 a barrel in July.

III.7.1 The euro area

Euro area GDP growth increased to 1.4% year on year in 2015 Q1 (see Chart III.7.1). Economic growth also picked up pace in quarter-on-quarter terms (to 0.7%). Household consumption, which rose by 2.1% year on year, was the main source of growth. The only negative contributors were net exports and change in inventories. Household consumption is expected to remain the driver of overall economic growth in 2015 Q2, as suggested by a further acceleration in annual real retail sales growth in April and May. Turning to individual countries, Slovenia, Slovakia, Ireland and also, for example, Spain recorded the highest growth rates. Only Finland recorded an annual economic contraction in 2015 Q1.

Almost all the monitored institutions expect euro area GDP to grow by 1.5% **in 2015** (see Chart III.7.2). Economic growth is expected to pick up pace by a further 0.4 percentage point in 2016. The annual growth rate of industrial production increased in May, but remains relatively low. However, the PMI in manufacturing saw a further slight improvement in June. The unemployment rate was flat at 11.1% in May, suggesting that the economic growth is not yet strong enough to cause a more pronounced decrease.

Inflation is expected to be very subdued in 2015 (see Chart III.7.3) and not exceed 1% until 2016. The annual inflation rate was 0.2% in June, 0.1 percentage point lower than a month earlier. In June, inflation excluding energy and food prices (0.8%) slightly reversed its May increase. The decline in industrial producer prices slowed to 2% in May. Euro area inflation has been affected in 2015 by low oil prices and, in the upward direction, by the ECB's easy monetary policy, which is causing the euro exchange rate to weaken.

At its July meeting, the **ECB** confirmed that its quantitative easing policy, i.e. its expanded bond purchase programme, would continue.[57] The 3M EURIBOR is therefore slightly negative and will also be close to zero at the one-year horizon according to market outlooks. M3 continued to rise rapidly (by 5%) in May. The July bank lending survey recorded an easing of credit standards for both corporations and households in 2015 Q2. The main cause of this easing was competition among banks.

In the euro area, attention was also focused on **resolving the Greek debt crisis**. Agreements on the release of funds from the European Stability Mechanism (ESM) were reached in exchange for reforms of the Greek economy,[58] but a high degree of uncertainty persists with regard to future developments.

The **quarterly growth rate of the German economy** fell from 0.7% in 2014 Q4 to 0.3% in 2015 Q1, mainly because of a drop in inventories. The dynamics of the other domestic demand components – in particular household consumption – remained strong. The contribution of net exports was negative for the second consecutive quarter. Annual economic growth also slowed in 2015 Q1 – by 0.5 percentage point to 1% (see Chart III.7.4). This was due to slower growth in domestic demand, which was affected among other things by an increase in the negative contribution of change in inventories, and to the fading out of the positive contribution of net exports.

The July CF expects a return to stronger quarterly and annual economic growth in **2015 Q2**. This is also suggested by stronger month-on-month and year-on-year growth in industrial production and retail sales in the first two months of Q2 compared to Q1. In addition, the unemployment rate went down in May in both quarter-on-quarter and year-on-year terms (by 0.1 and 0.3 percentage point respectively), reaching a record-low level of 4.7%. However, the July CF outlook and the growth rates of industrial production and retail sales conflict with the German Ministry of Finance's preliminary estimate of relatively low quarterly GDP growth in 2015 Q2 (0.3%).

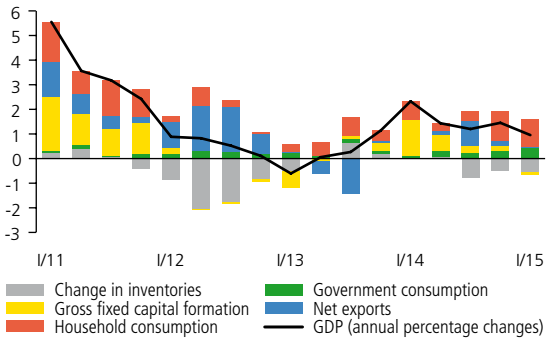
For this year as a whole, CF predicts annual GDP growth of 1.9% for the German economy. Growth should be supported above all by household consumption (thanks to higher employment and real wages), but also by investment and net exports. The economy is expected to continue growing at the same pace in 2016. The Bundesbank's June forecast also expects the economy to continue growing at a pace of around 1.7% at least until 2017, exceeding potential output growth, which is estimated at around 1.2%.[59]

CHART III.7.4

GDP IN GERMANY

Annual GDP growth decreased in 2015 Q1

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



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

58 In reaction to the agreement, S&P increased Greece's rating by two notches from CCC- to CCC+, i.e. back to the early June level.

59 According to the Bundesbank, the output gap closed roughly in late 2014 and early 2015.

CHART III.7.5

INFLATION AND PRODUCER PRICES IN GERMANY

Inflation fell by 0.4 percentage point to 0.3% in June, while the decline in industrial producer prices slowed
(annual percentage changes; source: Datastream)

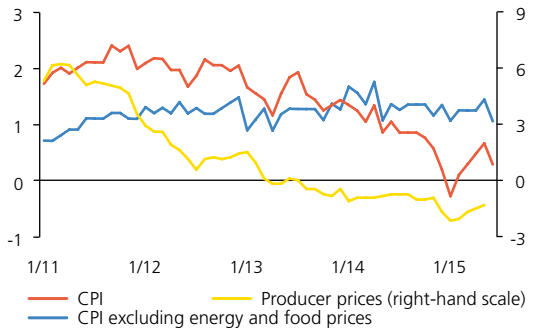
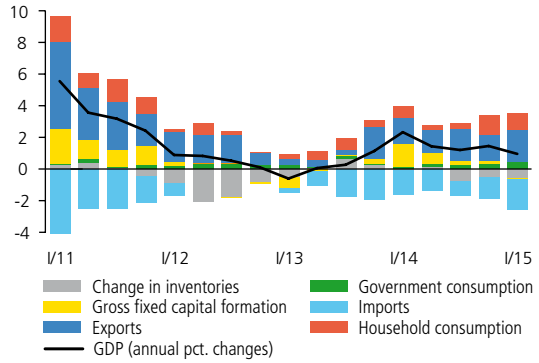


CHART 1 (BOX)

STRUCTURE OF GDP IN GERMANY

A decreasing contribution of net exports and a negative contribution of inventories are weakening the growth of the German economy
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)



This favourable outlook is somewhat undermined by a decrease in almost all leading indicators except the PMI in manufacturing in June and July. This probably reflected rising uncertainty connected with the Greek crisis.

