Narodowy Bank Polski
Monetary Policy Council

November 2017

Inflation Report

The *Inflation Report* presents the Monetary Policy Council's assessment of the macroeconomic developments influencing inflation. The projection of inflation and GDP presented in Chapter 4 was prepared at the Economic Analysis Department of Narodowy Bank Polski (NBP). In terms of the contents, works on the projection were supervised by Piotr Szpunar, Director of the Economic Analysis Department. The projection was prepared with the use of the NECMOD macroeconomic model. The NBP Management Board approved the submission of the projection to the Monetary Policy Council. The inflation projection is one of the inputs to the Monetary Policy Council's decision-making process.

The time frame of the analysis presented in the Report is conditioned by the availability of macroeconomic data. In turn, the periodisation of the analysis (breakdown into sub-periods) is conditioned by the development of particular variables. The cut-off date for the data in this Report was 25 October 2017.

This *Inflation Report* is a translation of NBP’s *Raport o inflacji* in Polish. In case of discrepancies, the original prevails.

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Summary

World economy continues to recover. Yet, global GDP growth remains lower than before the financial crisis. Economic conditions in Poland's major trading partners are still favourable. In 2017 Q2, economic growth both in the euro area and in the United States accelerated again, driven further by consumption demand. Economic conditions in the major emerging market economies are also better than in previous years.

Despite ongoing recovery in the global economy, consumer price growth abroad remains moderate and in many economies remains below inflation targets. Moderate inflation abroad is supported by relatively low core inflation amid economic growth, which in many countries is still lower than before the global financial crisis.

Against this background, the European Central Bank (ECB) is keeping interest rates close to zero, including the deposit rate below zero, and continues to purchase assets. In October, the ECB decided to extend its asset purchase programme at least till September 2018, and at the same time to reduce the scale of monthly purchases as of 2018. The Federal Reserve (Fed) has continued to tighten its monetary policy. The Fed has also started to gradually reduce its balance sheet, by decreasing asset reinvestment.

Sentiment in the global financial markets has been improving significantly since the beginning of 2017, backed by the continued global economic recovery amid still accommodative global monetary conditions. These also supported further increase in stock market indices around the world which in many developed countries have reached levels close to their record highs. The improved sentiment in the global financial markets was coupled with a fall in bond yields in emerging market economies as well as appreciation of their currencies.

Annual consumer price growth in Poland remains moderate. This is attributable to still low inflationary pressure related, on the one hand, to only gradually rising domestic demand pressure, and on the other hand, to slow import price growth. At the same time, food price growth is markedly higher than in previous quarters, while energy prices are rising moderately.

Economic conditions in Poland are favourable and GDP growth remains close to 4% y/y. Growth has been driven primarily by increasing consumer demand, supported by rising employment and wages, very good consumer sentiment and disbursement of benefits. Investment growth picked up to a slightly positive level in 2017 Q2 and inventories also added to GDP growth. At the same time, the contribution of net exports turned negative, as exports weakened more substantially than imports. Leading economic indicators as well as developments in industry, construction and retail trade in 2017 Q3 suggest that economic conditions in Poland remain favourable.

A steady rise in demand across the economy amid high capacity utilisation is conducive to further growth in labour demand. This drives continued employment growth and a fall in unemployment. Consequently, the position of employees in pay negotiations is improving, which translates into a stronger wage and unit labour cost growth.

Stable economic growth is accompanied by the growth in credit to the non-financial sector at the rate close to that of the nominal GDP. Loans to households remain the most important source of lending to the non-financial sector. Loans to the corporate sector are also growing.

Against this background, the Monetary Policy Council has been keeping the NBP interest rates unchanged, including the reference rate at 1,50%. The majority of market participants expect interest rates to remain stable also in the coming quarters.

In recent months, government bond yields have not changed markedly due to the relatively stable expected NBP interest rates and no significant change in term premium. Improving sentiment in global financial markets and the favourable domestic economic conditions contributed to further rise in equity prices, although at a slower rate than in the first half of the year, as well as a further appreciation of the zloty. Residential real estate prices increase slightly, which is related to continuously high housing demand.

In 2017 Q2, the current account balance was lower than a quarter before, yet still close to its historical high. In turn, the combined capital and current account balance remained in surplus which was attributable to stronger inflow of EU investment funds under the European Regional Development Fund and the Cohesion Fund. Meanwhile, the financial account balance decreased.

The *Report* is structured as follows: Chapter 1 presents the analysis of economic conditions in the external environment of the Polish economy in terms of their impact on inflation developments in Poland. These developments and the domestic factors that might affect them have been described in Chapter 2. *Minutes of the Monetary Policy Council decision-making meetings* held in July – October 2017, together with the *Information from the meeting of the Monetary Policy Council* in November 2017 are presented in Chapter 3. *Minutes* of the MPC meeting held in November will be published on 23 November 2017 and so will be included in the next *Report*. The Monetary Policy Council voting records from the meetings held between May and September 2017 can be found in Chapter 5. This *Report* also includes a box: *Balance sheet reduction by the Federal Reserve*.

Chapter 4 of the *Report* presents the projection for inflation and GDP based on the NECMOD model, which is one of the inputs into the Council's decision-making process on the NBP interest rates. In line with the November projection – prepared under the assumption of unchanged NBP interest rates and taking into account data available until 18 October 2017 – there is a 50-per cent probability that the annual price growth will be in the range of 1.9-2.0% in 2017 (compared to 1.6-2.3% in the July 2017 projection), 1.6-2.9% in 2018 (as against 1.1-2.9%) and 1.7-3.7% in 2019 (versus 1.3-3.6%). The annual GDP growth – under this projection – will be, with a 50-per cent probability, in the range of 3.8-4.6% in 2017 (as compared to 3.4-4.7% in the July 2017 projection), 2.8-4.5% in 2018 (as against 2.5-4.5%) and 2.3-4.3% in 2019 (versus 2.3-4.3%).

1 External developments

1.1 Economic activity abroad

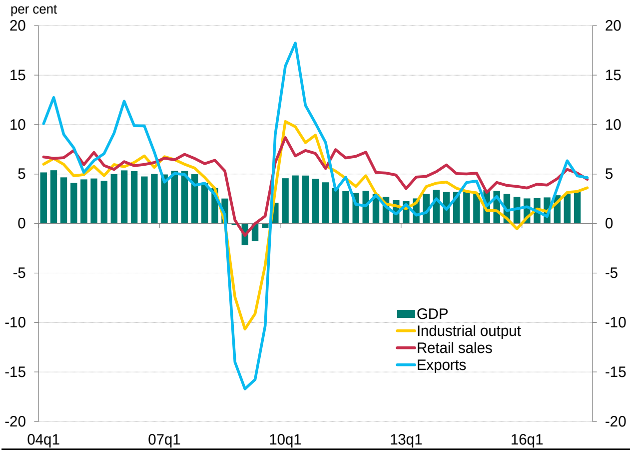
Global economy continues to recover. Yet, global GDP growth remains lower than before the global financial crisis (Figure 1.1).

Economic conditions in Poland's major trading partners remain favourable. In 2017 Q2, economic growth in the euro area accelerated again (to 2.3% y/y), while incoming data indicate that GDP growth will continue at a similar rate also in 2017 Q3. The major driver of GDP growth in this economy remains domestic demand, particularly consumer demand, with a somewhat smaller role of investment compared to previous quarters (Figure 1.2). Domestic demand growth in the euro area is supported by the ongoing improvement in labour market conditions and favourable sentiment of economic agents, as well as still expansionary monetary policy of the European Central Bank (see Chapter 1.4 *Monetary policy abroad*).

Amid ongoing increase in world trade turnover, foreign trade conditions of the euro area are favourable. Despite the appreciation of the euro, the contribution of net exports to GDP was positive in 2017 Q2 (Figure 1.2). At the same time, growth in exports and imports of goods manufactured within global supply chains, particularly cars and car parts, slowed down markedly (Figure 1.3). This was related to less working days in the European industry in 2017 Q2 and to some deceleration in car sales following many years of a robust growth.

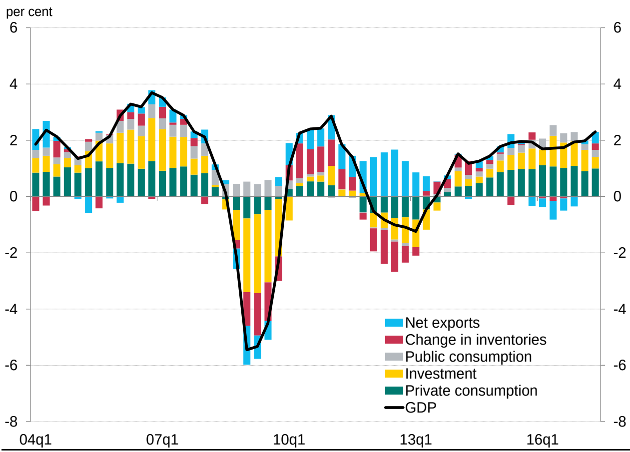
The weakening of growth in trade within the global supply chains had also a negative impact on foreign trade of Central and Eastern European economies. Yet, the main driver of economic growth in these countries was still domestic demand, supported by good labour market conditions, positive consumer sentiment and

Figure 1.1 GDP growth and global economic activity indicators (y/y)



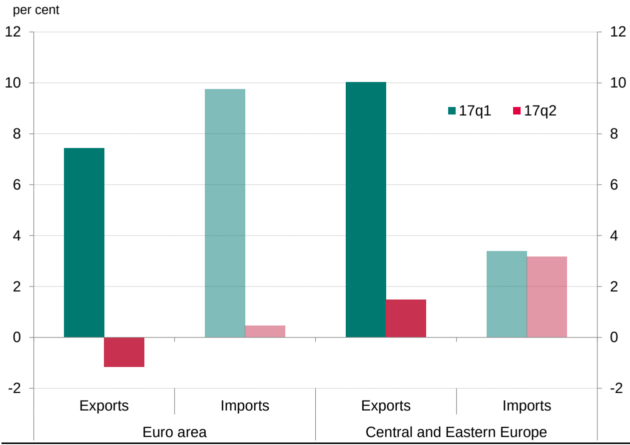
Source: Bloomberg, Centraal Planbureau, Eurostat, IMF data, NBP calculations.
GDP, industrial output and retail sales – GDP-weighted average annual growth in economies comprising 80% of global GDP in 2016. Exports – global export growth rate estimated by Centraal Planbureau.

Figure 1.2 GDP growth in the euro area and its components (y/y)



Source: Eurostat data, NBP calculations.

Figure 1.3 Export growth of cars and car parts for selected groups of countries (y/y)



Source: Eurostat data, NBP calculations.
Central and Eastern Europe – non-euro area Central and Eastern European EU member states (excluding Poland).

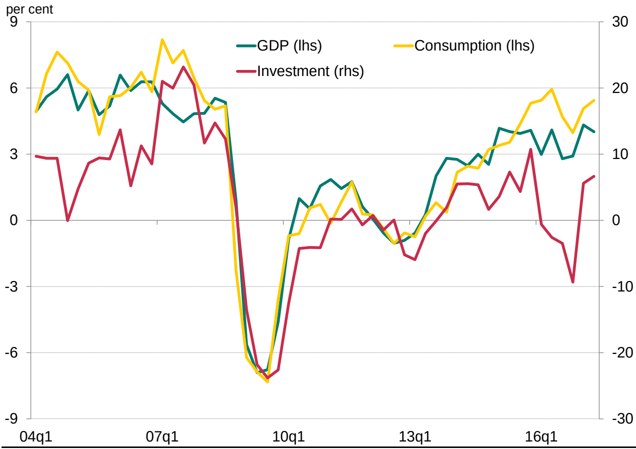
stronger wage growth compared with previous years. As a result, economic growth in Central and Eastern Europe picked up after a marked slowdown in 2016 (Figure 1.4).

In the United States, GDP growth also accelerated in 2017 Q2 (Figure 1.5), driven mainly by consumer demand, which was supported by further growth in employment and wages, and improving balance sheets of US households (see Chapter 1.5 *International financial markets*). Simultaneously, investment has been recovering for several quarters. Available data suggest that the positive trends will continue in the coming quarters. Yet, in 2017 Q3 economic growth was adversely affected by hurricanes, which had lowered production and sales in several regions of the country.

In the United Kingdom, following a slowdown observed since early 2015, economic growth stabilised in 2017 Q3 at a level close to its long-run average (Figure 1.5). GDP growth has been supported by rising consumer demand and increasing investment after a decline in the previous year. Export growth is also higher than in the previous year, as the British pound, in spite of the recent appreciation, remains relatively weak.

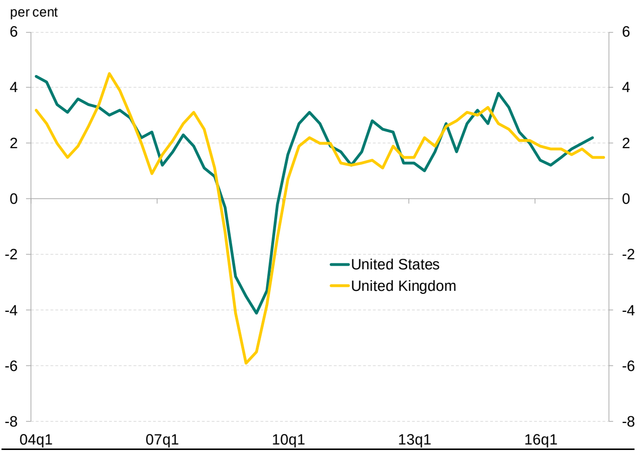
Economic conditions in the major emerging market economies are also better than in previous years (Figure 1.6). In China, GDP growth has been relatively stable, in spite of some deceleration in 2017 Q3 resulting from weaker housing and infrastructural investment following its significant pick-up in the first half of 2017. At the same time, consumption continued to grow at a pace similar to the preceding quarters. In Russia, in turn, economic growth accelerated notably in 2017 Q2. However, structural problems, the macroeconomic impact of sanctions and relatively low, despite some increase, oil prices continue to weigh on economic activity in this country.

Figure 1.4 Economic growth and its selected components in countries of Central and Eastern Europe (y/y)



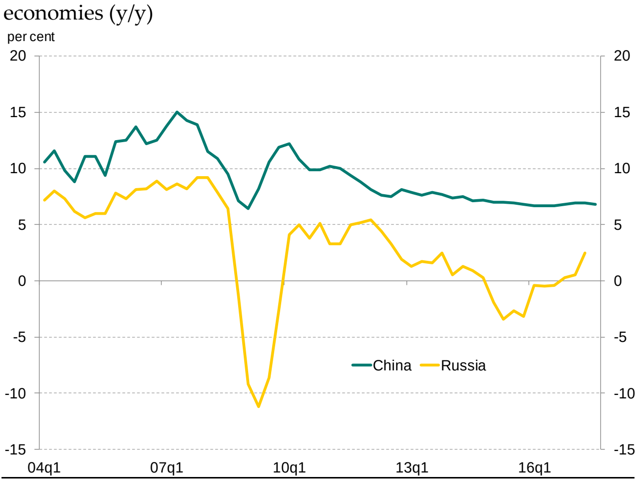
Source: Eurostat data, NBP calculations.
GDP-weighted annual growth rate of the total GDP, private consumption and gross fixed capital formation in non-euro area Central and Eastern European EU member states (excluding Poland).

Figure 1.5 Economic growth in selected advanced economies (y/y)



Source: Bloomberg data.

Figure 1.6 Economic growth in selected emerging market economies (y/y)



Source: Bloomberg data.

1.2 Inflationary developments abroad

Despite ongoing recovery in the global economy, consumer price growth abroad remains moderate. In many economies, it remains below inflation targets (Figure 1.7).

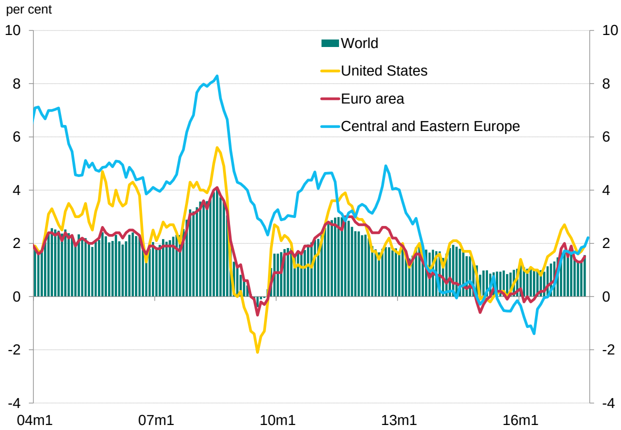
Moderate inflation abroad is supported by relatively low core inflation amid economic growth, which in many countries is still lower than before the global financial crisis (see Chapter 1.1 *Economic activity abroad*; Figure 1.8). At the same time, the rise in energy commodity prices translated into a pick up in the energy price growth rates in 2017 Q3 (see Chapter 1.3 *Global commodity markets*).

In the euro area, inflation remains lower than the ECB's definition of price stability (1.5% y/y in September 2017). Inflation increase in this region has been limited by the recent appreciation of the euro (see Chapter 1.5 *International financial markets*) and still low domestic inflationary pressure.

In the United States, inflation is still higher than in many other major advanced economies, including the euro area, backed by robust economic recovery evolving over past few years. More recently, an increase in inflation in this country was supported by the acceleration in energy price growth, at a higher pace than in other advanced economies. Higher energy prices stemmed from a simultaneous fall in shale oil output and a sharp increase in demand for petrol in the wake of adverse weather conditions in selected regions of this country.

In turn, in the Central and Eastern European economies inflationary pressure has increased of late amid a rise in wage growth. As a result, headline and core inflation rates have increased, yet are still below their long-term averages.