Following six months of gradual increases, **annual inflation** fell again in June (by 0.4 percentage point to 0.3%; see Chart III.7.5). Rents and prices of energy, transport and communications decreased. Core inflation also declined by 0.4 percentage point to 1%. The July CF expects average inflation of 0.6% this year rising to 1.6% next year.

BOX 3
The German economy and the dollar-euro exchange rate

The **German economy has long been one of the biggest exporters in the world**. It currently ranks third behind China and the USA and has trade surpluses with all its major trading partners except China;[60] its current account surplus stands at around 7% of GDP. This confirms Germany's exclusive position as the economic engine of the euro area,[61] i.e. its essential role in world trade. However, the growth rate of the German economy has been falling slightly over the last two years, owing among other things to a decreasing positive contribution of net exports compared to previous periods and negative contributions of change in inventories (see Chart 1). This box aims to clarify **why Germany has not recorded an upswing in GDP growth recently despite last year's marked depreciation of the euro against most other world currencies**, which – according to economic intuition – should have stimulated the export-oriented German economy.

The first set of reasons pertains to the **rate of German potential GDP growth**, which, according to several different sources, is estimated at around 1.2%.[62] Solely from this perspective, the current economic growth rates, which are above this level, should be regarded as satisfactory. The factors reducing the potential output of the German economy include a gradually fading effect of labour market reforms (Hartz I–IV), the introduction of a national minimum wage, higher energy prices (the switch from nuclear energy to renewable sources) and approved earlier retirement ages.[63]

60 Germany continues to record goods trade deficits with Japan and Russia, and in Europe mainly with Norway and the Netherlands and also with the Czech Republic.
61 Germany's per capita GDP is 18 percentage points higher than the euro area average, and its economy accounts for almost 29% of the euro area economy (measured in euro, 2014 data).
62 Deutsche Bundesbank, OECD, The Economist (currently 1.1 percentage points, accelerating to 1.6 percentage points in 2017).
63 The current performance of the German economy is also being affected by recent strong fiscal consolidation.

The second set of reasons is connected with a **lower sensitivity of the German economy to exchange rate movements**. Calculations by the European Commission[64] reveal that Germany has a markedly lower sensitivity of exports to the exchange rate than, for example, France or Italy (see Chart 2), so it is not surprising that the weakening of the euro is helping Germany to a smaller extent than other large euro area economies. The lower sensitivity of exports to exchange rate movements is due among other things to the structure of German exports, which is geared more towards capital goods (including a higher share of investment projects), where the price competitiveness factor is less important, and to a high proportion of euro-denominated export contracts.[65]

Furthermore, a **substantial slowdown and subsequent decline in external demand for German exports together with the weakening of the effective euro exchange rate** has been observed recently (see Chart 3).[66] The low elasticity of German exports to exchange rate movements suggests that the weakening is insufficient from the point of view of Germany's growth performance to offset the unfavourable developments in the external environment, in particular the gradually falling growth rate of the Chinese economy and the plunge in Russian imports.

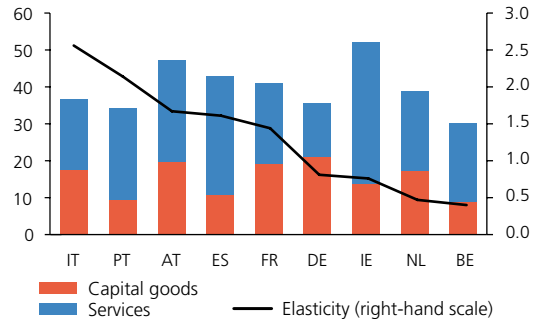
However, the **forecasts for the German economy** (see Chart 4) show that its growth rate should again approach 2%, which is also good news for the countries for which Germany is an important trading partner. The causes can be divided into internal ones (growth in wages and employment, expansionary fiscal policy, persisting accommodative monetary conditions, higher creation of capital goods and lower energy prices for households and corporations) and external ones (solid expected growth of the world economy, a recovery in the core euro area countries, lower dollar prices of oil and other commodities and an unwinding of the effect on economic growth of the drop in exports to Russia).

64 Quarterly Report on the Euro Area (2014), Vol. 13, No. 3.
65 According to ECB (2010), the share of Germany's euro-denominated extra-euro area exports reached almost 74% in 2009, see ECB (2010): International Role of the Euro, July.
66 This was due to a sizeable decline in the combined imports of China and Russia and to a smaller extent to a year-on-year decrease in imports to Japan, the Netherlands and Sweden.

Chart 2 (BOX)

EXPORT SENSITIVITY TO EXCHANGE RATE CHANGES AND EXPORT STRUCTURE OF SELECTED EURO AREA COUNTRIES

The German economy is one of the least sensitive economies to exchange rate movements
(percentages, source: European Commission)

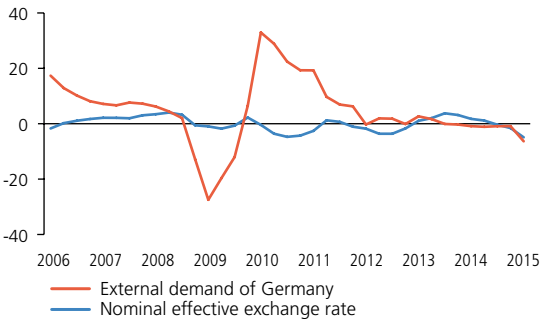


Note: Elasticity expresses the sensitivity of exports to a 1% change in the euro-dollar exchange rate.

Chart 3 (BOX)

EFFECTIVE EXCHANGE RATE AND EXTERNAL DEMAND OF GERMANY

External demand for German exports has been weakening in parallel with the weakening of the exchange rate
(annual percentage changes; source: BIS, Datastream, OECD, CNB calculation)

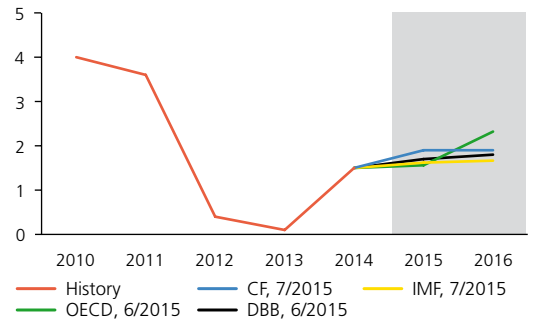


Note: External demand is defined as the weighted average of the total imports of Germany's 22 largest trading partners in euro. NEER 27 – index of the nominal effective exchange rate of the euro for Germany's 27 main trading partners; growth represents appreciation of the euro.

Chart 4 (BOX)

GDP FORECASTS FOR GERMAN ECONOMY

The growth forecasts for the German economy are quite optimistic
(annual percentage changes; source: CF, IMF, OECD, DBB)



Economic growth in Slovakia accelerated by 0.3 percentage point year on year to 2.9% in 2015 Q1. Weaker household and government consumption growth was more than offset by an increase in inventories. The quarterly growth rate of the Slovak economy edged up to 0.8% in 2015 Q1. Thanks to the robust economic growth, the unemployment rate fell further both year on year (by 1.5 percentage points) and month on month (by 0.1 percentage point) to 11.8% in May.

For this year as a whole, the July CF increased its **expectations for growth in Slovak GDP** to 3%, in line with many other institutions. The NBS outlook is even higher (by 0.2 percentage point). The same goes for GDP growth next year, for which CF predicts 3.3% and the NBS 3.8%.

Inflation in Slovakia was negative again in June. Consumer prices declined by 0.1% year on year for the third consecutive month and have been falling in annual terms since the start of this year. The July CF expects prices to rise by 0.2% on average in 2015 as a whole, but the NBS forecast predicts slightly negative inflation. Both prediction sources expect prices to rise by around 1.6% in 2016.

III.7.2 The United States

Annual **US GDP growth** increased to 2.9% in 2015 Q1 (see Chart III.7.6). Compared to the previous quarter, however, the economy contracted by 0.2%, affected by a stronger dollar, lower oil prices restricting investment in extraction, and one-off factors – weather fluctuations and strikes in West Coast harbours. Annual economic growth was driven mainly by household consumption. By contrast, the contribution of net exports was negative, with exports falling and imports rising. Gross fixed capital formation was affected by lower investment in the energy sector. The negative contribution of government consumption stemming from public finance consolidation in recent quarters disappeared.

The **US economy continued to grow in 2015 Q2**, albeit at a weaker pace than expected at the start of the year. Production in manufacturing was flat year on year in May and June and thus rose only modestly in 2015 Q2 as a whole. Retail sales recorded an unexpected decline in June, but increased overall in Q2 as a whole. Looking ahead, household demand is expected to be supported by favourable developments on the labour market, where unemployment is continuing to fall year on year (to 5.3% in June) amid a rising participation rate. The leading indicators are favourable and are recovering the losses recorded in 2015 Q1. The ISM PMI stood at 53.5 in June for the second consecutive month, the new orders component being particularly positive. The consumer sentiment indicators are also at favourable levels, although the University of Michigan index fell slightly in July on concerns about the situation in Greece. The US economy is expected to grow by between 1.9% and 2.5% in 2015 as a whole (see Chart III.7.7). Next year, GDP growth is expected to rise by about 0.5 percentage point.

Chart III.7.6

GDP IN THE USA

US economic growth picked up pace but is being depressed by a stronger dollar, which is fostering a decline in net exports
(annual percentage changes; contributions in percentage points; seasonally adjusted; source: Datastream, CNB calculation)

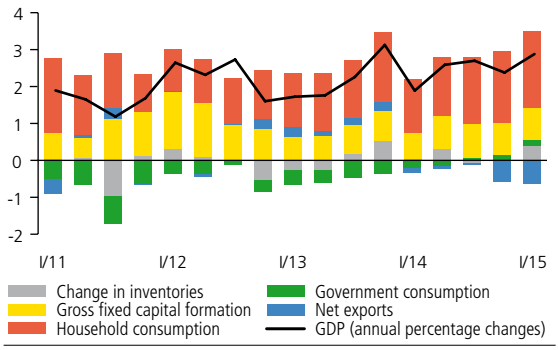
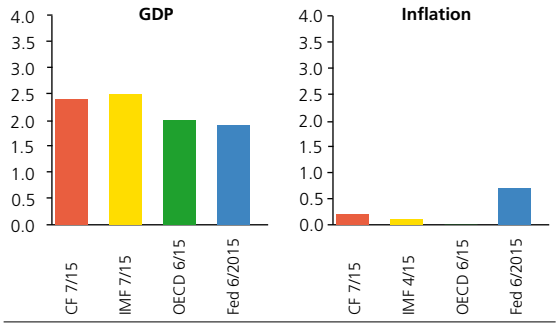


Chart III.7.7

US GDP AND INFLATION OUTLOOKS FOR 2015

Solid GDP growth is expected in 2015, while inflation will be very subdued
(annual percentage changes; source: CF, IMF, OECD, Fed)



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

Prices are still being influenced by the low oil prices and stronger dollar. Inflation reached positive figures for the first time in four months, rising to 0.2% in June (see Chart III.7.8). Inflation excluding energy and food prices remains stable (at around 1.7%) and the decline in producer prices has moderated in recent months. The monitored outlooks expect subdued growth in the price level this year. In 2016, inflation is expected to increase close to the 2% target.

At its June meeting, the **Fed** decided to maintain the target range for its key rate at 0%–0.25%. Any increase in key rates is conditional on developments in the economy, especially a further improvement in the labour market and visible signs of inflation moving back to the target.

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

In 2015 Q2, the **exchange rate of the euro against major world currencies** was affected mainly by news from the US economy and the escalation of the Greek crisis (see Chart III.7.9). US economic growth in 2015 Q1 fell short of expectations. The Q2 data do not point to a visible recovery either. However, labour market developments remain favourable. According to the Chair of the Fed's Board of Governors Janet Yellen, the interest rate can be expected to increase this year. The euro strengthened in early July after ECB President Mario Draghi said that the ECB would not react to short-term fluctuations on financial markets. The single currency was also briefly supported by expectations of an agreement on financial assistance for Greece. However, no such agreement was reached and Greece failed to repay the International Monetary Fund by the end of June.