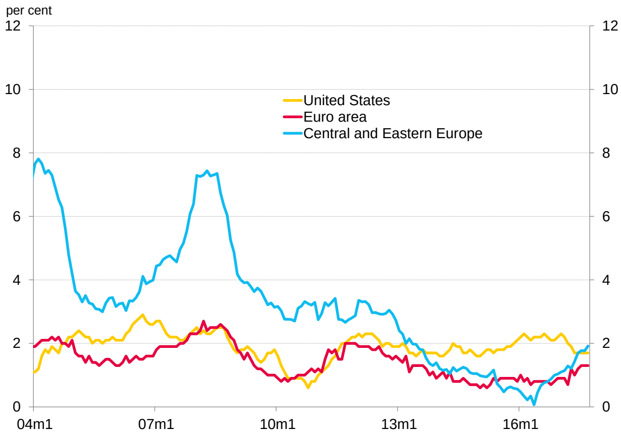
Figure 1.7 CPI inflation globally and in selected economies (y/y)



Source: Bloomberg data, NBP calculations.

World – GDP-weighted average consumer price inflation in economies comprising 80% of global GDP. Central and Eastern Europe – GDP-weighted annual CPI inflation in the non-euro area Central and Eastern European EU member states (excluding Poland). United States – annual CPI inflation. Euro area – annual HICP inflation.

Figure 1.8 Core inflation indices in the United States, the euro area and Central and Eastern Europe (y/y)



Source: Bloomberg data, NBP calculations.

United States – annual CPI inflation excluding food and energy prices. Euro area – annual HICP inflation excluding unprocessed food and energy prices. Central and Eastern Europe – GDP-weighted annual HICP inflation excluding unprocessed food and energy prices in in the non-euro area CEE EU member states (excluding Poland).

1.3 Global commodity markets

Global energy commodity prices have picked up over recent months. At the same time, agricultural commodity prices have fallen substantially (Figure 1.9; Figure 1.10; Figure 1.11).

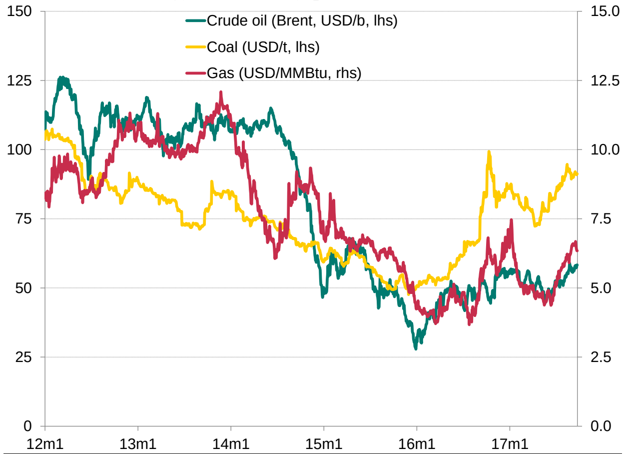
The price increase affected all major energy commodities. Oil prices have risen by almost 9 USD per barrel since early July 2017, however, despite this recent rise, prices remain below long term average (Figure 1.10). The price increase was driven mainly by supply-side constraints, although overall production remained high. In particular, oil production was curbed by the agreement on supply cuts between the Organization of the Petroleum Exporting Countries (OPEC) and selected other oil exporters, including Russia. In addition, oil production and exports had decreased in the United States due to a fall in the number of active shale rigs and disruptions caused by hurricanes in the areas where oil is extracted, processed and exported. These factors had also curbed oil inventories in the United States. In addition, oil prices growth was affected by new geopolitical tensions in the Middle East. Finally, a rise in demand, resulting from improving global economic conditions (see Chapter 1.1 *Economic activity abroad*) and increased purchases by China, were another factors supporting higher oil prices.

Other energy commodity prices have also risen since the previous *Report* (Figure 1.10). Coal prices were driven up in particular by the United States' announcement of a withdrawal from the Paris Agreement on climate change, amid disturbances in extraction and transportation of coal observed in some countries.[1] In turn, the increase in gas prices observed since mid-July resulted primarily from

Figure 1.9 Commodity price index

Source: Bloomberg data, NBP calculations.
Thomson Reuters/CoreCommodity CRB index, which is an is an arithmetic average of prices for the following 19 commodity futures: aluminium, unleaded gasoline, cocoa, coffee, copper, corn, cotton, crude oil, gold, heating oil, hogs, live cattle, natural gas, nickel, orange juice, silver, soybeans, sugar and wheat.

Figure 1.10 Energy commodity prices



Source: Bloomberg data, NBP calculations.
USD/b – US dollar per barrel (approx. 159 l) of oil. USD/MMBTu – price expressed in US dollar of British Thermal Unit, i.e. unit representing a quantity of energy required to raise the temperature of 1 pound (approx. 0.45 kg) of water by 1°F (slightly more than 0.5°C).

[1] The most important one was hurricane Debbie, which in the first half of 2017 had damaged both coal pits and the infrastructure for transportation of this commodity in Australia, which accounts for approx. 50% of the output of metallurgical coal. Exports of Australian coal were also negatively affected by blockades in Indonesian ports. Disturbances also occurred in the Russian Far East, where heavy rains had hampered coal transport by rail.

higher demand for this commodity related to relatively warm summer in some European countries and the intensified use of air conditioning.

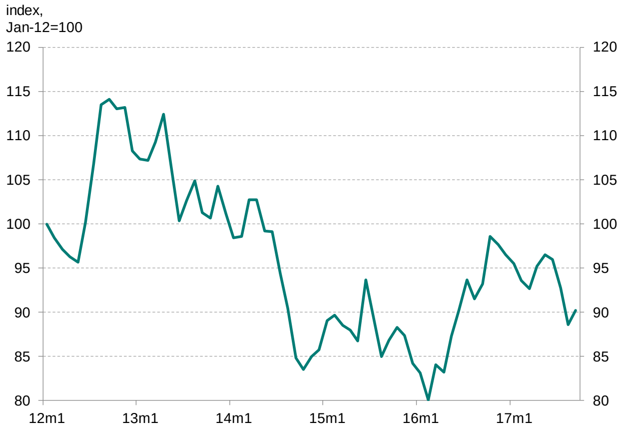
Since the previous *Report*, prices of most agricultural commodities have declined. This fall was associated with an increase in the global supply of certain agricultural commodities, notably dairy products and potatoes. Additionally, demand for pork in Asia fell and led to a subsequent fall in its prices. At the same time, both output and inventories of butter in the global market decreased. Amid heightened demand for this product, this contributed to a substantial increase in its price, containing a decline in the agricultural commodity price index (Figure 1.11).

1.4 Monetary policy abroad

Given the very strong labour market in the US and expected medium-term stabilization of inflation around the central bank's objective, the Federal Reserve (the Fed) has continued to tighten its monetary policy in recent months. In 2017, the Fed has raised the target range for the fed funds rate twice (each time by 0.25 percentage points) to 1.00-1.25%. The median projection of the Federal Open Market Committee (FOMC) indicates that the fed funds rate may be increased one more time in 2017 by 0.25 percentage points, and three times in 2018 by a total of 0.75 percentage points. Market participants also expect further fed funds rate hikes over the coming quarters (Figure 1.12). In October 2017, the Fed started to gradually reduce its balance sheet, by decreasing asset reinvestment, which additionally contributes to the tightening of the monetary conditions in the US (see Box: *Balance sheet reduction by the Federal Reserve*; Figure 1.13).

In turn, the European Central Bank (ECB), amid still subdued inflation in the euro area, is keeping interest rates close to zero, including the deposit

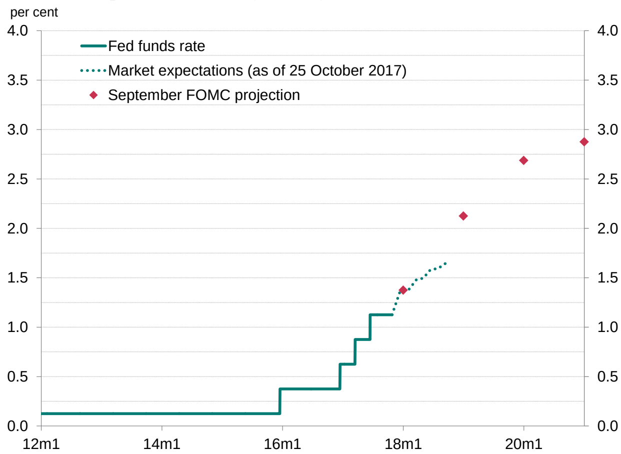
Figure 1.11 Index of agricultural commodity prices



Source: Bloomberg data, NBP calculations.

Index of agricultural prices includes prices of wheat, colza, pork, potatoes, sugar, cocoa, coffee, skimmed milk powder, butter and frozen concentrated orange juice. The weights reflect the consumption structure of Polish households.

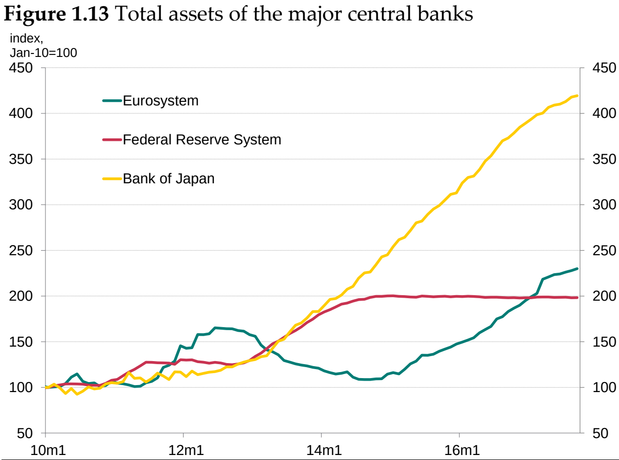
Figure 1.12 Historical and expected interest rates in the United States (midpoint of the target range for the fed funds rate)



Source: Bloomberg and Fed data.

Market expectations based on fed funds futures contracts.

Figure 1.13 Total assets of the major central banks



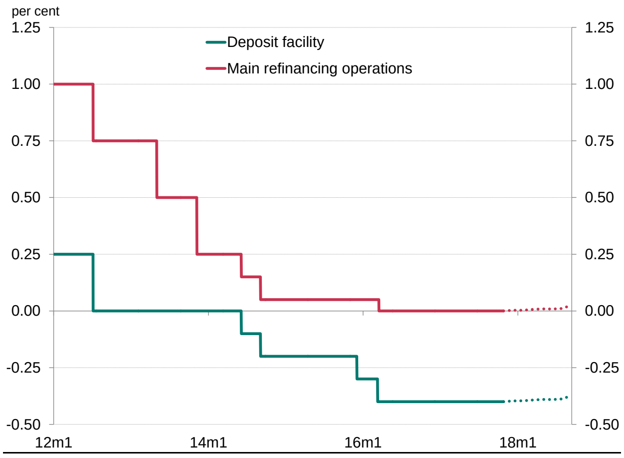
Source: FRED data.

rate below zero, and continues to purchase assets. In October, the ECB decided to extend its asset purchase programme at least till September 2018, and to reduce the scale of monthly purchases as of 2018 from the current EUR 60 billion to EUR 30 billion. Moreover, the ECB still expects that its interest rates will remain at their present levels well past the horizon of the net asset purchases. Consequently, market participants do not expect any changes in the ECB interest rates in the coming quarters (Figure 1.14).

Most of the other central banks in advanced economies are keeping their interest rates at historical lows amid low inflationary pressure in many countries. Additionally, the Bank of Japan and the Riksbank continue their asset purchase programmes and the Swiss National Bank declares its readiness to carry out currency interventions in order to prevent an excessive appreciation of the Swiss franc. In certain advanced economies – following signs of an economic recovery becoming more sustainable – central banks have started to scale down their expansionary monetary policy. In particular, in recent months interest rates have been raised in Canada and in the Czech Republic.

At the same time, in some emerging market economies a falling inflation has induced central banks to continue interest rate cuts (Figure 1.15). The decline in inflation observed in those countries was largely the result of the appreciation of their currencies, supported by improving business climate in emerging market economies and a positive sentiment in the global financial markets (see Chapter 1.5 *Global financial markets*).

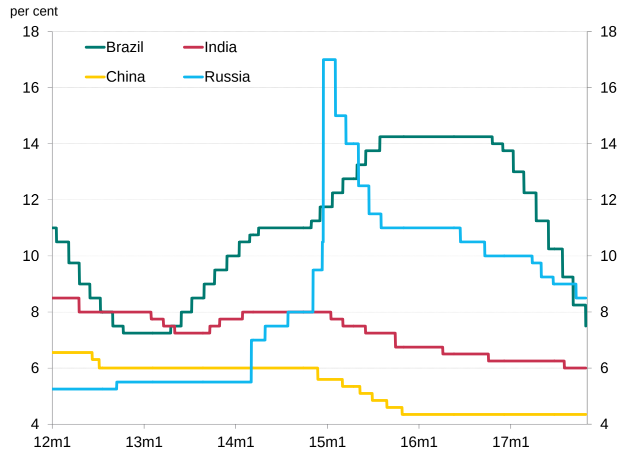
Figure 1.14 Historical and expected interest rates of the ECB



Source: Bloomberg data.

Expected interest rates based on the overnight index swaps for the rates on the deposit facility and the main refinancing operations.

Figure 1.15 Central banks' interest rates in major emerging market economies



Source: Bloomberg data.

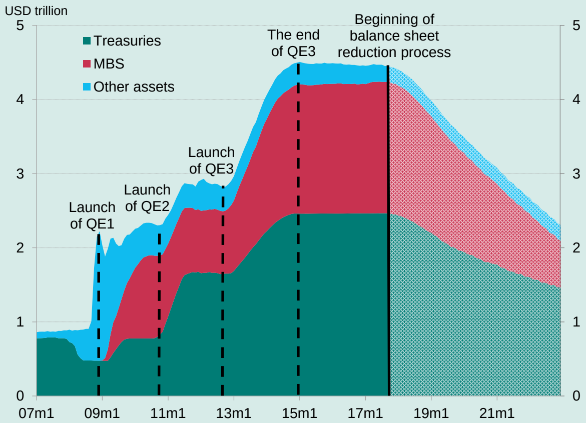
Box: Balance sheet reduction by the Federal Reserve

At its September meeting, the Federal Reserve (the Fed) announced that in October it would launch the process of balance sheet reduction (Fed 2017b), in accordance with the guidelines published earlier this year (Fed 2017a). The Fed will gradually increase a portion of the principal payments it receives from the securities purchased under previous rounds of quantitative easing that will not be reinvested. Thus, the Fed's decision ends the two-year period of stable balance sheet size, initiating the process of its reduction (Figure B.1). This Box discusses the size and dynamics of this process, as announced by the Fed, along with its potential consequences for monetary conditions in the United States, and in the emerging market economies, including Poland.

The Fed's total asset holdings

Currently, the assets held by the Fed total approximately USD 4.5 trillion (23% of GDP), compared to less than USD 0.9 trillion (6% of GDP) at the beginning of 2008 (Figure B.1).[2] Treasury securities make up 55% of the Fed's assets, and a further 40% are mortgage-backed securities (MBSs). The five-fold increase in the balance sheet size in the last decade was the effect of the Fed's quantitative easing programmes, which aimed to contain the impact of the global financial crisis on the economy. With short-term interest rates close to zero, these programmes sought to ease monetary conditions further, mainly by squeezing the yields on the eligible securities, thus affecting also the prices and yields of other assets. As the economic conditions in the United States started to improve steadily, the Fed opted for a gradual reduction in the pace of its asset purchases from the beginning of 2014, and finally terminate them in late 2014. Since then, the Fed has reinvested the principal payments from the securities purchased, so as to maintain its total assets at a stable level.

Figure B.1 The Fed's assets with a forecast



Source: FRED data, NBP calculations.

Forecast of: US Treasury bonds based on maturities and the caps announced by the Fed; MBSs assuming the decrease in line with the caps; other assets based on maturities of agency debt and assuming no change in other categories. The forecast does not take into account the maturities of bonds to be purchased under future reinvestment transactions. The actual extent of the asset reduction may be smaller than in the forecast, as in some months the principal payments on the MBS holdings may not reach the caps.

In line with the plan announced by the Fed, its assets will be reduced in a passive manner, i.e. the reinvestments of the principal payments from the securities held will be gradually decreased. Specifically, the payments will be reinvested only to the extent that they exceed gradually rising caps. Initially, in 2017 Q4 the monthly caps for Treasury securities will be USD 6 billion, and for the MBSs USD 4 billion. These limits will be subsequently increased by respectively USD 6 billion and USD 4 billion every three months, to reach USD 30 and 20 billion per month for Treasury securities and MBSs. The Fed did not declare either the length of the balance sheet reduction process, or the future target level for its assets. It only announced that assets will continue to be reduced until the reserve balances in the banking system reach a level "appreciably below that seen in recent years but larger than before the financial crisis" (Fed, 2017a).[3]

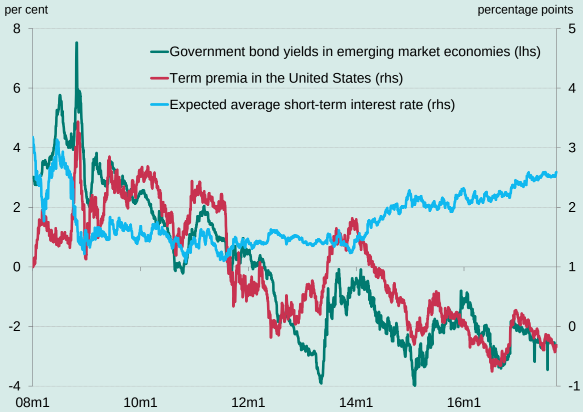
[2] For comparison, the Eurosystem's total assets stand at 39% of the euro area's GDP, while Bank of Japan's total assets equal 95% of Japan's GDP.

[3] Currently, the reserves stand at approx. USD 2,400 billion, while in 1997–2006 they averaged approx. USD 10 billion. If the Fed strived to reduce the reserves to their pre-crisis level, it would have to continue its asset-reducing process until at least 2023.

Economic consequences of the Fed's balance sheet reduction

The process of balance sheet reduction will imply a tightening of monetary conditions in the United States since it is a reversal of the previous balance sheet expansion that resulted in easing of monetary conditions. In particular, as a result of limiting its reinvestment, the Fed's demand for both US Treasuries and MBSs will diminish – by a total of approximately USD 400 billion in 2018. This will produce downward pressure on prices and upward pressure on yields of those securities, with a dampening effect on output and inflation – like in the case of short-term interest rate rises.[4] Furthermore, the decline in bond prices may affect the valuation of other assets through the portfolio rebalancing channel, putting downward pressure, among others, on equity prices, which through the wealth effect can also subdue demand and inflation.