The exchange rate of the euro against the **British pound** followed no clear trend in the same period. The results of the parliamentary elections supported the British currency in May, but the potential impact of the Greek crisis remains a source of uncertainty. GDP growth in the UK slowed in Q1 (to a revised quarterly figure of 0.4%). Inflation turned negative in April for the first time since the 1960s, so the monetary policy tightening may be postponed until 2016.

The euro appreciated against the **Japanese yen** during 2015 Q2. Japan's economic growth exceeded expectations in 2015 Q1 (with revised growth of 1% quarter on quarter), but headline inflation dropped to 0.5% in May in year-on-year terms as the effect of last year's consumption tax increase disappeared.

The euro tended to weaken against the US dollar **in the first half of July 2015**, especially after a referendum on the conditions of international assistance was called in Greece and after the results were announced. Eventually, an agreement was reached in the form of assistance from the ESM totalling around EUR 86 billion over three years, conditional on rapid implementation of economic reforms.

CHART III.7.8

INFLATION AND PRODUCER PRICES IN THE USA

The decline in consumer prices resulting from the fall in oil prices stabilised in 2015 Q2, while core inflation is holding steady just below 2%
(annual percentage changes; source: Datastream)

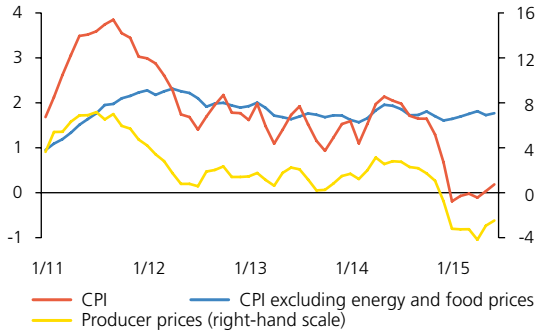
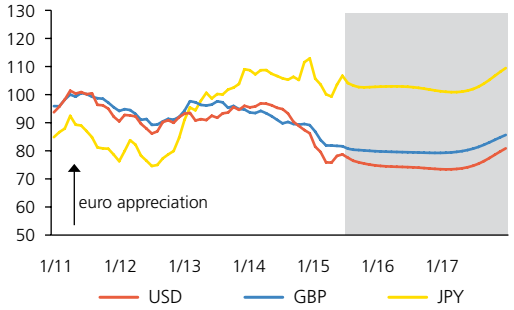


CHART III.7.9

EURO EXCHANGE RATE AGAINST MAJOR CURRENCIES

The euro's depreciation trend halted in 2015 Q2
(January 2010 = 100; source: Datastream; CNB calculation; outlook from Consensus Forecasts)



The **July CF** expects the euro to weaken further against the dollar to USD 1.06 at the one-year horizon. The euro is expected to depreciate by 1.1% against the British pound and by 1.8% against the Japanese yen at the same horizon.

III.7.4 Prices of oil and other commodities

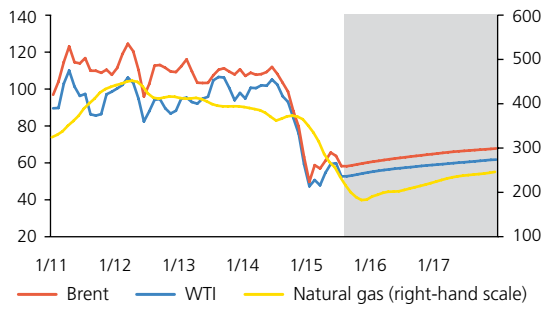
The **price of Brent crude oil** surged well above USD 60 a barrel in mid-April in reaction to slowing growth in oil extraction in the USA (see Chart III.7.10). The price then crept up until the start of May owing to a weakening dollar and escalating unrest in the Middle East. Oil prices then stabilised for two months, with the price of Brent crude oil recording only small fluctuations around a falling trend (and the price of WTI crude oil around a virtually stable level). A bigger change in market sentiment occurred in early July, when the WTI price started to decline in response to a surprising rise in US oil stocks (the first since April) and a higher rig count in the USA (observed for the first time since December 2014). The price of both types of oil then fell sharply following the Greek referendum. In the first two-thirds of July, Brent fluctuated between USD 56 and USD 59 a barrel with a slight downward tendency. WTI even fell towards USD 50 a barrel in the second half of the month owing to persisting concerns of lower GDP growth in China. Expectations of higher oil exports from Iran after an agreement was reached on its nuclear programme and continuing growth in global stocks of oil and oil products also played a role.

Chart III.7.10

OIL AND NATURAL GAS PRICES IN USD

The Brent crude oil price had been above USD 60 a barrel since mid-April but fell sharply at the start of July. Natural gas prices are gradually reflecting last year's slump in oil prices

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



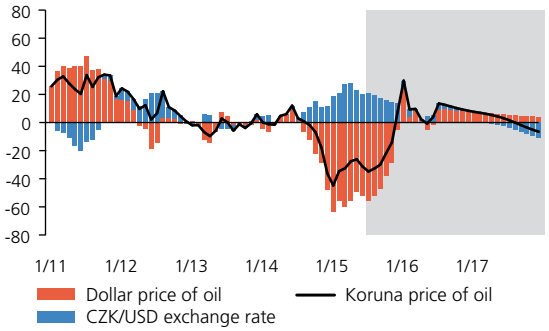
According to the IEA, **growth in physical demand** on the oil market peaked in 2015 Q1 (at 1.8 million barrels a day), owing mainly to low oil prices. However, demand growth is expected to weaken gradually as temporary stimulating factors unwind. The IEA expects daily demand to rise by 1.4 million barrels on average (to around 94 million barrels) in 2015 as a whole and slow to 1.2 million barrels in 2016. However, global oil supply continues to exceed consumption. Although oil extraction growth is slowing (and US shale extraction has been falling since May according to the EIA), it remains high following previous strong growth (at 96.6 million barrels a day in June according to the IEA, up by 3.1 million barrels year on year). Extraction growth in non-OPEC countries is expected to halt as a result of low oil prices and massive cuts in investment, but OPEC countries are still raising extraction, and Iran will also increase exports thanks to its agreement with the Western powers. However, there is currently great uncertainty about how much, and when, Iran will be able to increase its supplies. It has started to sell oil stored in tankers at sea to Asia.