Figure B.2 Bond yields in emerging market economies, term premium and the expected interest rate in the United States



Source: Bloomberg and New York Fed data, NBP calculations.

Index of government bond yields in emerging market economies is based on the principal component analysis for Poland, the Czech Republic, Hungary, Brazil, Columbia, Mexico, Korea, Turkey and South Africa. The volatility of the bond yields in emerging market economies is explained in 68% by the volatility of the term premium in the United States, and only in 1% by the variability of the expected interest rate path in this economy.

The reduction of the Fed's balance sheet may also affect monetary conditions in other countries, particularly in emerging market economies. Firstly, monetary tightening by the Fed may contribute to a depreciation of emerging market currencies. Secondly, any rise in bond yields in the United States may also cause – notably through the effect on the term premium (Figure B.2) – higher yields in emerging market economies, including Poland (similarly as the Fed's quantitative easing programme contributed previously to a fall in bond yields in these countries – see NBP 2016).[5] With consideration to historical interdependencies, a rise of 100 basis points in the term premium on 10-year US Treasuries might produce, other things being constant, a rise of around 80 basis points in the yields on Polish bonds. A temporary rise in yields of a similar scale was observed, for example, in the second half of 2013, following the Fed's announcement of quantitative easing tapering (the so-called taper tantrum, NBP 2013).

Since the announcement of the Fed's balance sheet reduction process the yields on US Treasuries and the term premium in the United States have gone up slightly[6]. However, an increase in the term premium in the United States, and hence in the long-term bond yields, is constrained by a number of factors. Firstly, despite the diminishing scale of reinvestment, the share of the Fed in the debt securities market is considerable, and will remain so in the quarters to come. Secondly, the term premium is subdued owing to the low perceived risk of inflation (measured indirectly by, among others, a dispersion of inflation forecasts by professional forecasters) and low expected volatility of interest rates in the US economy (Figure B.3; Figure B.4). Thirdly, despite smaller purchases by the Fed, investors' demand for US Treasuries will be sustained by factors such as regulatory

[4] The Fed's quantitative easing programmes brought about a decline in bond yields, mainly through decreasing the term premium. Therefore it can be assumed that a reduction in assets will trigger an opposite effect, i.e. will increase the term premium. Estimates prevailing in the literature put the decrease in the term premium on 10-year US Treasuries following from the Fed's QE programmes at 50-150 basis points (see e.g. the review of empirical studies and estimates in Bonis et al, 2017).

[5] So far, the shocks related to monetary policy in the United States spread to bond markets in emerging market economies mainly through changes in the term premium. Thus, it can be expected that these changes will pose a significant risk factor to the domestic government bond yields in emerging market economies.

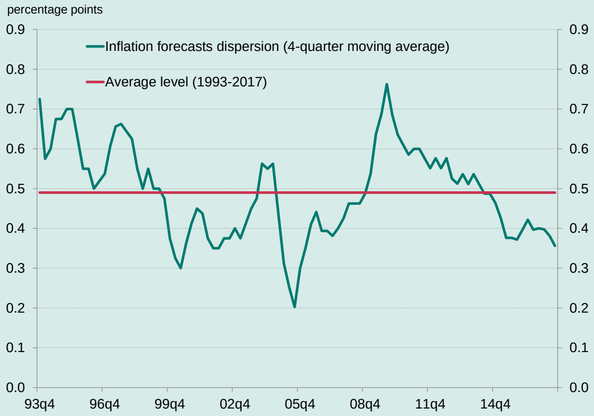
[6] Yield on 10-year US Treasuries rose from 2.25% on 19 September (i.e. day before the announcement of the Fed's balance sheet reduction process) to 2.44% on 25 October (cut-off date for the *Report*).

requirements for financial institutions to hold high quality liquid assets (HQLA) and to maintain exceptionally high liquidity, which are gradually coming into force. These factors, combined with the still accommodative monetary policy stance of the ECB (see Chapter 1.5 *Monetary policy abroad*), should curb the extent of a potential rise in long-term interest rates in Poland.

Summary

The Fed's balance sheet reduction will be probably putting an upward pressure on yields and a downward pressure on prices of bonds (and indirectly, also of other assets) in the United States, resulting in a tightening of the monetary conditions in this country over the next few years. However, given the low expected inflation volatility, the scale of a likely rise in yields on the US Treasuries driven by the reduction of the Fed's balance sheet may be smaller than their previous fall during quantitative easing programmes. Together with the continued accommodative monetary policy stance of the ECB this should mitigate the impact of the Fed's balance sheet reduction on emerging market economies, including Poland.

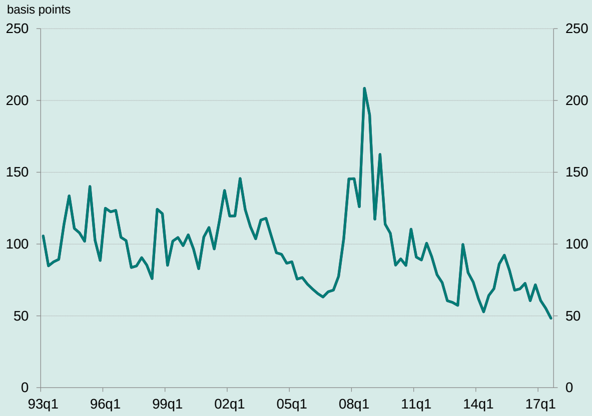
Figure B.3 Dispersion of forecasts of average inflation in the US economy in a 10-year horizon



Source: Survey of Professional Forecasters, Philadelphia Fed data.

Dispersion is defined as the difference between the 75th and 25th percentile of the forecast distribution.

Figure B.4 MOVE index of US Treasury bond yield volatility implied from option prices



Source: Bloomberg data.

The MOVE index is based on normalized volatilities of 1M options on 2Y, 5Y, 10Y, and 30Y US Treasuries.

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1.5 International financial markets

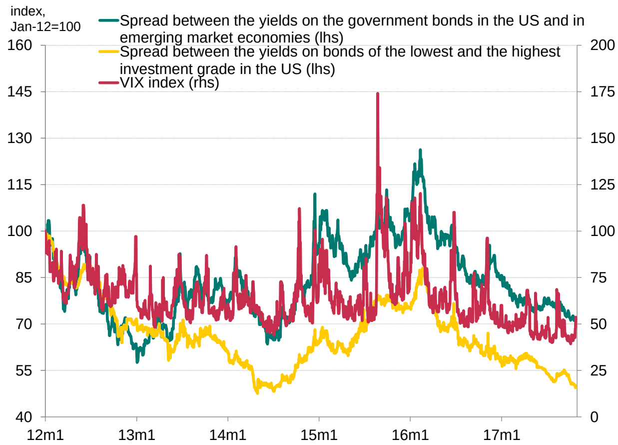
Sentiment in the global financial markets has improved significantly since the beginning of 2017, which is reflected in a fall in various risk assessment measures (Figure 1.16). This was underpinned by the continued global economic recovery (see Chapter 1.1 *Economic activity abroad*) amid still accommodative global monetary conditions, despite monetary policy tightening by the Fed (see Chapter 1.4 *Monetary policy abroad*).

Against this backdrop, stock market indices have continued to rise around the world and in many developed countries reached levels close to their record highs. In the United States and Germany stock prices are currently at their highest levels in history (Figure 1.17).

Given the improved sentiment in the global financial markets, bond yields in emerging market economies have declined (Figure 1.18). At the same time, bond yields in the euro area have stabilized at low levels on the back of still accommodative ECB's monetary policy stance (see Chapter 1.4 *Monetary policy abroad*). In turn, in the United States, bond yields have gone up slightly amid expected further Fed's interest rate increase and a gradual reduction of its balance sheet (see Box: *Balance sheet reduction by the Federal Reserve*).

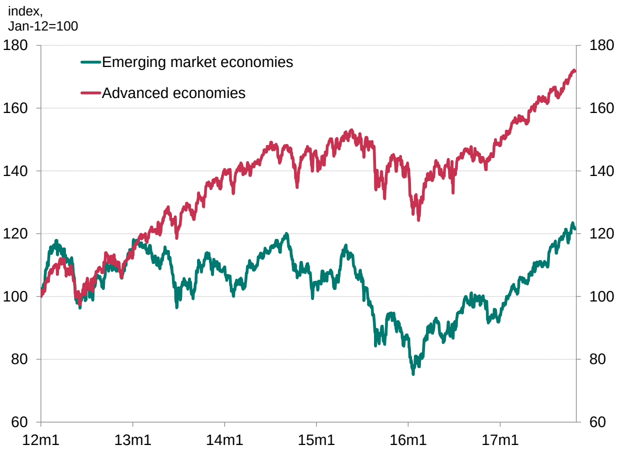
Better sentiment in the global financial markets and the improved outlook for some of the emerging market economies contributed to a marked appreciation of the currencies in these

Figure 1.16 Risk assessment measures in global financial markets



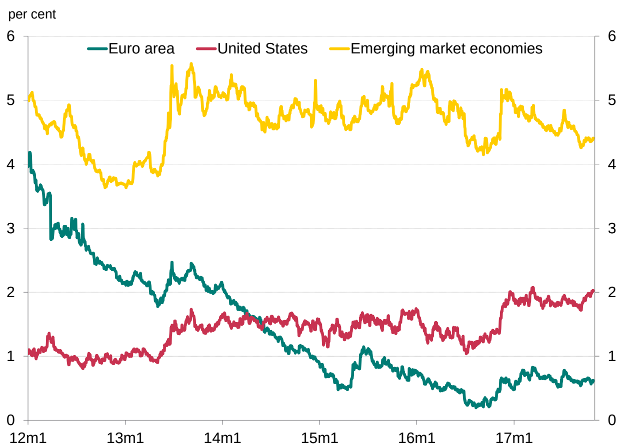
Source: Bloomberg data.

Figure 1.17 Global stock prices



Source: Bloomberg data, NBP calculations.
Advanced economies – *MSCI World Equity Index*, emerging market economies – *MSCI Emerging Markets Equity Index*.

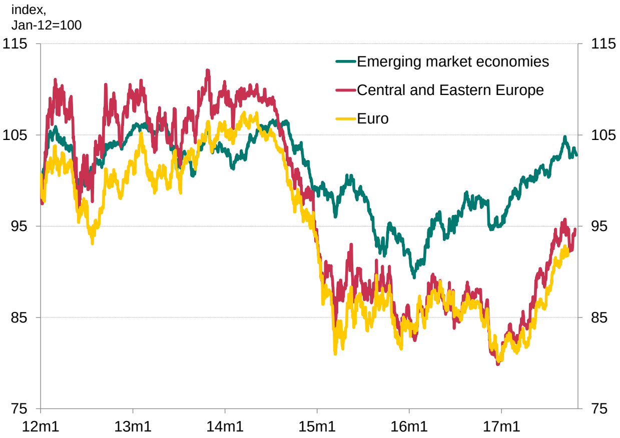
Figure 1.18 Global bond yields



Source: Bloomberg data.
Yields from Bloomberg bond indices: *Eurozone Sovereign*, *US Treasury* and *Emerging Market Sovereign*.

countries, particularly against the US dollar (Figure 1.19). At the same time, the euro strengthened significantly against the dollar driven by the improving business climate in the euro area.

Figure 1.19 Exchange rates of emerging markets currencies and the euro against the US dollar (rise indicates appreciation)



Source: Bloomberg data, NBP calculations.

Emerging market economies – *MSCI Emerging Market Currency Index*; Central and Eastern Europe – GDP-weighted average of exchange rates of the Polish zloty, the Czech koruna, and the Hungarian forint against the US dollar.

2 Domestic economy

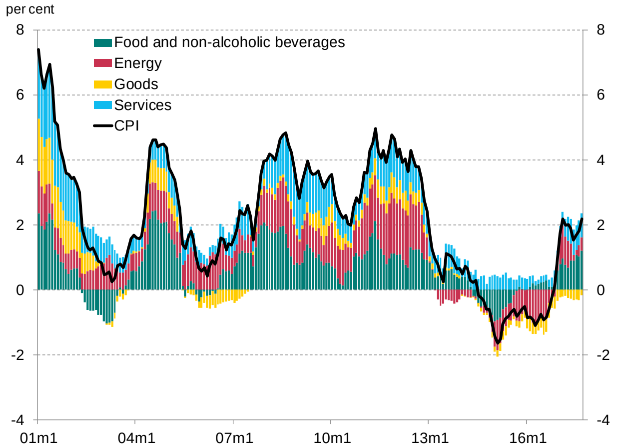
2.1 Consumer prices

Annual consumer price growth in Poland remains moderate (in September 2017, the prices of consumer goods and services rose by 2.2% y/y, Figure 2.1). This is attributable to still low inflationary pressure related, on the one hand, to only gradually rising domestic demand pressure, and on the other hand, to slow import price growth.[7] At the same time, food price growth is markedly higher than in previous quarters (5.0% y/y in September 2017), while energy prices are rising moderately (2.5% y/y).

Core inflation, despite a slight increase, is still low (Figure 2.2). The low level of core inflation results from further decline in the prices of inedible goods (-0.5% y/y in September 2017), alongside relatively stable growth in prices of services in recent months (2.6% y/y). The decline in the prices of inedible goods is supported by a stronger-than-a-year-ago zloty exchange rate, along with moderate price growth in the environment of the Polish economy. At the same time, core inflation is driven up by faster growth in corporate costs amid steadily rising consumer demand.

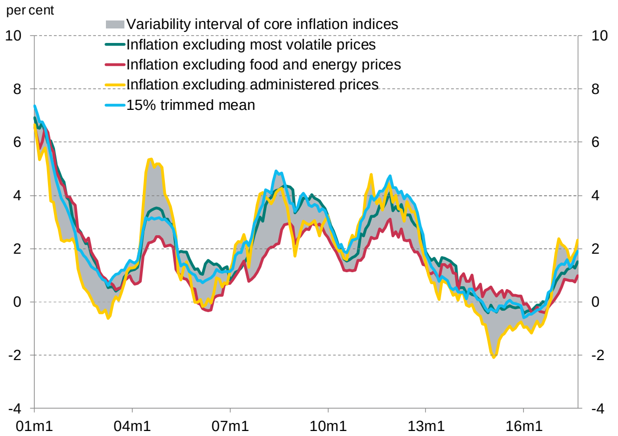
Despite the fall in global agricultural commodity prices, food price growth in Poland has recently picked up, mainly on the back of domestic factors. Higher food price growth, as compared to the previous year, was in particular related to the rise in domestic demand for food amid growing household income, alongside a simultaneous fall in the fruit harvest due to unfavourable weather conditions in spring 2017. In case of some products

Figure 2.1 Composition of CPI inflation (y/y)



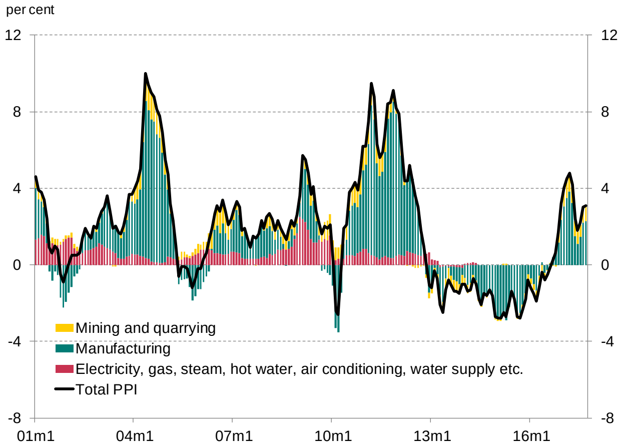
Source: GUS data, NBP calculations.

Figure 2.2 Core inflation indices (y/y)



Source: GUS data, NBP calculations.

Figure 2.3 Composition of PPI inflation (y/y)



Source: GUS and Eurostat data.

[7] In 2017 Q2, import price growth declined to 1.5% y/y, compared to 4.3% y/y in the previous quarter.

(particularly butter; see Chapter 1.3. *Global commodity markets*), the decline in their global production, coupled with continued heightened global demand, translated into further price rises.

Growth of energy prices remains moderate, although in recent months it first declined, and then picked up slightly. This was the result of changes in global oil prices translating – with a certain lag – into domestic fuel prices, as well as the impact of statistical base effects.

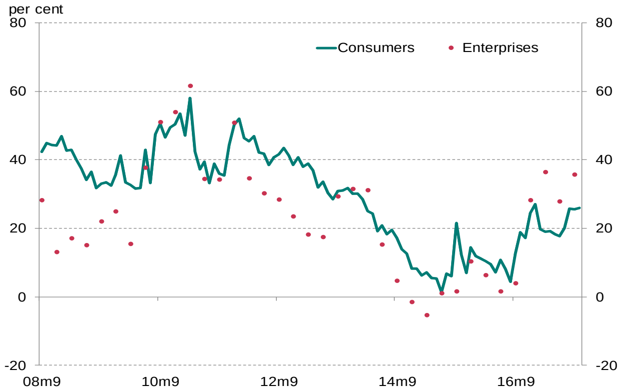
The increase in global commodity prices, particularly those of oil observed since July 2017, also translated into renewed increase in producer price inflation (PPI), following its marked declines in previous months (Figure 2.3).

Inflation expectations indicate that inflation is likely to remain close to its current level in the coming quarters. The opinions of surveyed consumers and enterprises on future inflation were changing only slightly over recent months (Figure 2.4). Financial sector analysts and economists surveyed by NBP expect that inflation will be close to the NBP target in the coming quarters (Table 2.1).

2.2 Demand and output

Economic conditions in Poland are favourable. In 2017 Q2, GDP growth remained close to 4% y/y (Figure 2.5). Growth was driven primarily by increasing consumer demand, supported by rising employment and wages, very good consumer sentiment and disbursement of benefits. At the same time, investment growth picked up to a slightly positive level in 2017 Q2. As in the previous quarters, inventories also added to GDP growth, whereas the contribution of net exports turned negative, as exports weakened more substantially than imports.

Figure 2.4 Balance statistics of consumer and enterprise inflation expectations



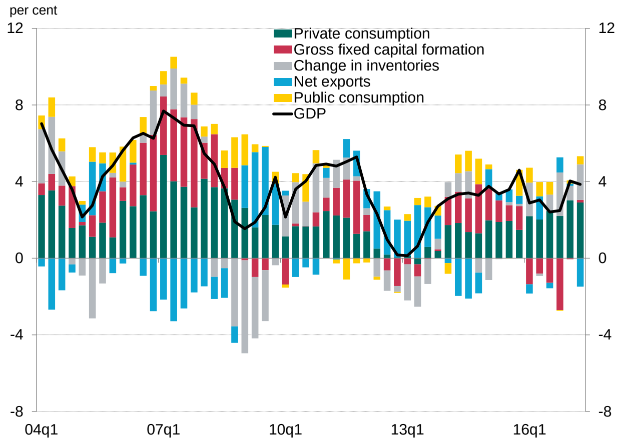
Source: GUS and NBP data, NBP calculations.
Balance statistics is defined as a difference between a fraction of respondents expecting rise in prices and the fractions of respondents expecting no change or fall in prices (with respective weights). A rise in balance statistics should be interpreted as a shift in opinions towards higher rise in prices.

Table 2.1 Inflation expectations of bank analysts and participants to the *NBP Survey of Professional Forecasters*

per cent	Survey conducted in:				
	16q4	17q1	17q2	17q3	17q4
Reuters Survey, inflation expected in 4 quarters	1.4	2.0	1.8	2.2	2.2
NBP Survey, inflation expected in 4 quarters	1.7	2.0	2.0	2.3	-
NBP Survey, inflation expected in 8 quarters	2.2	2.3	2.2	2.4	-

Source: NBP and Reuters data.
Inflation expectations of the financial sector analysts are proxied by the median forecast of the analysts surveyed by Thomson Reuters in the last month of a given quarter, except for 2017 Q4, when October forecast was used.
Inflation expectations of the participants to the *NBP Survey of Professional Forecasters* reflect the median probability distribution obtained from the aggregation of probability forecasts of the experts surveyed by NBP.

Figure 2.5 GDP growth and its components (y/y)



Source: GUS data, NBP calculations.
The charts do not include the revised GDP growth numbers for 2016 published by GUS on 23 October 2017.

2.2.1 Consumption

Consumption demand remains the main driver of GDP growth. In 2017 Q2, private consumption increased by 4.9% y/y (against 4.7% y/y in Q1). Growth in consumption is supported by rising employment and wages (see Chapter 2.4 *Labour market*, Figure 2.6), very high consumer confidence (Figure 2.7) and child benefit payments under the "Family 500 plus" programme. In turn, consumption growth is contained by higher consumer price inflation than in the previous years.

Preliminary data for 2017 Q3 suggests that favourable conditions for private consumption growth remain in place. The growth in retail sales was slightly higher than in 2017 Q2.[8] At the same time, wages were rising, employment growth remained high (see Chapter 2.4 *Labour market*) and consumer sentiment continued to improve, albeit at a slower pace than in previous months (Figure 2.7).

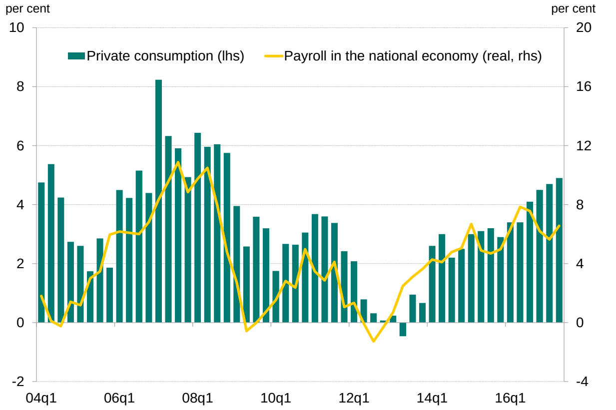
2.2.2 Investment

In 2017 Q2, gross fixed capital formation growth increased to a slightly positive level and stood at 0.8% y/y (Figure 2.8). Still a subdued investment growth resulted from further cuts in corporate investment expenditure, offset by positive growth in public and housing investment.

The weak growth rate of corporate investment resulted mainly from further cuts in expenditure in the energy and mining sectors (Figure 2.9). Meanwhile, growth in other sectors was positive, but remained lower compared to the previous period of investment recovery.

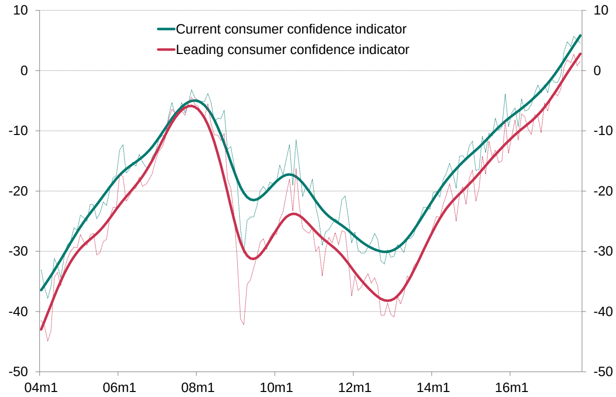
In the second half of 2017 a certain rebound in corporate investment is expected. This is implied by the favourable results of the business condition

Figure 2.6 Growth in private consumption and wage bill in the national economy (y/y)



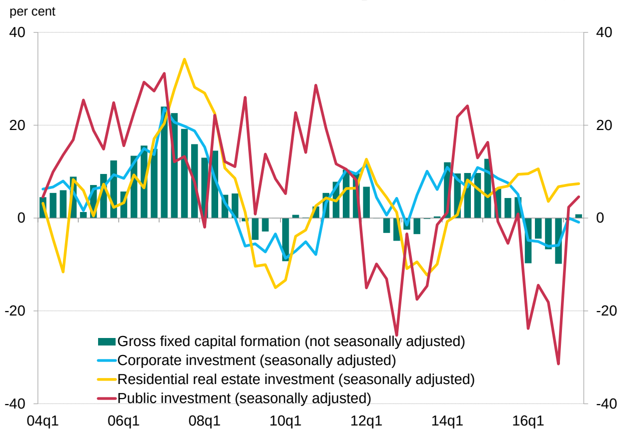
Source: GUS data, NBP calculations.

Figure 2.7 Consumer confidence indicators



Source: GUS data, NBP calculations.
The dashed line denotes raw data, while the solid line denotes HP filtered data.

Figure 2.8 Growth in total investment, corporate investment, residential real estate investment and public investment (y/y)



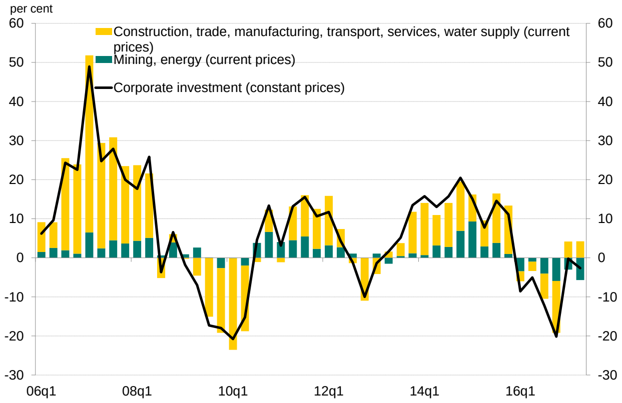
Source: GUS data, NBP calculations.
NBP estimates.

[8] Retail sales in fixed prices rose by 7.1% y/y on average in 2017 Q3, as compared with an average of 6.6% in 2017 Q2.

surveys in industry and construction (see Chapter 2.2.5 *Output*) and a high level of capacity utilisation. Corporate investment will also be boosted by a further inflow of EU funds. It not only supports the increase of fixed capital formation in the public sector – which is already visible in the rebound in investment in this sector – but also in the private sector. Yet, the scale of increase in corporate investment will probably be smaller than the rebound in public sector investment.

2017 Q2 continued to see a marked increase in housing investment. Growth in home sales has been supported by profitability of investment in housing as compared to other forms of funds allocation. Demand for housing has been also supported by the favourable situation in the labour market, which increases households' capacity to finance home purchases, especially amid relatively low interest rates on mortgage loans.

Figure 2.9 Corporate investment by sectors (y/y)



Source: GUS data, NBP calculations.

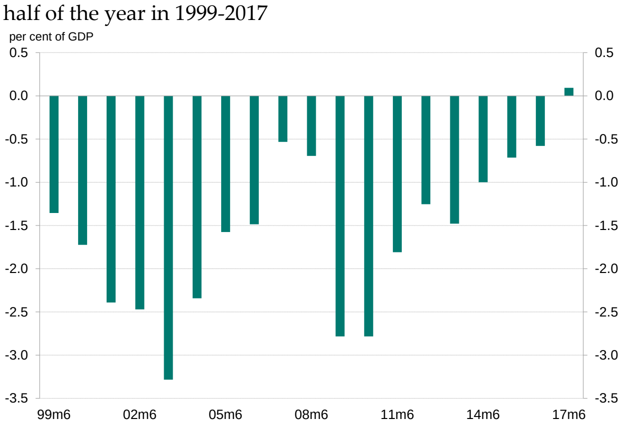
Sector categories according to NACE. Data from the survey conducted by GUS on revenues, costs, financial outcome and investment (based on F-01/I-01 forms). Data differ from those presented on Figure 2.8 because the survey does not include, unlike national accounts, entities dealing with scientific research and development, administration of the State and the economic and social policy of the community, higher education, public health activities, creative arts and entertainment activities enjoying status of a legal entity, as well as financial and insurance activities.

2.2.3 Public finance

Favourable economic conditions, rising employment and wages, successful efforts to improve tax collection[9], coupled with a relatively slow public spending growth have translated into the general government surplus (ESA2010) in the first half of 2017, against deficits recorded in the corresponding period of previous years (Figure 2.10). In particular, available data show a very good outturn of the state budget[10] and of the social insurance funds.[11]

In the following quarters of 2017, the general government balance is expected to worsen due to

Figure 2.10 General government balance (ESA2010) in the first half of the year in 1999-2017



Source: Eurostat data.

[9] Measures aimed at improving tax collection were specifically targeted at VAT.
[10] In January-June 2017, the state budget (data according to national reporting) recorded a surplus of approx. PLN 5.9bn, while in January-August 2017 surplus amounted to approx. PLN 4.9bn, which was the best result in the past 25 years.
[11] The financial position of social security funds has improved by PLN 2.5bn in the first half of 2017 and in the period of January-July 2017 compared to the corresponding periods of the previous year.

the anticipated pick up in the expenditure, resulting to a large extent from a likely acceleration of public investment. A recovery in public investment, mainly of the local government units[12], was already observed in the first half of 2017[13], while the bulk of investment projects is usually carried out in the second half of the year.[14] The rise in the public spending will probably also result from a lowering of the statutory retirement age in October 2017. Moreover, it will be accelerated by the government's recent decisions to allocate additional funds to health services[15] and to pay compensation to retired mineworkers for the loss of entitlement to free coal.[16]

At the end of September 2017, the Council of Ministers submitted the *2018 Draft Budget Act* to the Parliament. Compared to previous years, the *Draft Act* provided for a relatively slow increase in the cap on total spending (amounting to 3.2% y/y), in particular owing to freezing wages for the majority of the public administration employees. On the revenue side, major tax rates are set to remain at the current level (except increasing personal allowance). At the same time, further measures to improve tax collection (VAT[17] , income taxes[18]) are expected to generate additional income of 0.6% of GDP next year. As a result, the 2018 state budget deficit limit will be lower in comparison to 2017 *Act* (amounting to PLN 41.5bn as against PLN 59.3bn in 2017).

[12] The capital spending of the local government units increased by 21.9% y/y (i.e. by PLN 1.2bn), in the first half of 2017. This included a rise in EU-financed expenditure of 271.2% y/y (i.e. by approx. PLN 0.9bn).
[13] The general government gross fixed capital formation (ESA2010) in 2017 Q1 declined by 2.8% y/y, followed by an increase of 13.1% y/y in 2017 Q2.
[14] In the past ten years, the second half of each year accounted for an average of 70% of all the investment realised in that year.
[15] By ordinance of the President of the National Health Fund from September 2017 it was decided to release additional funds (approx. PLN 0.8bn) for improving the availability of medical services and reducing patients' waiting lists.
[16] The act of 12 October 2017 on a compensation benefit related to the loss of entitlement to free coal (Journal of Laws of 2017, item 1971). The benefits (a one-off payment) are to be funded from the state budget in 2017; the total spending under this heading is not to exceed approx. PLN 2.3bn (or approx. 0.1% of GDP).
[17] These activities involve, among others, enhancement of the IT system processing the Standard Audit Files (SAF Analyser), implementation of on-line fiscal cash registers and introduction of the split payment mechanism.
[18] Plans include a number of changes to limit aggressive tax optimisation, including provisions concerning thin capitalisation, controlled foreign companies (CFC) and tax capital groups. With reference to company income tax, capital gains are to be accounted for separately from other sources of revenue and scope of tax deductible expense on intangible services is to be limited.

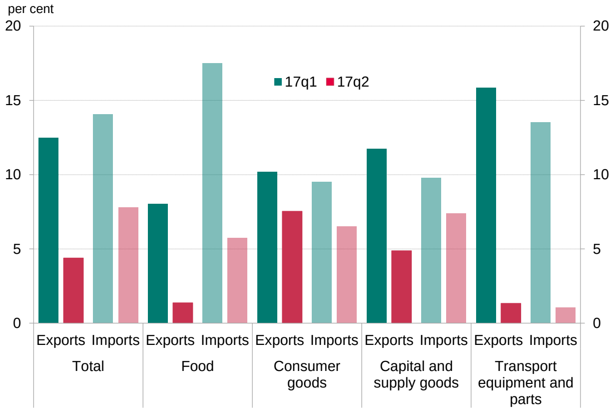
In 2018, the fiscal deficit (ESA2010) may be expected to remain at a level close to that in 2017. This would be the effect of the assumed slow growth of the state budget expenditure and favourable macroeconomic conditions, amid a simultaneous rise in the Social Insurance Fund spending due to the lowering of the statutory retirement age, and a likely further recovery in investment of local government units. However, should VAT tax collection continue to improve, the deficit may decline.

2.2.4 External trade

Following a relatively robust increase in the previous quarters, the growth in the value of exports and imports declined in 2017 Q2.[19] Weaker growth in external trade was recorded for all destinations and major commodity groups (Figure 2.11; Figure 2.12). It was partly attributable to one-off factors, visible particularly in case of exports, which rebounded in the first two months of 2017 Q3.[20]

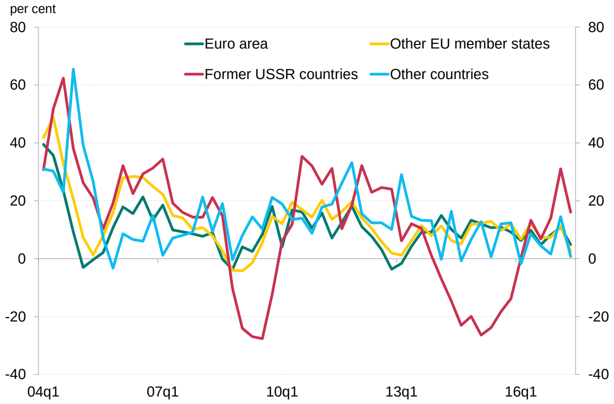
The slowdown in Poland's external trade was recorded in spite of the recovery in global trade and industry. It resulted to a great extent from slower growth in exports and imports of goods manufactured under global supply chains, most notably transport equipment and investment goods. Trade in these goods was negatively affected by a lower number of working days in the European industry in 2017 Q2 as well as by somewhat weaker car sales, whose exports and imports had been expanding rapidly in the preceding quarters. Weaker growth in trade in these goods was observed in all Central and

Figure 2.11 Growth in exports and imports by commodity (y/y)



Source: GUS data, NBP calculations.
Data based on GUS classification of the main product categories for the value of Polish exports and imports in zlotys.

Figure 2.12 Export growth by destination (y/y)



Source: GUS data, NBP calculations.

[19] GUS data on the value of exports and imports of goods expressed in the Polish zloty are analysed in this chapter. Trends in trade of services are not discussed broadly due to a lack of detailed breakdowns by destination or type of services. According to NBP data, the growth of exports of services remained relatively robust in 2017 Q2, albeit weaker than in 2017 Q1 (exports of services grew by 6.7% y/y in 2017 Q2 compared with 11.6% y/y in Q1), while imports of services increased by 2.7% y/y, against 7.8% y/y in the previous quarter.

[20] Higher export growth in July and August 2017 concerned all destinations, most notably the euro area, as well as most major commodity groups. The acceleration in exports was accompanied by a slightly weaker increase in imports.

Eastern European economies (see Chapter 1.1 *Economic activity abroad*).

A slowdown in growth in the value of external trade – both exports and imports – was also recorded for other trade products, most notably food. This was partly due to a decline in global agricultural commodity prices, which dampened Polish food export prices in 2017 Q2 (see Chapter 1.3 *Global commodity markets*). Growth in food exports may have also been hit by unfavourable weather conditions in Poland in the first half of 2017, which contributed to lower supply of certain agricultural products.

Export growth may have also been curbed by the appreciation of the zloty in the first half of 2017 (see Chapter 2.5.1 *Financial markets*). Yet, despite the appreciation, the exchange rate of the zloty has remained below its long-run average (Figure 2.13) and have not posed a barrier to the price competitiveness of Polish exports.[21]

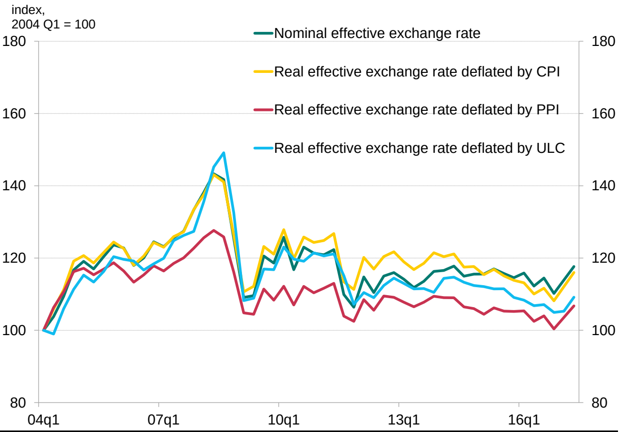
At the same time, the stronger zloty, along with stable domestic demand, was probably limiting the slowdown in imports, which decelerated to a much smaller degree than exports (Figure 2.12). In consequence, the contribution of net exports to GDP growth decreased.