Chart III.7.11

DECOMPOSITION OF KORUNA OIL PRICE GROWTH

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

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



The excess supply of oil is reflected in continued **growth in global stocks of oil** and oil products. According to the EIA, stocks rose at around 2.2 million barrels a day in the first half of this year. The growth is expected to slow to 1.5 million barrels a day in the second half of the year on account of a seasonal increase in demand and a slowdown in US production. Next year, stocks are expected to rise by 0.6 million barrels a day on average.

The **oil price forecasts** are currently quite divergent. The market outlook based on futures contracts implies an average Brent crude oil price of USD 59.2 a barrel this year and an only gradual increase to USD 62.8 a barrel next year. The EIA lowered its projection for this year to USD 60 a barrel, but continues to predict a sharper rise in 2016 (to USD 67 a barrel on average). WTI prices are expected to be USD 5 a barrel lower in both years. However, if Iranian oil returns quickly to the global market, the EIA forecast for 2016 could fall by USD 5–15 a barrel. The July CF expects a rise in the Brent price at the three-month horizon (to USD 62.8 a barrel) and the CF estimate is above the EIA projection at the one-year horizon (USD 68.6 a barrel).

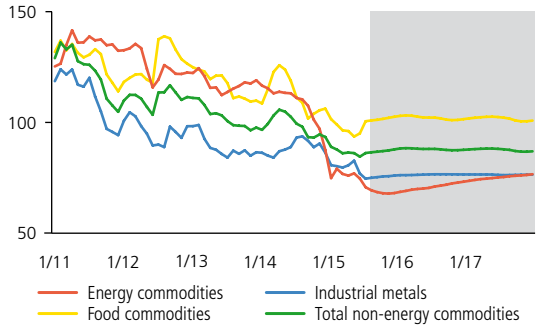
The average monthly **non-energy commodity price index** was relatively stable in 2015 H1, as the fluctuations in its components broadly offset each other (see Chart III.7.12). In mid-June, the downward trend in the food commodity sub-index halted and the index rose for the first time since December 2014 as a result of increasing demand (and therefore a faster decline in grain stocks) and a lower estimate for this year's harvest owing to worse weather. By contrast, the industrial metals sub-index rose in the first half of May on account of higher energy prices and a weaker dollar, but since then a decrease in its components has been observed almost across the board, mainly because of less favourable economic developments in China. The outlooks for all three indices are only slightly rising. Metal prices could be supported by continuing stabilisation on the property market in China and a halt in sales on the Chinese stock market. El Niño, which will probably cause worse growing conditions this year, could contribute to a rise in food commodity prices.

CHART III.7.12

COMMODITY PRICES

The total non-energy commodity price index was flat in the first half of this year, as the contrary movements in its components broadly offset each other

(January 2010 = 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

BEER	behavioural equilibrium exchange rate
CF	Consensus Forecasts
CNB	Czech National Bank
CPI	consumer price index
CZK	Czech koruna
CZSO	Czech Statistical Office
DBB	Deutsche Bundesbank
ECB	European Central Bank
EIA	Energy Information Administration
EIB	European Investment Bank
ESA	European System of Accounts
ESCB	European System of Central Banks
ESM	European Stability Mechanism
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
FDI	foreign direct investment
Fed	US central bank
FEER	fundamental equilibrium exchange rate
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
ICT	information and communications technology
IEA	International Energy Agency
ILO	International Labour Organization
IMF	International Monetary Fund
IRS	interest rate swap
JPY	Japanese yen
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
LTV	loan to value
M1, M2, M3	monetary aggregates
MLSA	Ministry of Labour and Social Affairs
NAIRU	non-accelerating inflation rate of unemployment
NBS	National Bank of Slovakia
NFCs	non-financial corporations
NiGEM	National Institute's Global Econometric Model
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
VAR	vector autoregression model
VAT	value added tax
WTI	West Texas Intermediate

Forecasts for general government debt and debt service, and sensitivity analyses	(Box)	I/2011
Price-setting behaviour in the Czech Republic (micro data evidence) in relation to the pricing mechanism in the g3 forecasting model	(Box)	II/2011
The relationship between the Brent crude oil price and the dollar exchange rate	(Box)	II/2011
The impacts of changes to VAT rates on the budget and inflation and their components in 2012 and 2013	(Box)	III/2011
Labour market developments during the economic recession and the subsequent recovery	(Box)	III/2011
The debt situation in Italy	(Box)	III/2011
Publication of the Graph of Risks to the Inflation Projection (GRIP)	(Annex)	III/2011
Pension system reform	(Box)	IV/2011
The credit rating of the Czech Republic	(Box)	IV/2011
Germany – the Czech Republic's main trading partner	(Box)	IV/2011
The pass-through of VAT to food prices at the end of 2011	(Box)	I/2012
Extraordinary revision of the quarterly national accounts	(Box)	I/2012
An analysis of the impacts of fiscal measures in the Czech Republic in 2001–2011	(Box)	I/2012
Revision of the consumer basket	(Box)	II/2012
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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
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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

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

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

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

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

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

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

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

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

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

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

Disinflation: A decline in inflation.

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

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

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

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

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

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

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

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

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

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

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

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

Price-to-rent ratio: Indicator of sustainability of apartment prices, calculated as the ratio of the price of the apartment to the annual rent. The price-to-rent ratio is the inverse of the rent return. Higher values of this indicator usually mean that apartments are overpriced. This indicator is calculated from asking rents and asking prices of apartments according to the Institute for Regional Information.

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

Property transaction prices: Prices based, on the one hand, on Ministry of Finance statistics from property transfer tax returns and published by the CZSO. These prices are the closest to actual market prices in terms of methodology, but are published with a time delay. The second, alternative source of data on transaction prices is CZSO data from a survey in estate agencies, for which the time lag is considerably shorter.