2.2.5 Output

Sectoral decomposition of GDP growth indicates that economic growth encompasses all sectors, as confirmed by significantly positive contributions of services, industry and construction to GDP growth (Figure 2.14).

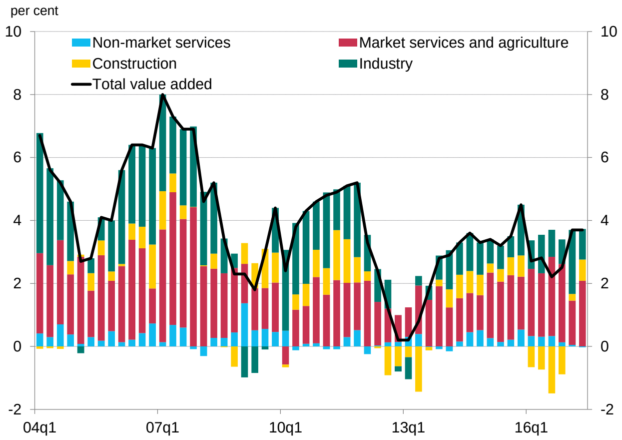
Industrial output growth, following a slowdown in 2017 Q2, which to a large extent resulted from fewer working days than a year ago,[22] increased

Figure 2.13 Nominal and real exchange rate (rise indicates appreciation)



Source: IMF, OECD and Reuters data, NBP calculations.

Figure 2.14 Growth of gross value added by sectors (y/y)



Source: GUS data, NBP calculations.

[21] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, October 2017.

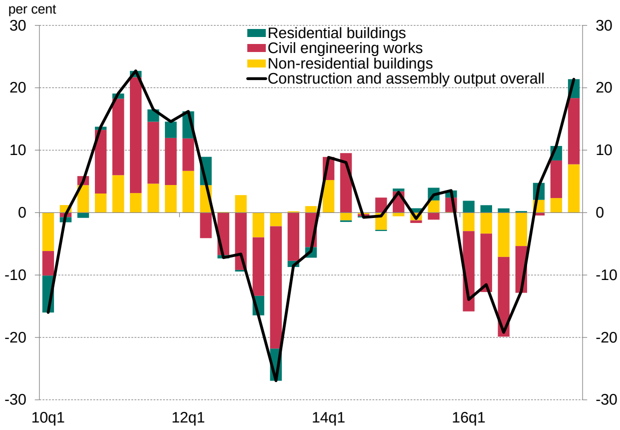
[22] Taking into account the different number of working days, industrial output growth in 2017 Q2 remained unchanged compared to the previous quarter.

again in 2017 Q3.[23] The improvement in economic conditions was driven by a renewed acceleration in export growth and rising domestic consumer demand. At the same time, the pick-up in industrial output growth partly stemmed from temporary factors, in particular from greater energy production amid higher than average temperatures in August, which translated into increased use of air conditioning.

Output growth in construction rose significantly in 2017 Q2 and Q3,[24] primarily on the back of a recovery in investment of local government units associated with the growing absorption of EU funds from the 2014-2020 financial framework. In 2017 Q3, output growth markedly accelerated also in commercial construction, which was mainly related to a substantial increase in the construction of office and commercial buildings, and to a lesser extent to a recovery in industrial construction. Residential construction continued to rise at a relatively high and stable pace (Figure 2.15).

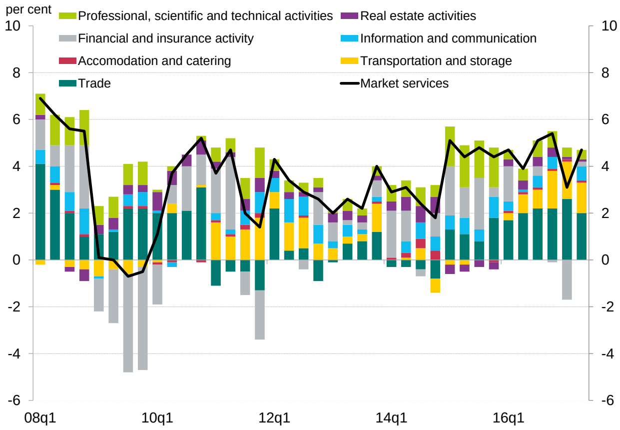
After a temporary slowdown in 2017 Q1, growth of value added in market services also picked up in 2017 Q2, approaching the levels observed in 2016. Trade together with transportation and storage remain the main drivers of growth in this sector (Figure 2.16). In the majority of the remaining branches, growth of value added is positive and relatively stable. In 2017 Q3, sentiment improved in the majority of branches (Figure 2.17), sales growth increased in trade and transportation and conditions in business services remained favourable. All of that suggests growth of value added in market services remained at least as high as in 2017 Q2.

Figure 2.15 Construction and assembly output growth by construction objects (y/y)



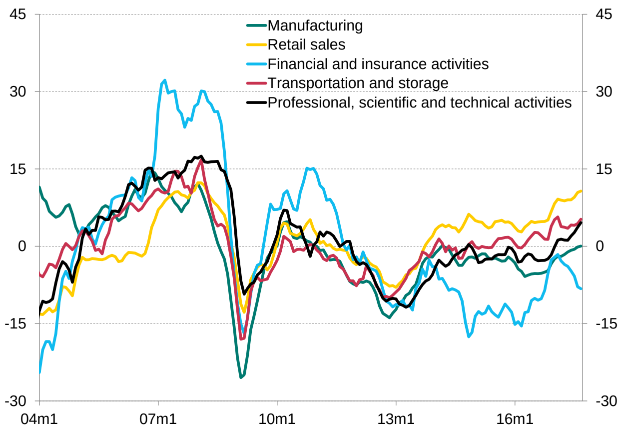
Source: GUS data, NBP calculations.

Figure 2.16 Growth of gross value added in market services by branches (y/y)



Source: GUS data, NBP calculations.

Figure 2.17 Forecast of economic situation against the long-term average (seasonally adjusted data, 3-month moving average)



Source: GUS data, NBP calculations.

[23] In 2017 Q3, industrial output grew by 6.4% y/y on average, compared to 4.3% in 2017 Q2.

[24] Construction and assembly output increased by 21.4% y/y in 2017 Q3, compared to 10.7% in 2017 Q2.

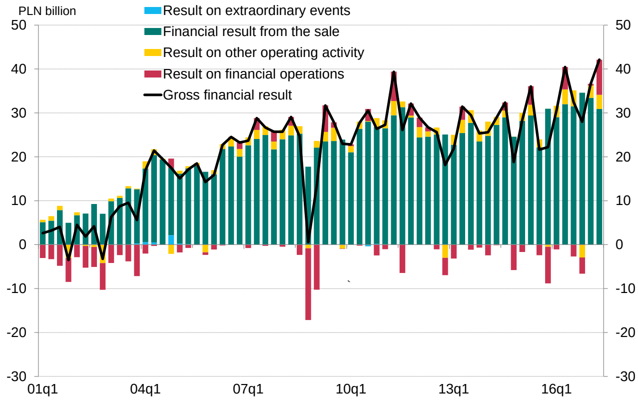
2.3 Financial situation in the enterprise sector

Amid stable economic growth, the financial and liquidity position of the corporate sector continues to be sound. At the same time, with firms' costs rising faster than their revenues, sales profitability ratio in the sector decreased slightly in 2017 Q2. Companies' financial performance continued to vary considerably across the industries of the economy.

In 2017 Q2, the gross financial result of enterprises rose compared to the corresponding period of the previous year (by 4.1% y/y; Figure 2.18). This improvement resulted from an increase in profit on financial activity, supported by disbursement of higher dividends and improved performance on exchange rate differences. In turn, profit on firms' core activity, i.e. profit from sales declined slightly (by 3.4% y/y). The slight deterioration in the profit from sales – despite a substantial rise in revenues (of 8.0% y/y) resulting from the improved economic conditions – was the effect of a stronger increase in costs (by 8.6% y/y), especially the costs of commodities, semi-products and materials.

Increasing cost also translated into a slight decline in the net turnover profitability and the share of profitable firms, although both of these indices remain at relatively high levels (Table 2.2). The liquidity position of enterprises also remains high, despite the adverse impact of the rising operational costs and a slightly higher percentage of firms whose receivables are not settled by clients on time.

Figure 2.18 Gross financial result of enterprises and its components



Source: GUS data, NBP calculations.
Data from the survey conducted by GUS on revenues, costs, financial outcome and investment (based on F-01/I-01 forms).

Table 2.2 Selected financial efficiency ratios in the enterprise sector

percent	2016				2017	
	q1	q2	q3	q4	q1	q2
Sales profitability ratio	4.9	5.1	5.0	5.0	5.1	4.6
Net turnover profitability	4.2	5.5	4.2	3.1	4.4	5.3
Percentage of profitable enterprises (sa)	76.5	76.4	75.8	75.2	75.2	74.3
1st degree liquidity ratio	37.4	37.2	38.5	38.8	37.4	35.3

Source: GUS data, NBP calculations.
Data from the survey conducted by GUS on revenues, costs, financial outcome and investment (based on F-01/I-01 forms).

2.4 Labour market

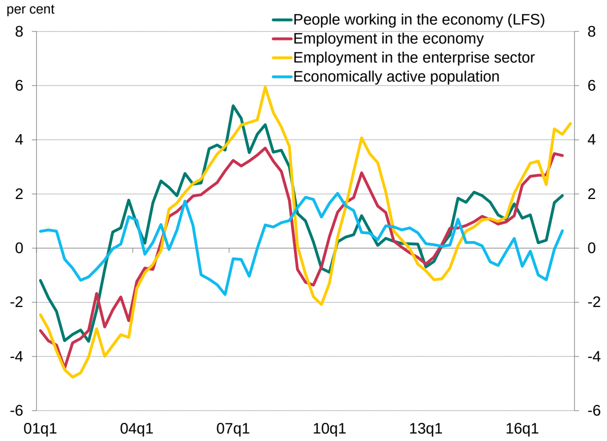
A steady rise in demand across the economy amid high capacity utilisation is conducive to further growth in labour demand, as shown by the rising number of job offers.[25] High labour demand drives further employment growth (Figure 2.19), as corroborated by the Labour Force Survey data (LFS; a rise of 1.9% y/y in the number of working persons in 2017 Q2), as well as the corporate sector data (employment growth of 4.5% y/y in September).[26]

The relatively strong employment growth is accompanied by increasing labour supply (by 0.6% y/y in 2017 Q2; Figure 2.19). This results from rising economic activity, especially among persons at the pre-retirement age (55-64 years; an increase of 2.9 percentage points y/y in the labour participation rate in 2017 Q2). High demand for employees coupled with an accelerating wage growth motivates candidates to enter and remain in the labour market.

At the same time, unemployment has fallen to historically low levels, as indicated by both the LFS and the Labour Office data (Figure 2.20). As a result, an increasing number of employers is reporting difficulties in finding staff (an increase from 46% in 2017 Q2 to 50% in Q3).[27]

Consequently, the position of employees in pay negotiations is improving, which translates into a stronger wage growth. In 2017 Q3, nominal wage growth in the corporate sector picked up to 6.0% y/y (from 5.4% y/y in 2017 Q2; Figure 2.21).

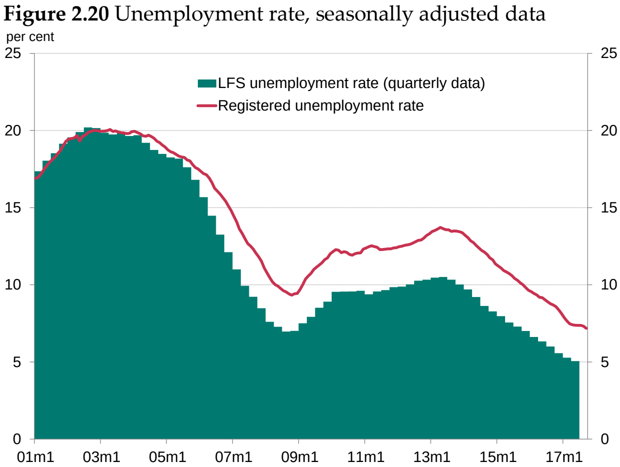
Figure 2.19 Annual growth in employment and economically active population (y/y)



Source: GUS data, NBP calculations.

People working in the economy (LFS) is a survey-based estimate of the number of working persons, regardless of employment relationship. Employment in the economy denotes the enterprise-reported average number of persons performing paid work at the end of each reporting period. This data does not comprise, among others, businesses employing up to 9 persons, individual farmers, persons contributing to a family business free of charge and persons working under civil law employment contracts. In addition, data on average employment in the enterprise sector does not cover the public sector and sole proprietors.

Figure 2.20 Unemployment rate, seasonally adjusted data



Source: GUS data, NBP calculations

Seasonally adjusted NBP data. There are two reasons for the difference between the registered unemployment rate and the LFS rate: 1) the definition of an unemployed person is different, 2) the definition of the population to which the number of the unemployed is referred is different.

[25] In September, the number of job offers at Labour Offices rose by 10.8% y/y, and the Job Offer Barometer (BOP), measuring the number of online job offers, increased by 21.3% y/y.

[26] The annual growth in the number of working persons according to the LFS is lower than employment growth in the corporate sector as employees are shifting from temporary employment forms – and possibly the grey economy – to permanent employment contracts. In 2017 Q2, the number of people employed on temporary contracts declined by 2.2% y/y, while the number of those working permanently increased by 4.7% y/y. Corporate employment growth figures were additionally augmented by the annual update of the sample of firms employing more than 9 people run by GUS.

[27] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, October 2017.

However, wage growth remains lower than during previous periods of economic recovery. This reflects the fact that wages in companies which do not experience pay pressure from their employees are hardly increasing (in contrast to, for example, the period of 2007-2008).[28] Another likely factor dampening wage growth is the rising number of foreign employees, particularly from Ukraine. Due to a pick-up in price growth in 2017, real wage growth is lower than in the past two years (Figure 2.21).

In 2017 Q2, GDP and employment grew at rates similar to those recorded in 2017 Q1. Accordingly, labour productivity continued to rise at approx. 2% per annum. With wage growth accelerating, growth in unit labour costs rose (Figure 2.22).

2.5 Monetary policy and asset markets

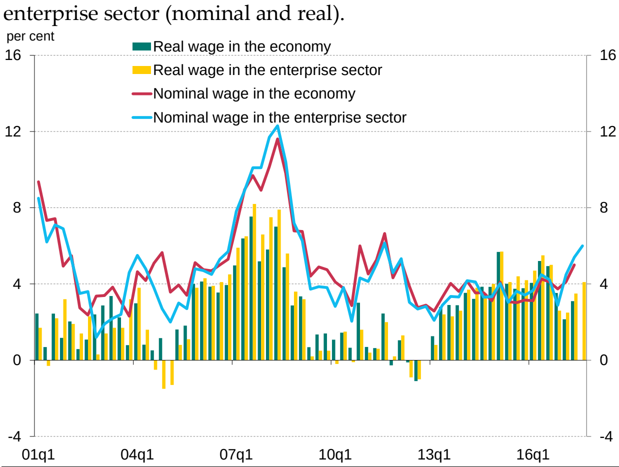
The Monetary Policy Council has been keeping the NBP interest rates unchanged since March 2015, including the reference rate at 1.50%. Most of market participants still expect NBP interest rates to remain stable in the coming quarters, yet expectations of an increase have risen somewhat in the recent period (Figure 2.23).

2.5.1 Financial market

Against the background of the relatively stable expected NBP interest rates and no significant change in term premium, government bond yields have not changed markedly in recent months (Figure 2.24). Yield on 10-year government bonds currently stands at 3.4%.

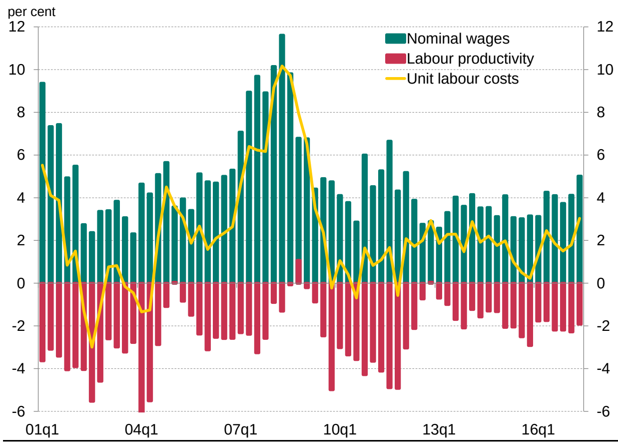
In recent months, equity prices have continued to rise, although at a slower rate than in the first half of the year. The rise was underpinned by the increasing global stock prices (see Chapter 1.5 *International financial markets*), and by the positive

Figure 2.21 Annual wage growth in the economy and in the enterprise sector (nominal and real).



Source: GUS data.

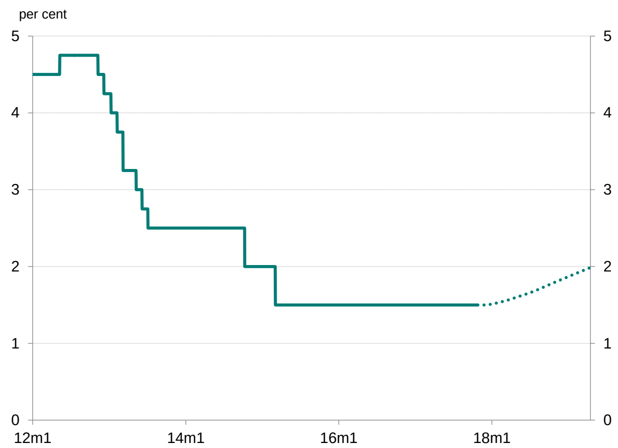
Figure 2.22 Growth of unit labour cost in the economy (y/y) and its determinants



Source: GUS data, NBP calculations

Labour productivity growth is a factor limiting unit labour cost growth; hence in the graph it assumes negative values.