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

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

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

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

KEY MACROECONOMIC INDICATORS

		years										
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
DEMAND AND SUPPLY												
Gross domestic product												
GDP	CZK bn, constant p. of 2010, seas. adjusted	3,958.1	4,058.6	3,867.8	3,950.6	4,028.6	3,995.4	3,974.1	4,052.8	**4,206.6**	**4,324.4**	**4,444.5**
GDP	%, y-o-y, real terms, seas. adjusted	5.5	2.5	-4.7	2.1	2.0	-0.8	-0.5	2.0	**3.8**	**2.8**	**2.8**
Household consumption	%, y-o-y, real terms, seas. adjusted	4.1	2.8	-0.6	0.9	0.3	-1.5	0.7	1.5	**3.5**	**2.8**	**2.9**
Government consumption	%, y-o-y, real terms, seas. adjusted	0.4	1.1	3.0	0.4	-3.0	-1.8	2.3	1.8	**2.2**	**2.0**	**1.9**
Gross capital formation	%, y-o-y, real terms, seas. adjusted	14.3	0.9	-17.8	4.2	1.9	-3.9	-5.1	4.4	**7.3**	**3.7**	**3.6**
Exports of goods and services	%, y-o-y, real terms, seas. adjusted	11.0	3.8	-9.5	14.4	9.3	4.5	0.0	8.9	**9.1**	**9.2**	**6.7**
Imports of goods and services	%, y-o-y, real terms, seas. adjusted	12.8	2.8	-10.7	14.5	6.7	2.8	0.1	9.9	**10.1**	**9.9**	**7.2**
Net exports	CZK bn, constant p. of 2010, seas. adjusted	60.3	86.9	108.1	121.8	198.4	251.0	250.4	245.6	**237.0**	**236.5**	**233.6**
Coincidence indicators												
Industrial production	%, y-o-y, real terms	10.6	-1.8	-13.6	8.6	5.9	-0.8	-0.1	5.0	**-**	**-**	**-**
Construction output	%, y-o-y, real terms	7.1	0.0	-0.9	-7.4	-3.6	-7.6	-6.7	4.3	**-**	**-**	**-**
Receipts in retail sales	%, y-o-y, real terms	10.0	2.7	-4.7	1.5	1.7	-1.1	1.2	5.5	**-**	**-**	**-**
PRICES												
Main price indicators												
Inflation rate	%, end-of-period	2.8	6.4	1.1	1.5	1.9	3.3	1.4	0.4	**-**	**-**	**-**
Consumer Price Index	%, y-o-y, average	2.5	6.4	1.1	1.5	1.9	3.3	1.4	0.4	**0.6**	**1.7**	**2.1**
Regulated prices (18.70%)*	%, y-o-y, average	4.9	15.6	8.4	2.6	4.7	8.6	2.2	-3.0	**-0.1**	**0.0**	**2.0**
Net inflation (81.30%)*	%, y-o-y, average	1.5	2.4	-0.9	0.0	1.3	1.0	0.5	0.9	**0.5**	**1.8**	**2.0**
Food prices (including alcoholic beverages and tobacco) (24.58%)*	%, y-o-y, average	3.8	3.0	-0.9	0.9	3.9	2.9	3.1	1.8	**0.8**	**2.0**	**2.2**
Adjusted inflation excluding fuels (53.32%)*	%, y-o-y, average	0.5	2.0	0.0	-1.2	-0.7	-0.3	-0.5	0.5	**1.2**	**1.6**	**1.9**
Fuel prices (3.39%)*	%, y-o-y, average	-0.1	4.3	-11.1	12.8	9.9	6.0	-2.1	0.2	**-11.2**	**3.6**	**2.2**
Monetary policy inflation (excluding tax changes)	%, y-o-y, average	1.9	4.3	0.9	0.4	1.9	2.1	0.6	0.2	**0.1**	**1.5**	**2.0**
GDP deflator	%, y-o-y, seas. adjusted	3.5	2.0	2.6	-1.4	-0.2	1.4	1.4	2.5	**1.3**	**1.7**	**2.1**
Partial price indicators												
Industrial producer prices	%, y-o-y, average	4.1	4.5	-3.1	1.2	5.6	2.1	0.8	-0.8	**-2.2**	**1.7**	**1.8**
Agricultural prices	%, y-o-y, average	16.5	9.3	-24.9	7.1	22.1	3.3	5.0	4.7	**-6.5**	**1.5**	**3.0**
Construction work prices	%, y-o-y, average	3.9	4.5	1.2	-0.2	-0.5	-0.7	-1.1	0.5	**-**	**-**	**-**