Figure 2.23 NBP reference rate and FRA-implied 3M interest rate (as of 25 October 2017)



Source: NBP and Bloomberg data, NBP calculations.

[28] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, October 2017.

signals coming from the Polish economy. As a result, the main stock index is currently close to the 2007 level (Figure 2.25).

Improving sentiment in global financial markets and the favourable domestic economic conditions drove capital inflows to Poland, which supported a further appreciation of the zloty. As a result, the zloty strengthened against the US dollar and the Swiss franc. At the same time, due to the appreciation of the euro, the exchange rate of the zloty against this currency stabilised in recent months (see Chapter 1.5 *International financial markets*; Figure 2.26).

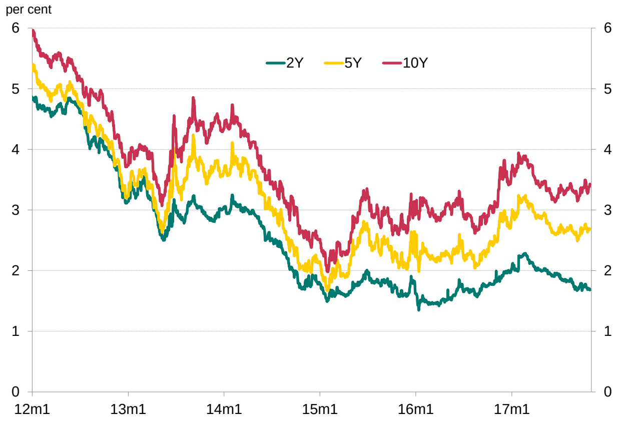
2.5.2 Residential real estate market[29]

Favourable economic conditions in the Polish economy has been translated into a further recovery in the housing market. The number of dwellings sold continues to be high, with their prices increasing slightly (Figure 2.27; Figure 2.28).

Demand for dwellings is supported by rising employment and wages (see Chapter 2.4 *Labour market*) accompanied by very good consumer sentiment. Other factors underpinning the increase in home sales are the relatively low interest rates, reflected in low cost of mortgage loans, and the relatively high profitability of flat rental against other forms of household investment. At the same time, the impact of the government scheme "Flat for the Young" on housing demand has weakened considerably.[30]

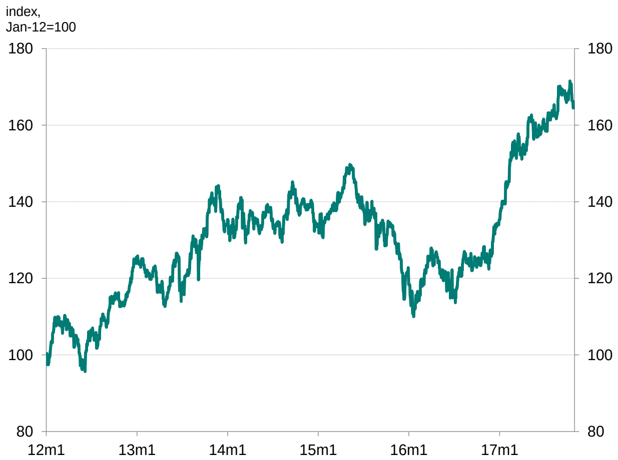
High demand for dwellings in the primary market and optimistic expectations as to future trends in this market – amid continued low construction costs – incline developers to further increase the supply of flats (Figure 2.27). This is indicated by the steadily rising number of building permits

Figure 2.24 Polish government bond yields



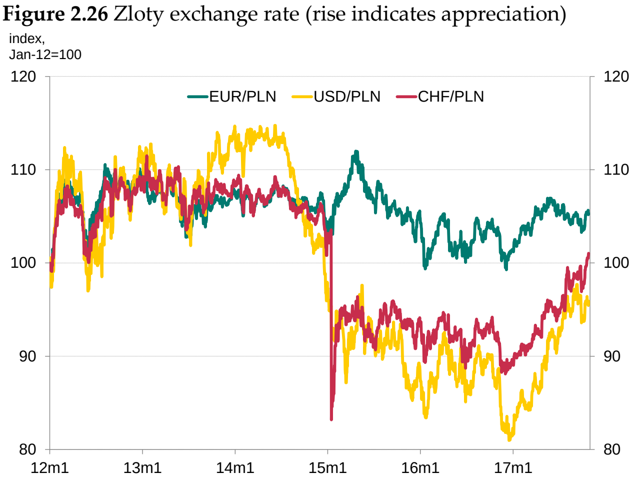
Source: Bloomberg data.

Figure 2.25 The main stock index in Poland (WIG)



Source: Bloomberg data.

Figure 2.26 Zloty exchange rate (rise indicates appreciation)



Source: Bloomberg data.

[29] For more information on the situation in the housing real estate market in Poland see the NBP report: *Information on home prices and the situation in the housing and commercial real estate market in Poland in 2017 Q2*, NBP, September 2017.
[30] The diminished influence of this factor results from reaching the statutory threshold of 50% of the budgeted funds on 7 April 2017, for which reason only about PLN 0.1bn was disbursed in 2017 Q2.

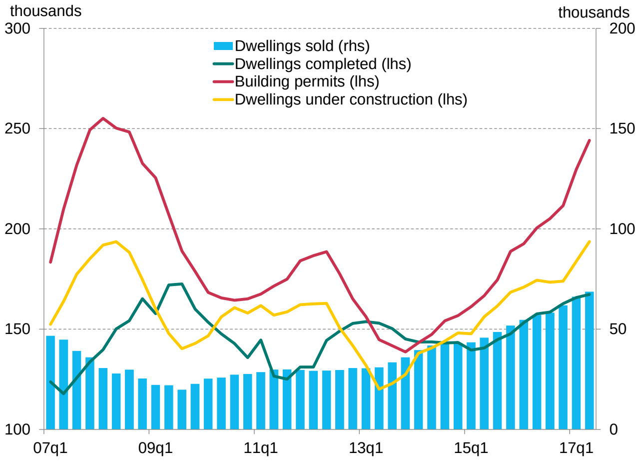
issued and dwellings under construction. Despite the expanding supply, the average selling time of dwellings in primary market is gradually falling, and leading indicators point to the possibility of mounting shortages of housing supply. In these conditions, prices in the residential estate market are rising slightly.[31]

2.6 Money and credit

Stable economic growth is accompanied by credit to the non-financial sector rising at the rate close to that of the nominal GDP.[32] Consequently, the ratio of outstanding loan portfolio of the non-financial sector to GDP has stabilised at levels close to 53% for several quarters.

Loans to households remain the most important source of lending to the non-financial sector, growing at a rate close to 4.5% y/y for several years (Figure 2.29). The rise in those loans stems to an almost equal extent, from an increase in consumer loans and housing loans, with the growth rate of the former significantly higher than the latter (7.9% y/y and 3.3% y/y in 2017 Q3, respectively).[33] The growth in loans to households has been backed by their favourable financial position, very good consumer sentiment and by relatively low interest rates. In the case of housing loans, these factors helped to stabilise their growth rate, despite the

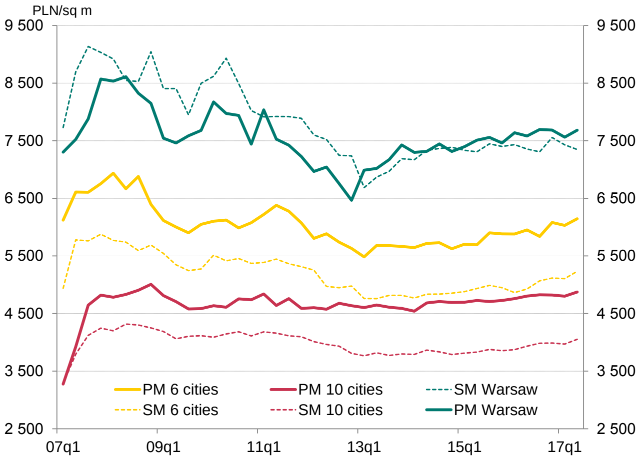
Figure 2.27 Residential construction in Poland (4-quarter rolling sum)



Source: GUS and REAS data, NBP calculations.

Sales data is based on 6 major markets in Poland (Warszawa, Kraków, Trójmiasto, Wrocław, Poznań i Łódź)

Figure 2.28 Average prices of flats in major cities in Poland



Source: NBP calculations based on the NBP survey.

PM – primary market, SM – secondary market. Transaction prices – an average weighted with the share of the housing stock in a given city in the total housing stock. Aggregate of 6 cities consists of: Gdańsk, Gdynia, Kraków, Łódź, Poznań, Wrocław, whereas of 10 cities: Białystok, Bydgoszcz, Katowice, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin i Zieloną Górę.

[31] In 2017 Q2 transaction prices in the primary market rose 2.1% y/y and in the secondary market by 4.0% y/y. The rise in the primary market prices may have also resulted from the changing structure of the sold flats: the number of relatively cheaper flats, purchased under the "Flat for the Young" scheme has diminished, while the number of more expensive buy-to-let flats has increased (*Residential Market in Poland in 2017 Q2*, REAS).

[32] In this chapter, growth in lending to a given sector is defined as growth in transaction changes in receivables of monetary financial institutions from that sector. The only exemption are data on growth in lending to small, medium-sized and large enterprises relating to non-transaction changes in line with the banking sector statistics of loans and advances.

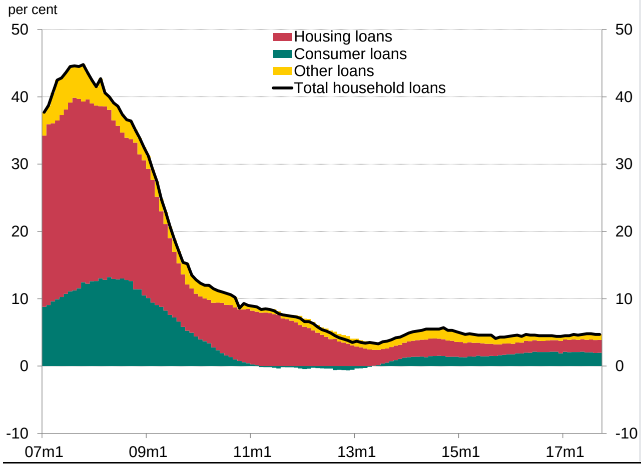
[33] Housing loan growth was constrained by the decrease in household debt on account of declining foreign currency housing loans (by 7.1% in 2017 Q3 y/y), while housing loans in zloty rose by 10.5% y/y in 2017 Q3.

significantly reduced support under the "Flat for the Young" programme[34] and the relatively restrictive lending standards.[35]

Corporate loans, growing in Q3 at a rate close to the one recorded in Q2, i.e. markedly higher than at the beginning of the year (7.4% y/y compared with 4.6% y/y in Q1 2017; Figure 2.30),[36] also contributes substantially to the rise in lending to the non-financial sector. The higher corporate lending growth is supported by an increase in demand for loans as reported by banks.[37] The higher needs for external financing from enterprises may be associated with the continuing good economic conditions and a rise in corporate optimism about their outlook. Corporate lending growth continues to be supported by the high availability of loans and their relatively low service costs.

Lending growth contributes to growth in broad money aggregate (M3) in the economy, however the simultaneous decrease in net debt of the government sector in banks causes the M3 rate to decrease (in Q3 2017, M3 growth slowed to 5.7% y/y from 6.4% y/y in the previous quarter; Figure 2.31).[38] This was reflected in the slowdown in growth in cash in circulation and household deposits. At the same time, households increased their investment in participation units of investment funds.[39] Also the value of shares held by households rose, which was supported by the

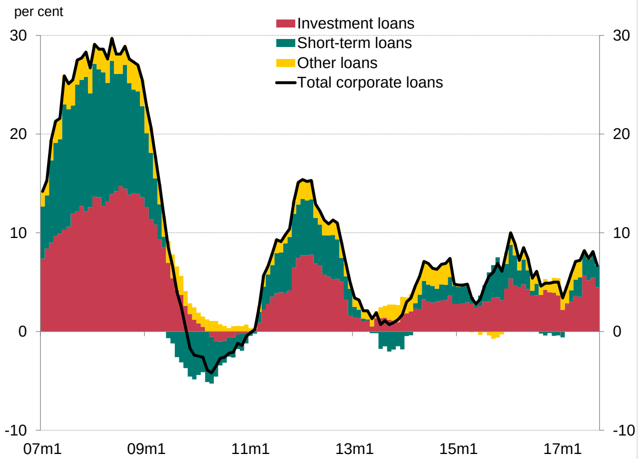
Figure 2.29 Composition of growth in loans to households (y/y)



Source: NBP data.

The category *Other loans* covers operating and investment loans to microenterprises.

Figure 2.30 Composition of growth in loans to companies (y/y)



Source: NBP data.

The category *Other loans* covers i.a. loans for security purchases and export loans.

[34] As the statutory limit of 50% of funds scheduled for this year was reached, acceptance of applications for subsidies under the „Flat for the Young" for 2018 was discontinued on 7 April 2017. In 2017 Q2, loan subsidy payments amounted to approx. PLN 0.1 billion. At the same time, following the amendment to the Act on the State support to the first home buyers, in August 2017 an additional amount of PLN 67 million was allocated for subsidizing home purchases in 2017.

[35] *Senior loan officer opinion survey on bank lending practices and credit conditions*. 2017 Q3, NBP, July 2017.

[36] The higher growth of corporate loans in Q2 and Q3 may have, in part, stemmed from an one-off factor: the conversion of foreign debt in the amount of approx. PLN 7 billion into domestic debt by an economic entity in March 2017. At the same time, the higher growth of loans was observed – similarly as in 2017 Q2 – both in the sector of large enterprises as well as in the sector of small and medium-sized ones (the growth in July and August were 5.9% y/y and 6.0% y/y, respectively).

[37] *Senior loan officer opinion survey on bank lending practices and credit conditions*. 2017 Q3, NBP, July 2017.

[38] The decrease in net debt of the government sector in banks results, on the one hand, from the fact that the effect of a strong rise in commercial banks' exposure to government bonds in 2016 has waned, which may have been associated with the introduction of the act on tax on assets, which excludes government bonds from the tax base. On the other hand, a significant increase in deposits of the government sector decreases net debt. The trend continued in 2017 Q3. In July and August, the average net debt growth of the government sector remained negative, and the growth of broad money slowed down again (to 5.7% y/y).

[39] The value of inflows to investment funds in July and August 2017 amounted to PLN 838 million.

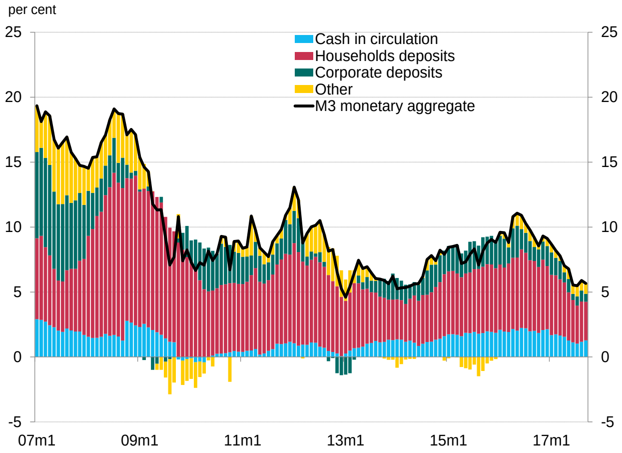
good situation on the Warsaw Stock Exchange (see Chapter 2.5 *Monetary policy and asset markets*). In turn, the pace of growth of corporate deposits stabilised, which may have been driven by the good financial and liquidity position of enterprises (see Chapter 2.3 *Financial situation of the enterprise sector*).

2.7 Balance of payments

In 2017 Q2 the current account balance was lower than a quarter before, yet still close to its historical high (Figure 2.32; Table 2.3). The decline in the current account balance stemmed from narrower trade surplus amid a temporary deceleration in exports (see Chapter 2.2.4 *External trade*). Another factor behind lower current account balance was wider primary income deficit resulting from weaker inflow of usually volatile Common Agricultural Policy funds and higher remittances to Ukraine (see Chapter 2.4 *Labour market*).[40]

In turn, the combined capital and current account balance remained in surplus in 2017 Q2. This was attributable to stronger inflow of EU funds under the European Regional Development Fund and the Cohesion Fund. However inflow of EU funds remained still relatively low in Q2 (see Chapter 2.2.2 *Investment*).[41] The financial account balance in 2017 Q2 (in terms of 4-quarter rolling sum) decreased (Figure 2.33).[42] As in previous quarters, it was again lowered by a significant portfolio capital inflows into Polish government bond market, stimulated by an improvement in market

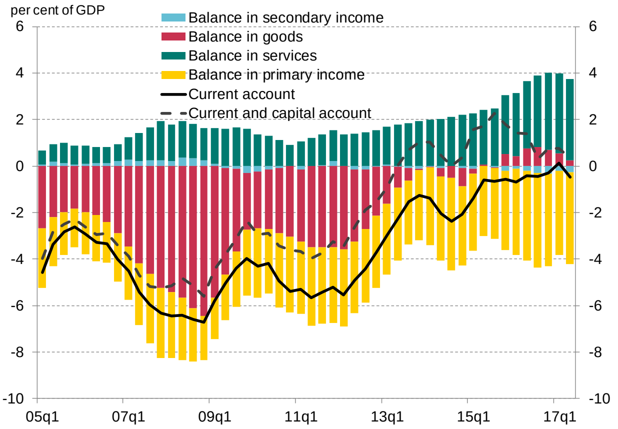
Figure 2.31 Composition of M3 growth (y/y)



Source: NBP data.

The category *Other* covers deposits of non-monetary financial institutions and local government units, repurchase agreements between banks and non-banking sector as well as debt securities with maturity up to 2 years issued by banks.

Figure 2.32 Current account balance (4-quarter rolling sum)



Source: NBP data.

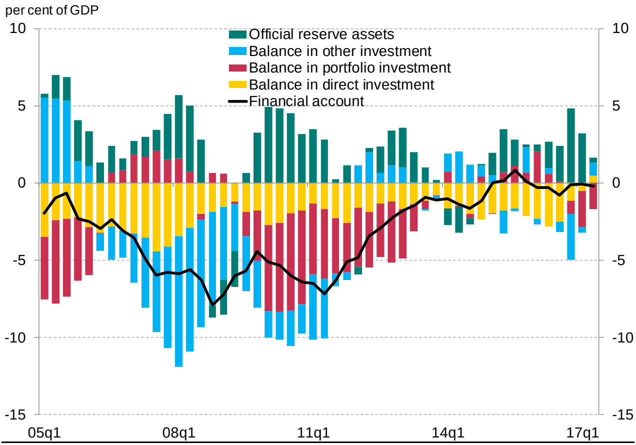
[40] In July and August 2017 (in terms of a 12-month rolling sum), current account balance was still close to its historical highs, with somewhat higher trade surplus.

[41] In line with the available data for the first two months of Q3, these trends continued.

[42] Factor contributing to a fall in financial account balance was a smaller scale of the increase in the value of the NBP official reserve assets (in terms of a 4-quarter rolling sum) resulting largely from the NBP's own transactions (i.e. repo transactions serving the management of foreign exchange reserves). Some positions in financial account may also be influenced by changes in tax optimisation. Pursuant to the Act of 29 November 2016 amending the Personal Income Tax Act, Corporate Income Tax Act, an Act amending the Tax Ordinance Act and some other Acts, an exemption from corporate income tax for debt securities investment was introduced, while investment in partnerships was excluded from the exception. This change in tax legislation have affected the portfolio and direct investment accounts, yet their combined impact on the financial account balance has been limited.

sentiment and favourable data from the Polish economy (see Chapter 1.5 *International financial markets*, Chapter 2.2 *Demand and output* and Chapter 2.5 *Monetary policy and asset markets*).[43] The above described trend was partly offset by a single transaction, which led to a lower share of direct investors in a certain large domestic financial institution.

Figure 2.33 Financial account balance (4-quarter rolling sum)



Source: NBP data.

A positive value of the balance means an increase in Polish net assets (net outflow of capital from Poland).

Table 2.3 Selected external stability indicators (4-quarter rolling sum in per cent, unless indicated otherwise)

	2014	2015	2016				2017	
			q1	q2	q3	q4	q1	q2
Current account balance/GDP	-2.1	-0.6	-0.7	-0.4	-0.5	-0.3	0.1	-0.5
Current and capital balance/GDP	0.4	1.8	1.4	1.4	0.3	0.8	0.8	0.3
Trade balance/GDP	1.7	2.5	3.1	3.7	3.9	4.0	4.0	3.7
Official reserve assets (in monthly imports of goods and services)	5.3	5.3	5.3	6.1	5.9	6.4	5.7	5.3
Foreign debt/GDP	71	73	71	75	74	76	73	71
Net international investment position/GDP	-69	-65	-63	-62	-62	-61	-62	-62
Official reserve assets/short-term foreign debt and forecast current account balance)	106	106	107	113	111	111	107	107
Official reserve assets/short-term foreign debt	110	108	107	116	114	116	115	116

Source: NBP data.

The last two indicators include foreign debt and the level of official reserves at the end of the period.

[43] Financial account balance increased in July and August 2017 (in terms of a 12-month rolling sum). This was attributable to an increase in Polish direct investment abroad and a slightly lower scale of foreign portfolio investment in Poland.

3 Monetary policy in July – November 2017

At the meetings between July and November 2017 the Council kept the NBP interest rates unchanged at the following levels: reference rate 1.50%, lombard rate 2.50%, deposit rate 0.50%, rediscount rate 1.75%.

What follows in the next part of the chapter are the previously published *Minutes of the Monetary Policy Council decision-making meetings* held between July and October 2017 as well as the *Information from the meeting of the Monetary Policy Council* in November 2017. *Minutes of the Monetary Policy Council decision-making meeting* in November 2017 will be published on 23 November, and thus included in the next *Report*.

Minutes of the Monetary Policy Council decision-making meeting held on 5 July 2017

Members of the Monetary Policy Council discussed macroeconomic developments abroad analysing their impact on economic conditions in Poland. Further signs of strengthening in global activity were indicated, including the ongoing recovery in the euro area confirmed by an improvement in many economic indicators. It was pointed out that – besides a rise in consumption – euro area GDP growth was currently supported also by a recovery in investment. The Council members also considered the diminishing growth differentials among euro area countries as a sign of consolidation of the recovery in the euro area. Yet, certain Council members underlined that, despite the improved business conditions, growth in the euro area remained relatively weak. While analysing economic developments in other economies, it was judged that GDP growth in the United States probably increased in 2017 Q2. It was noted, however, that recent data on activity in the US economy were slightly weaker than expected. Attention was also drawn to the relatively high equity prices in the US market and their historically low volatility. Moreover, during the discussion it was pointed out that current data in China indicated a gradual slowdown in country’s economic growth.

While discussing price developments abroad, it was emphasised that despite the ongoing global recovery, inflation had remained moderate and had even slightly declined in some countries. In this context, attention was drawn to the stabilisation of global energy commodity prices in the recent period. In the opinion of the Council members, owing to the increased use of shale oil in the United States and the high oil stocks, the prices of oil have currently become less sensitive to changes in global economic conditions and to OPEC decisions to restrict oil production.

During the discussion on monetary policy abroad, it was pointed out that, despite the strengthening of the economic recovery in the euro area, the European Central Bank had revised downward its medium-term inflation forecasts for the euro area economy. Currently it is expected that also in the coming years inflation in the euro area will remain below the ECB's inflation target. Taking this into account, the European Central Bank keeps interest rates close to zero, including the deposit rate below zero, and continues its asset purchase programme. In reference to the United States, it was pointed out that the Federal Reserve was continuing monetary policy tightening by raising interest rates and signalling the possibility of decreasing its reinvestment of the principal payments from securities in the coming quarters.

While discussing developments in Poland's real economy, the Council members stressed that monthly data on economic activity signalled a continuation of stable GDP growth in 2017 Q2. It was judged that a further rise in retail sales amid very good consumer sentiment indicated still high private consumption growth. Moreover, attention was drawn to the increased growth in both industrial output and construction and assembly output in May after their marked weakening in April. Similarly, leading economic indicators suggest a continuation of favourable trends in the corporate sector. It was assessed that – along with the expected growth in the use of EU funds – this should support gross fixed capital formation, while also stressing that under the July projection investment growth in 2017 Q2 was probably only slightly positive. In reference to the July projection, it was underlined that economic growth over the coming quarters would remain close to its current level, and would then run close to potential output growth. The Council members indicated that, although rising consumer demand remained the main driver of growth, in the coming quarters its role would diminish due to the gradual fading of the statistical effects of the "Family 500 plus" programme introduced in 2016 on consumption growth. At the same time, a further recovery in investment is forecast beginning from the second half of 2017. Certain Council members pointed to the still low investment rate in the Polish economy compared to many other European countries, which could have a negative effect on potential output growth.

When analysing inflation developments in Poland, it was emphasised that annual growth of consumer prices remained moderate and even decreased in June. At the same time, it was pointed out that core inflation, although gradually increasing, remained low. The Council members judged that these developments in inflation followed from fading effects of the past increase in global commodity prices, with only a gradual rise in domestic inflationary pressure stemming from improving domestic economic conditions.

While discussing the outlook for price developments in Poland, it was emphasised that – under the July projection – consumer price inflation should remain moderate and approach the target towards the end of the projection horizon. This will result from the gradual increase in core inflation related to the continuation of favourable economic conditions, amid lower growth in import prices. The majority of the Council members judged the risk to price stability in the medium term to be limited. Yet, in the opinion of certain Council members, the impact of factors increasing inflation over the coming years could prove stronger than had been forecast in the July projection, while the impact of factors holding back inflation could be weaker than anticipated in the projection.

With reference to the situation in the labour market, attention was drawn to a further increase in employment and wages in the corporate sector. In the opinion of the Council members, in the coming quarters wage growth could continue to increase due to the likely further rise in employment amid the emerging labour supply-side constraints. At the same time, the expected continuation of increases in labour productivity growth was highlighted, which would limit the unit labour cost growth in the coming years. In this context, certain Council members pointed to the risk of lower labour immigration of Ukrainian citizens to Poland, and also a possible decrease in the labour force participation rate following the introduction of the lower retirement age.

The Council members also discussed the consequences of interest rates remaining unchanged for a prolonged time amid expectations of a gradual growth in inflation in the coming years. Certain Council members pointed out that the prolonging of the period of negative real interest rates could increase the risk of the emergence of the negative effects of this phenomenon. In particular, these Council members emphasised that low interest on deposits encourages households to search for assets offering higher yields and therefore also associated with higher risk. In this context, certain Council members pointed to the decrease in the level of household deposits in May. At the same time, it was observed that the relatively low interest on loans supported the rise in household debt. However, other Council members stressed that so far no negative consequences of interest rates remaining at the current level could be observed. In this context, they underlined that, although the structure of household assets could gradually change, deposits were still their largest component, while loan growth and the stable share of non-performing loans in banks' credit portfolios, did not indicate excessive indebtedness of households.

While discussing NBP monetary policy, the Council decided that interest rates should remain unchanged. The Council members assessed that, despite favourable economic conditions, good labour market conditions and gradual rise in wage growth, inflationary pressure remained limited and there were no imbalances building up in the economy. At the same time, available forecasts, including the July projection, indicate that inflation will remain moderate in the coming quarters. Therefore, in the Council's assessment, the risk of inflation running persistently above the target in the medium term was limited.

The majority of the Council members assessed that stabilisation of the NBP interest rates was likely in the following quarters, since – given the available information – it had been helping to keep the Polish economy on a sustainable growth path and maintain macroeconomic balance. In addition, the majority of the Council members assessed that the stabilisation of the interest rates would support the expected recovery in investment.

In the opinion of certain Council members, should data and forecasts incoming in the following quarters suggest stronger inflationary pressure than expected at the time of the meeting, it might be justified to consider an increase in the NBP interest rates. In the opinion of these Council members, decisions on the level of interest rates should take into account in particular the impact of negative real interest rates on lending, asset prices and savings rate in the Polish economy.

The Council decided to keep the NBP interest rates unchanged: the reference rate at 1.50%, the lombard rate at 2.50%, the deposit rate at 0.50%, the rediscount rate at 1.75%.

Minutes of the Monetary Policy Council decision-making meeting held on 6 September 2017

Members of the Monetary Policy Council discussed macroeconomic developments abroad analysing their impact on economic conditions in Poland. Further signs of strengthening in global activity were indicated. In particular, attention was drawn to the pick-up in GDP growth rate in the euro area in 2017 Q2 and the improvement in many euro area economic indicators and sentiment indicators in 2017 Q3. While analysing economic developments in other economies, it was underlined that in 2017 Q2 higher GDP growth was also observed in the United States as compared to 2017 Q1, and monthly indicators suggested a continuation of favourable economic situation in that economy. It was also stressed that in both the euro area and the United States consumption remained the most important demand factor of economic growth. During the discussion it was also pointed out that GDP growth had stabilised in China in 2017 Q2, although at the same time attention was drawn to the imbalances that remained in this economy.

While discussing price developments abroad, it was emphasised that despite the ongoing global recovery, inflation abroad had remained moderate.

In particular, it was pointed out that in the major advanced economies inflation continued to run below their respective inflation targets. While discussing factors impacting inflationary pressure abroad, attention was drawn to a slight increase in oil prices and their expected stabilisation in the coming years. In the opinion of Council members, owing in particular to the increased use of shale oil in the United States, oil prices have become less sensitive to changes in global economic conditions. Council members also pointed to the growth in US activity in the global gas market. In the opinion of Council members, as a result, the upward impact of energy commodity prices on inflation will probably be limited.

During the discussion on monetary policy abroad, it was pointed out that the European Central Bank was keeping interest rates close to zero, including the deposit rate below zero, and continuing its asset purchase programme. The persistence of moderate inflation in the euro area, related to low wage pressure in this economy and the appreciation of the euro, spoke in favour of preserving the strongly accommodative monetary policy of the ECB. It was indicated that low wage pressure and the appreciation of the euro increased the risk of another downward revision of inflation forecasts in euro area economy, despite the strengthening recovery there. As a result – as it was emphasised – inflation in the euro area would probably remain below the ECB's inflation target also in the coming years. In reference to the United States, it was underlined that the Federal Reserve would probably continue to gradually reduce the accommodative stance of its monetary policy, announcing in the near future the phasing out of reinvestment of maturing securities. At the same time, due to the decline in inflation, the pace of further interest rate increases by the Fed may be slower than previously expected.

While discussing developments in Poland's real economy, Council members pointed out that in 2017 Q2 GDP growth was close to that observed in 2017 Q1. It was underlined that growth continued to be driven primarily by increasing consumer demand, supported by rising employment and wages, disbursement of benefits and very good consumer sentiment. However, investment growth was still weak, as the fall in corporate investment had deepened somewhat, despite high capacity utilization and a further improvement in business conditions. Council members judged that the gradual recovery in investment financed with EU funds suggested that total investment growth would be higher in the second half of 2017. At the same time, export growth proved slower than import growth in 2017 Q2, and as a result, the contribution of net exports to GDP turned negative. Council members indicated that the weakening of export growth could be related to the slowdown in Germany's export growth due to the strong ties between Polish and German producers within global supply chains. In view of the improving economic situation abroad, the weakening of export growth may, however, be a temporary phenomenon.

When referring to monthly data on economic activity in Poland at the beginning of 2017 Q3, Council members underlined that the data indicated a continuation of stable GDP growth. It was judged that further stable growth in retail sales amid very good consumer sentiment suggested continued high growth in private consumption. At the same time, attention was drawn to a certain slowdown in industrial output growth and a strong acceleration in construction and assembly output growth in July. Moreover, it was stressed that leading economic indicators suggested a continuation of favourable trends in the corporate sector.

When analysing inflation developments in Poland, it was indicated that the annual growth of consumer prices remained moderate and stood at 1.8% in August. At the same time, it was underlined that core inflation continued at a low level. Council members judged that inflation would remain moderate also in the following quarters. This will result from a gradual rise in domestic inflationary pressure stemming from improving domestic economic conditions, alongside a decline in import price growth due to the expected stabilisation of energy commodity prices and low inflationary pressure abroad. However, certain Council members indicated that further growth in food prices could be a factor increasing inflation in the coming quarters. In the opinion of some Council members, the November projection, taking into account the latest data, will be important for an assessment of the inflation outlook.

With reference to the situation in the labour market, it was stressed that the further growth in employment and reduction in unemployment in 2017 Q2 was accompanied by a pick-up in wage growth in the corporate sector and the economy as a whole. It was pointed out that compared to other countries of the region wage growth in Poland remained moderate and continued to be curbed by the inflow of employees from Ukraine as well as by the further rise in the labour force participation rate among Poles. In the opinion of Council members, in the coming quarters wage growth could continue to increase due to the likely further rise in employment amid the emerging labour supply-side constraints. In the opinion of certain Council members, in particular the lowering of the retirement age could adversely affect the labour supply. However, other Council members judged that many people who will take retirement could remain active in the labour market, thus the impact of this factor on the labour supply may be limited.

Council members also discussed the size and structure of savings in the economy. It was pointed out that the total savings rate – with enterprises contributing the largest share of savings in Poland – exceeded the investment to GDP ratio. In reference to households, some Council members judged that their propensity to save depended to a large extent on the level of their disposable income, and should increase alongside a rise in employment and wages. At the same time, in the opinion of these Council members, the expected income from investing funds has less impact on the decision to save. However, other Council members argued that keeping NBP interest rates unchanged amidst gradually rising inflation could adversely affect households' propensity to save or encourage them to shift funds towards riskier assets.

While discussing NBP monetary policy, the Council decided that interest rates should remain unchanged. The Council assessed that, despite favourable economic conditions, good labour market conditions and wage growth continuing to exceed nominal productivity growth, inflationary pressure remained limited and there were no imbalances building up in the economy. At the same time, available forecasts indicate that in the coming quarters inflation will remain moderate. Therefore, in the Council's assessment, the risk of inflation running persistently above the target in the medium term was limited.

The majority of the Council members assessed that stabilisation of the NBP interest rates were likely in the coming quarters, since – given the available information – it had been helping to keep the Polish economy on a sustainable growth path and maintain macroeconomic balance. In addition, the majority of Council members assessed that the stabilisation of interest rates would support the expected recovery in investment.

In the opinion of certain Council members, should data and forecasts incoming in the following quarters suggest stronger inflationary pressure than expected at the time of the meeting, it might be justified to consider an increase in the NBP interest rates. In the opinion of these Council members, decisions on the level of interest rates should take into account in particular the impact of negative real interest rates on lending, asset prices and the savings rate in the Polish economy, while according to other Council members also on changes in unit variable costs.

A view was also expressed that in the event of a significant decline in economic indicators accompanied by a marked deterioration in consumer and corporate sentiment, it may be justified to consider a decrease in interest rates.

The Council decided to keep the NBP interest rates unchanged: the reference rate at 1.50%, the lombard rate at 2.50%, the deposit rate at 0.50%, the rediscount rate at 1.75%.

Minutes of the Monetary Policy Council decision-making meeting held on 4 October 2017

Members of the Monetary Policy Council discussed macroeconomic developments abroad analysing their impact on economic conditions in Poland. It was indicated that global economy continued to recover. Particular attention was drawn to a rise in GDP growth in the euro area over previous quarters, supported mainly by consumption, with somewhat slower investment growth in 2017 Q2. It was emphasised that, according to available data and forecasts, in 2017 GDP growth in the euro area should be stable and somewhat higher than previously expected. At the same time, it was noted that forecasts for growth in exports of the euro area, Poland's main trading partner, had been revised downwards. In addition, it was assessed that economic conditions in the United States were strong. Yet, it was also judged that adverse weather conditions could have had a temporarily negative impact on the US economic activity over recent months. In turn, in China, monthly indicators suggested that GDP growth might slow down slightly in 2017 Q3.