Brent crude oil	%, y-o-y, average	9.9	35.4	-36.5	28.4	38.2	0.7	-2.6	-8.5	**-40.5**	**6.2**	**5.9**
LABOUR MARKET												
Average monthly wage	%, y-o-y, nominal terms	7.2	7.8	3.3	2.2	2.5	2.5	-0.1	2.3	**2.8**	**4.3**	**4.4**
Average monthly wage	%, y-o-y, real terms	4.3	1.4	2.3	0.7	0.6	-0.8	-1.5	1.9	**2.1**	**2.6**	**2.3**
Number of employees	%, y-o-y	1.8	1.6	-2.2	-2.2	0.0	-0.1	1.6	0.6	**1.7**	**0.5**	**0.6**
Unit labour costs	%, y-o-y	2.6	4.7	3.0	-1.7	0.3	3.5	1.0	0.0	**0.6**	**2.2**	**2.5**
Unit labour costs in industry	%, y-o-y	3.4	-1.7	3.3	-6.2	0.7	5.5	4.9	-1.9	**-**	**-**	**-**
Aggregate labour productivity	%, y-o-y	3.4	0.5	-3.1	3.4	2.2	-1.3	-0.8	1.4	**2.8**	**2.2**	**2.2**
ILO general unemployment rate	%, average, age 15–64	5.4	4.4	6.7	7.4	6.8	7.0	7.1	6.2	**5.8**	**5.2**	**4.8**
Share of unemployed	%, average	4.9	4.1	6.2	7.0	6.7	6.8	7.7	7.7	**6.5**	**5.9**	**5.5**
PUBLIC FINANCE												
Public finance deficit (ESA 2010)	CZK bn, current p.	-26.6	-84.6	-216.2	-174.5	-108.9	-157.9	-47.2	-84.6	**-60.9**	**-27.3**	**-10.7**
Public finance deficit / GDP**	%, nominal terms	-0.7	-2.1	-5.5	-4.4	-2.7	-3.9	-1.2	-2.0	**-1.4**	**-0.6**	**-0.2**
Public debt (ESA 2010)	CZK bn, current p.	1,065.5	1,150.7	1,335.7	1,508.5	1,604.0	1,803.6	1,839.7	1,816.1	**1,825.6**	**1,843.7**	**1,871.9**
Public debt / GDP**	%, nominal terms	27.8	28.7	34.1	38.2	39.9	44.6	45.0	42.6	**40.7**	**39.3**	**38.0**
EXTERNAL RELATIONS												
Current account												
Trade balance	CZK bn, current p.	10.4	-4.4	65.0	40.4	75.5	123.8	167.0	238.9	**265.0**	**290.0**	**315.0**
Trade balance / GDP	%, nominal terms	0.3	-0.1	1.7	1.0	1.9	3.1	4.1	5.6	**5.9**	**6.2**	**6.4**
Balance of services	CZK bn, current p.	88.1	89.3	81.9	78.5	81.3	77.6	70.4	55.9	**55.0**	**50.0**	**50.0**
Current account	CZK bn, current p.	-164.5	-75.3	-89.2	-141.8	-84.8	-63.3	-21.8	26.1	**50.0**	**50.0**	**35.0**
Current account / GDP	%, nominal terms	-4.3	-1.9	-2.3	-3.6	-2.1	-1.6	-0.5	0.6	**1.1**	**1.1**	**0.7**
Foreign direct investment												
Direct investment	CZK bn, current p.	-179.1	-36.3	-37.7	-95.0	-46.8	-121.3	7.4	-133.6	**20.0**	**-70.0**	**-70.0**
Exchange rates												
CZK/USD	average	20.3	17.1	19.1	19.1	17.7	19.6	19.6	20.8	**-**	**-**	**-**
CZK/EUR	average	27.8	25.0	26.5	25.3	24.6	25.1	26.0	27.5	**-**	**-**	**-**
CZK/EUR	%, y-o-y, real (CPI euro area), avg.	-2.2	-12.6	5.3	-4.6	-2.1	1.5	3.5	6.0	**-**	**-**	**-**
CZK/EUR	%, y-o-y, real (PPI euro area), avg.	-3.7	-8.6	4.6	-4.1	-3.1	2.6	2.3	4.8	**-**	**-**	**-**
Foreign trade prices												
Prices of exports of goods	%, y-o-y, average	1.3	-4.6	0.2	-1.0	1.7	2.9	1.2	3.5	**-0.8**	**1.0**	**0.2**
Prices of imports of goods	%, y-o-y, average	-1.0	-3.3	-3.5	2.0	4.3	4.2	-0.2	1.9	**-1.3**	**1.2**	**0.5**
MONEY AND INTEREST RATES												
M2	%, y-o-y, average	11.6	9.5	5.7	4.3	3.6	5.6	4.4	4.2	**5.7**	**6.1**	**6.5**
2W repo rate	%, end-of-period, CNB forec. = avg.	3.50	2.25	1.00	0.75	0.75	0.05	0.05	0.05	**0.05**	**0.05**	**0.89**
3M PRIBOR	%, average	3.1	4.0	2.2	1.3	1.2	1.0	0.5	0.4	**0.3**	**0.3**	**1.2**

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

2013				2014				2015				2016				2017			
QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV	QI	QII	QIII	QIV
984.6	989.6	992.8	1,007.1	1,005.8	1,010.8	1,015.8	1,020.4	1,046.3	1,045.1	1,053.8	1,061.3	1,067.6	1,076.2	1,084.8	1,095.8	1,100.9	1,107.0	1,114.1	1,122.5
-2.1	-1.2	-0.3	1.4	2.2	2.1	2.3	1.3	4.0	3.4	3.7	4.0	2.0	3.0	2.9	3.2	3.1	2.9	2.7	2.4
-0.2	0.4	1.1	1.5	1.1	1.3	1.5	2.0	2.9	3.4	3.8	3.6	3.0	2.8	2.8	2.7	2.7	2.8	3.0	3.3
1.1	1.4	3.4	3.5	1.4	2.5	0.6	2.7	2.5	2.2	2.8	1.3	2.0	2.1	1.9	1.9	1.9	1.9	2.0	2.0
-6.9	-12.0	-1.8	0.7	1.7	10.7	5.7	0.1	10.1	3.4	5.3	10.8	3.3	5.8	5.0	0.8	3.8	3.6	3.5	3.6
-5.0	-0.1	0.2	5.1	11.7	8.7	7.8	7.5	7.7	8.2	10.3	10.2	8.4	9.8	9.3	9.4	8.2	7.1	6.3	5.2
-4.8	-2.2	1.7	5.7	11.3	11.7	8.3	8.3	8.9	8.2	11.2	12.0	10.0	11.0	10.2	8.4	8.3	7.5	6.9	6.2
58.8	71.6	60.3	59.6	68.2	57.7	61.5	58.2	64.6	61.8	60.9	49.6	57.2	57.7	58.9	62.8	60.8	58.8	57.5	56.5
-5.9	-2.8	3.7	5.0	6.9	6.0	4.0	3.2	4.5	-	-	-	-	-	-	-	-	-	-	-
-11.2	-11.7	-3.9	-3.1	13.3	5.6	2.9	0.7	6.9	-	-	-	-	-	-	-	-	-	-	-
-2.7	0.4	2.9	3.8	7.0	4.7	5.7	4.7	7.9	-	-	-	-	-	-	-	-	-	-	-
2.8	2.3	1.8	1.4	1.0	0.7	0.5	0.4	0.3	0.5	-	-	-	-	-	-	-	-	-	-
1.8	1.5	1.2	1.1	0.2	0.2	0.6	0.5	0.1	0.7	0.7	1.0	1.8	1.6	1.6	1.8	2.1	2.1	2.1	2.1
3.5	2.6	1.5	1.3	-4.1	-3.5	-2.2	-2.1	0.2	0.3	-0.3	-0.5	0.1	-0.2	-0.1	0.2	2.0	2.1	2.0	1.9
0.6	0.6	0.5	0.3	1.0	0.7	1.0	0.8	-0.2	0.5	0.6	1.2	1.9	1.6	1.7	1.8	1.9	2.0	2.0	2.0
3.0	3.8	3.3	2.4	3.5	1.5	1.5	0.7	-0.9	0.7	1.3	2.1	2.3	1.6	1.9	1.9	2.1	2.2	2.3	2.3
-0.4	-0.6	-0.7	-0.4	-0.2	0.4	0.8	0.9	1.1	1.1	1.1	1.4	1.5	1.6	1.6	1.6	1.8	1.8	1.9	2.0
-1.5	-3.8	-1.4	-1.7	0.3	1.0	0.5	-1.2	-14.6	-10.1	-11.0	-9.1	5.3	1.9	2.8	4.3	3.7	3.0	1.9	0.1
0.9	0.8	0.4	0.3	0.1	0.0	0.5	0.3	-0.1	0.4	0.5	0.9	1.6	1.3	1.4	1.6	2.0	2.0	2.0	2.0
1.3	1.1	1.3	1.9	2.2	2.8	2.9	2.1	1.1	1.9	0.8	1.4	2.0	1.1	2.0	1.9	1.5	1.9	2.4	2.7
1.2	0.5	0.7	0.8	-0.7	-0.2	-0.1	-1.9	-3.3	-2.3	-2.5	-0.6	1.9	1.4	1.7	1.6	1.7	1.7	1.8	1.9
14.5	9.3	1.5	-4.3	-4.4	-2.1	-2.3	-6.0	-9.3	-10.9	-5.1	1.4	-0.1	1.8	2.3	2.4	2.6	3.1	3.3	3.2
-1.0	-1.3	-1.3	-0.8	-0.3	0.5	0.7	0.9	1.0	1.1	-	-	-	-	-	-	-	-	-	-
-4.6	-4.3	0.3	-0.7	-4.2	6.2	-5.7	-29.5	-48.9	-42.1	-43.5	-20.8	11.4	-1.7	8.7	7.9	7.5	7.2	7.0	6.8
-0.6	1.0	1.2	-2.0	3.2	2.1	1.6	2.2	2.2	2.5	3.1	3.4	4.0	4.4	4.4	4.4	4.3	4.4	4.4	4.4
-2.4	-0.5	0.0	-3.1	3.0	1.9	1.0	1.7	2.1	1.7	2.4	2.3	2.3	2.8	2.7	2.6	2.2	2.2	2.3	2.3
2.0	2.4	0.9	1.3	0.4	-0.2	1.0	1.2	2.2	2.0	1.6	1.1	0.3	0.5	0.5	0.6	0.7	0.7	0.6	0.5
2.8	2.3	1.1	-2.1	-0.1	-0.2	-1.3	1.4	-0.7	1.1	1.2	0.7	2.6	1.9	2.2	2.1	2.4	2.5	2.5	2.6
6.0	6.1	4.1	3.4	-0.9	-1.4	-3.6	-1.9	-0.5	-	-	-	-	-	-	-	-	-	-	-
-3.1	-1.9	0.4	1.1	1.6	2.1	2.0	0.0	2.9	2.2	2.8	3.5	1.8	2.3	2.2	2.5	2.4	2.3	2.2	2.1
7.5	6.8	7.0	6.8	6.9	6.1	6.0	5.8	6.1	5.7	5.7	5.6	5.7	5.1	5.1	5.0	5.2	4.7	4.8	4.7
8.0	7.5	7.5	7.8	8.5	7.6	7.4	7.2	7.5	6.4	6.1	6.1	6.6	5.8	5.5	5.6	6.1	5.4	5.2	5.4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48.4	59.7	31.7	27.3	77.4	68.2	51.7	41.6	78.9	79.0	58.0	49.1	85.0	85.0	66.0	54.0	92.0	91.0	72.0	60.0
5.1	5.9	3.1	2.5	7.9	6.4	4.7	3.7	7.6	7.0	5.1	4.2	7.9	7.3	5.5	4.3	8.2	7.4	5.7	4.6
21.7	18.2	14.5	16.0	20.4	15.2	12.2	8.1	17.8	16.0	11.0	10.2	17.0	13.0	10.0	10.0	17.0	13.0	10.0	10.0
16.5	-4.0	-29.1	-5.2	83.6	-29.2	-33.3	5.0	91.5	-13.0	-35.0	6.5	97.0	-17.0	-39.0	9.0	89.0	-16.0	-43.0	5.0
1.8	-0.4	-2.8	-0.5	8.5	-2.7	-3.0	0.5	8.8	-1.2	-3.1	0.5	9.0	-1.5	-3.3	0.7	7.9	-1.3	-3.4	0.4
1.9	1.9	1.9	1.9	-38.7	-59.0	-29.7	-6.3	-15.2	-	-	-	-	-	-	-	-	-	-	-
19.4	19.8	19.5	19.6	20.0	20.0	20.9	22.1	24.5	24.8	-	-	-	-	-	-	-	-	-	-
25.6	25.8	25.9	26.7	27.4	27.4	27.6	27.6	27.6	27.4	-	-	-	-	-	-	-	-	-	-
2.1	2.5	3.5	5.9	7.9	6.6	6.6	3.2	0.4	-0.7	-	-	-	-	-	-	-	-	-	-
1.8	1.7	1.9	3.9	6.1	4.8	5.1	3.3	1.1	-0.1	-	-	-	-	-	-	-	-	-	-
0.9	0.6	0.4	2.9	4.1	3.4	4.7	2.0	-0.5	-0.3	-1.4	-0.8	0.2	0.7	1.6	1.5	0.7	0.3	0.0	0.0
-0.3	-0.7	-0.9	1.0	2.4	1.3	2.9	1.2	-1.5	0.0	-2.1	-1.7	0.2	0.1	2.1	2.5	1.5	0.9	0.2	-0.4
4.2	4.1	4.9	4.6	4.6	4.5	3.4	4.4	5.0	5.7	6.1	5.9	5.9	5.9	6.1	6.3	6.7	6.5	6.4	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	0.05	0.05	0.63	0.90	0.99	1.05
0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9	1.2	1.3	1.3

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