Referring to price developments in the world economy, it was pointed out that despite the ongoing global recovery, inflation abroad remained moderate. It was emphasised that this was caused by persistently low domestic inflationary pressure in many countries. Certain Council members stressed that the reasons for the persistence of low global inflation were highly uncertain, with stronger economic connections within global value chains being cited as one of the likely reasons. It was pointed out that, according to available forecasts, in the coming years inflation should remain moderate, particularly in the euro area, where it was to run below the level consistent with the ECB’s definition of price stability.

During the discussion it was noted that prices of some commodities, including oil, had risen somewhat of late. However, it was judged that the rise in oil prices had resulted from temporary factors, including the adverse weather conditions in the United States and geopolitical factors. Yet, the Council members underlined that the rise in oil price was still contained by high oil supply attributable, most notably, to heightened shale oil production in the United States. It was pointed out that following a decline caused by weather conditions, shale oil extraction had rebounded at the beginning of October, while exports of this commodity from the United States had surged.

Regarding the monetary policy abroad, it was highlighted that the European Central Bank was keeping interest rates close to zero, including the deposit rate below zero, and was continuing its asset purchase programme. It was indicated that the market participants expected that the ECB would probably continue to purchase financial assets in 2018, albeit at a diminishing pace. Moreover, the ECB still signals that it will keep its interest rates unchanged, even after asset purchases come to an end. It was observed also that the interest rates were low in Central and Eastern European economies. Referring to the US monetary policy, it was noted that the Federal Reserve continued to gradually reduce the amount of monetary policy accommodation. In particular, the

US central bank is starting to wind down its balance sheet, though at a gradual pace. It was underlined that, in line with the Federal Reserve's announcements, the bank's balance sheet would not return to the pre-crisis level in the coming years. It was also emphasised that the Federal Reserve had lowered its expectations regarding the interest rates over the longer run. As a result, the interest rates in the coming years will probably remain lower than before the global financial crisis.

While discussing developments in Poland's real economy, the Council members judged that the economic conditions in Poland were favourable. It was underlined that economic growth was still driven primarily by increasing consumer demand, supported by rising employment and wages, disbursement of benefits and very good consumer sentiment. Yet, it was indicated that investment expenditures remained low. However, it was assessed that higher use of EU funds and an acceleration in construction and assembly output growth pointed to a gradual recovery in fixed capital formation. In the opinion of certain Council members, the scale of the expected recovery in investment remained unclear. It was also noted that industrial output growth had picked up in August, whereas economic activity indicators in this sector had improved again in September. At the same time, certain Council members cited still moderate leading economic indicators.

With reference to labour market conditions, it was pointed out that further growth in employment was accompanied by an acceleration in wage and unit labour cost growth. However, it was stressed that wage growth, even though it had accelerated, remained moderate and markedly lower than in some Central and Eastern European economies. It is contained by the inflow of foreign employees to Poland as well as higher labour force participation among Poles. At the same time, many Council members were pointing to a risk of further intensification in wage pressure. In this context, it was indicated that enterprises were reporting growing difficulties in finding employees. However, some Council members emphasised that, at the time of the meeting, it was hard to assess whether these difficulties would translate into higher wage growth or rather become a barrier to growth for enterprises. Certain Council members expressed the opinion that protracted low investment growth might restrain productivity growth over longer run and thereby add to unit labour cost growth.

When analysing price developments in Poland, it was indicated that the annual growth in consumer prices remained moderate and stood at 2.2% in September, i.e. was slightly higher than expected. At the same time, it was stressed that core inflation continued at a low level. The majority of the Council members underlined that, given available forecasts, inflation would remain moderate in the following quarters. They argued that this would result from moderate price growth in the environment of the Polish economy, alongside a gradual rise in domestic inflationary pressure stemming from improving economic conditions at home.

At the same time, in the opinion of some Council members, in the coming quarters inflation could be higher than forecast at the time of the meeting due to stronger growth in wage and cost pressures. In this context, they pointed to a pick-up in producer price growth, also with energy prices excluded. Certain Council members expressed an opinion that the gas mandatory stock requirement imposed recently on importers of this commodity could be a factor supportive of an increase in its prices. Certain Council members were of the opinion that, given the underlying trends in some economic variables, inflation might exceed the target in the medium term, particularly in the event of a negative supply shock.

Referring to developments in monetary aggregates, it was stressed that lending to the non-financial sector was growing steadily, in line with the nominal GDP growth rate. In particular, it was emphasised that, despite the ongoing recovery in the real estate market, mortgage lending growth was stable. It was also noted that a decline in the value of household deposits had come to a halt in August. However, certain Council members judged that households could still be shifting funds from bank deposits towards riskier assets.

While discussing NBP monetary policy, the Council decided that interest rates should remain unchanged. The Council assessed that, despite the favourable economic conditions and wage growth higher than labour productivity growth, inflationary pressure remained limited and there were no imbalances building up in the economy. The majority of the Council members judged that in the coming quarters inflation would remain moderate, thus the risk of inflation running persistently above the target in the medium term was limited. As a result, the majority of the Council members assessed that stabilisation of the NBP interest rates was likely in the coming quarters. It was underlined that the stabilisation of interest rates would allow to meet the inflation target, and at the same time support the expected recovery in investment.

In the opinion of some Council members, should data and forecasts incoming in the following quarters suggest stronger inflationary pressure than expected at the time of the meeting, it might be justified to consider an increase in the NBP interest rates. In the opinion of these Council members, decisions on the level of interest rates should take into account in particular the impact of negative real interest rates on lending, asset prices and savings in the Polish economy, and also changes in unit variable costs. An opinion was also expressed that future decisions of the Council should account for developments in inflation expectations.

A view was expressed that in the event of a significant decline in economic indicators accompanied by a marked deterioration in consumer and corporate sentiment in the longer run it might be justified to consider a decrease in interest rates.

The Council judged that – given the available information – the stabilisation of interest rates helped to keep the Polish economy on a sustainable growth path and maintain macroeconomic stability. Some Council members stressed that the next projection of inflation and GDP would be important for an assessment of the outlook for monetary policy in the coming quarters.

The Council decided to keep the NBP interest rates unchanged: the reference rate at 1.50%, the lombard rate at 2.50%, the deposit rate at 0.50%, the rediscount rate at 1.75%.

Information from the meeting of the Monetary Policy Council held on 7-8 November 2017

The Council decided to keep the NBP interest rates unchanged: reference rate at 1.50%; lombard rate at 2.50%; deposit rate at 0.50%; rediscount rate at 1.75%.

Global economy continues to recover. Economic growth in the euro area remains higher than in the previous year, driven by an improvement in the labour market conditions, favourable sentiment of economic agents, and a recovery in international trade. In the United States GDP growth in 2017 Q3 was close to that observed in the previous quarter, despite the negative impact of adverse weather factors on economic activity. In China economic growth in 2017 Q3 slowed down slightly.

Despite ongoing global recovery, inflation abroad remains moderate, on the back of persistently low domestic inflationary pressure in many countries. At the same time, prices of certain commodities, including oil, have risen somewhat of late.

The European Central Bank keeps interest rates close to zero, including the deposit rate below zero. At the same time, the ECB has extended the duration of the asset purchase programme at least until September 2018, cutting the amount of monthly purchases as of next year by half. The US Federal Reserve, in turn, has started reducing its balance sheet.

In Poland, monthly data indicate that GDP growth in 2017 Q3 was probably higher than in the previous quarter. Growth was still driven primarily by consumer demand, supported by rising employment and wages, disbursement of benefits and very good consumer sentiment. At the same time, faster construction and assembly output growth than in the first half of the year points to a probable recovery in investment.

The annual growth in prices of consumer goods and services remains at a moderate level. All core inflation measures have risen, though still remain moderate.

The Council became acquainted with the results of the November projection of inflation and GDP, prepared under the assumption of unchanged NBP interest rates. In line with the November projection based on the NECMOD model, there is a 50-percent probability that the annual price growth will be in the range of 1.9-2.0% in 2017 (against 1.6-2.3% in the July 2017 projection), 1.6-2.9% in 2018 (compared to 1.1-2.9%) and 1.7-3.7% in 2019 (compared to 1.3-3.6%). At the same time, the annual GDP growth – in line with this projection – will be with a 50-percent probability in the range of 3.8-4.6% in 2017 (against 3.4-4.7% in the July 2017 projection), 2.8-4.5% in 2018 (compared to 2.5-4.5%) and 2.3-4.3% in 2019 (compared to 2.3-4.3%).

Taking into account the present information, including the results of the November projection, the Council judges that in the coming years inflation will run close to the inflation target. As a result, the current level of interest rates is conducive to keeping the Polish economy on the sustainable growth path and maintaining macroeconomic stability.

The Council adopted a resolution on the required reserve ratios. In line with this resolution the required reserve ratio on funds received for at least a two-year period will stand at 0%. The resolution comes into force on 1 March 2018 and applies since the required reserve maintenance period starting on 30 April 2018.

The Council adopted the *Opinion on the 2018 Draft Budget Act.*

The Council adopted *Inflation Report – November 2017.*

4 Projection of inflation and GDP

This inflation and GDP projection was prepared by the Economic Analysis Department of Narodowy Bank Polski and presents a forecast of economic developments under the assumption of the unchanged NBP interest rates. In terms of the contents, works on this projection were supervised by Piotr Szpunar, Director of the Economic Analysis Department. The process was coordinated by the Macroeconomic Forecasts Division of the Economic Analysis Department. Using the macroeconomic model NECMOD[44], the projection was prepared as the outcome of an iterative process, in the course of which the paths of some variables were adjusted if they diverged from NBP experts' economic intuition based on their knowledge of economic processes. The Management Board of NBP approved the projection to be submitted to the Monetary Policy Council. The projection constitutes one of the inputs to the Monetary Policy Council's decision-making process concerning the NBP interest rates.

The November projection based on the NECMOD model covers the period from 2017 Q4 to 2019 Q4. The starting point for the projection is 2017 Q3.

The cut-off date for the data used in this projection is 18 October 2017.

[44] Current version of the documentation of the model is available at the NBP website http://www.nbp.pl/homen.aspx?f=/en/publikacje/raport_inflacja/necmod.html

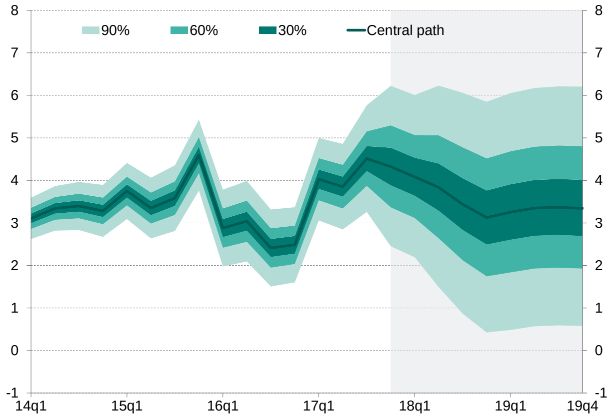
4.1 Summary

In line with the current projection, GDP growth in the second half of 2017 will remain high, exceeding 4% y/y, thus running above the July projection's expectations. Private consumption will remain the main factor behind growth in this period, which results from further improvement in labour market conditions and payments of benefits under the "Family 500 plus" programme, which boost the purchasing power and the sentiment of households. Additionally, the second half of 2017 will see a pick-up in the growth of investment expenditure, including, in particular, public investment, which is related to the inflow of funds from the EU budget under the EU financial framework 2014-2020.

Along with further increase in the absorption of EU structural funds in the subsequent years, the outlook for growth in investment demand will remain favourable. The growing wage bill will support the improvement in the financial condition of households, yet the effect of transfers under the "Family 500 plus" programme on consumption growth will gradually wane. Also the decline in GDP growth in the euro area, anticipated for the years 2018-2019, will curb faster economic growth. At the same time, low interest rates and the related low credit costs will have a boosting effect on domestic demand. All these factors will translate into a gradual decline in GDP growth to the level close to the potential output growth.

High GDP growth contributed to the closing, in 2017 Q3, of the output gap which had been negative since 2012. In subsequent years, the output gap will grow and will be at a positive, yet low level, not exceeding 1% of potential output. The size of the output gap suggests that the coming years will see a moderate rise in demand

Figure 4.1 GDP (y/y %)



Source: GUS data, NBP calculations.

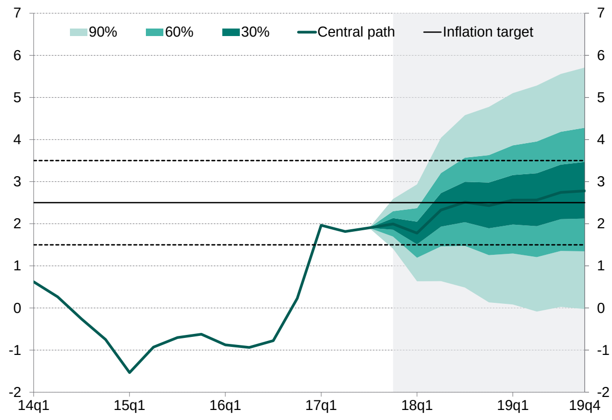
pressure in the economy as a whole, and the improvement in economic conditions will gradually translate, albeit to a limited extent, into a pick-up in domestic inflation. Wage growth, forecast to exceed that of labour productivity over the projection horizon, will act in the same direction. Persisting strong demand for labour amid insufficient labour supply will also be a factor behind accelerating wage growth. In turn, domestic inflation will be curbed by the moderate price growth in the euro area, low prices of energy commodities in the global markets and the appreciation of the effective exchange rate of the zloty.

As a result of the above-mentioned factors, consumer price inflation will gradually rise over the projection horizon to run slightly above 2.5% y/y in 2019. In comparison with the July projection, inflationary pressure is rising somewhat faster, which is driven by the upward revision of the path of domestic economic growth and the forecast scale of improvement in the labour market conditions in Poland.

The realisation of the projection scenario will depend to a significant degree on the scale of the recovery in the global economy. The future performance of the US economy, notably the shape of fiscal and monetary policy, which is currently hard to predict, will be the main source of uncertainty in the scenario. Among domestic factors, labour supply is a significant risk factor to the path of inflation and GDP. The record-low level of unemployment have a beneficial effect on the situation of households. However, a shortage of labour supply may create a barrier preventing enterprises from further expanding the scale of production.

The assessment of the above-mentioned factors points to a nearly symmetrical distribution of risks to CPI inflation and GDP growth, as reflected in relevant fan charts (Figure 4.1, Figure 4.2).

Figure 4.2 CPI inflation (y/y, %)



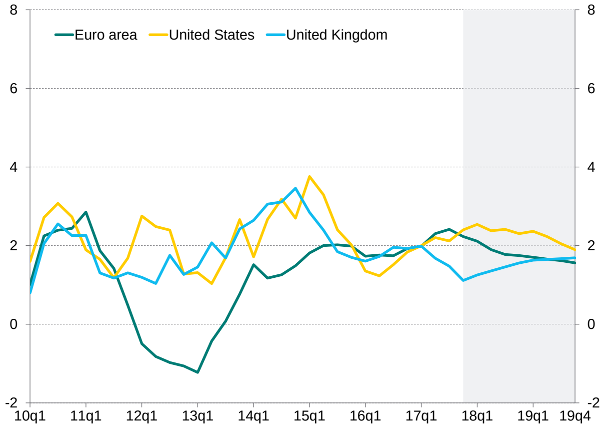
Source: GUS data, NBP calculations.

4.2 External environment

Over the projection horizon, economic growth in the external environment of the Polish economy will remain moderate, with the outlook for business conditions in the United States being more optimistic than in Europe (Figure 4.3). Consumption will remain the main factor boosting GDP growth in the euro area and in the United States, which will be supported by the persistently favourable trends in the labour market in these economies. In the United Kingdom, net exports will be an important factor behind the economic growth due to improved price competitiveness of enterprises driven by the depreciation of the British pound. In the coming years economic growth abroad will be, however, curbed by slow labour productivity growth. As compared to the previous forecasting round, GDP growth in the euro area has been revised upwards, with the strongest upward revision in 2017 and a slightly lower one in 2018 (Table 4.1).

In the euro area, after a robust recovery observed in 2017, in the coming years the GDP growth will decline slightly. This will be a result of rising inflation, containing the purchasing power of households, which will have a negative impact on private consumption growth. At the same time, investment demand in the corporate sector will be on a gradual upward trend over the projection horizon, as indicated by the currently high level of capacity utilization. Also the outlook for housing expenditure is optimistic due to the robust situation in the labour market and the persistently low dwellings' prices. Growth in both private consumption and investment will be supported by low interest rates on loans, in line with the ECB's accommodative monetary policy under which the central bank of the euro area will

Figure 4.3 GDP abroad (y/y, %)



Source: Bloomberg, Eurostat data, NBP calculations.

Table 4.1 GDP abroad – November projection versus July projection

	2017	2018	2019
GDP in Euro Area (y/y, %)			
November 2017	2.2	1.9	1.6
July 2017	1.9	1.7	1.6
GDP in United States (y/y, %)			
November 2017	2.2	2.4	2.1
July 2017	2.2	2.5	2.1
GDP in United Kingdom (y/y, %)			
November 2017	1.6	1.4	1.7
July 2017	1.4	1.5	1.7

Source: NBP calculations.

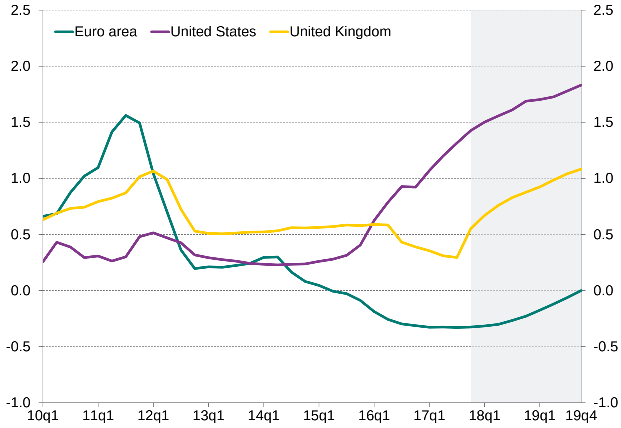
keep negative short-term interest rates until the end of 2019 (Figure 4.4) [45].

The current forecast of economic growth in the euro area assumes the 2017 economic growth to be 0.3 percentage points higher than in the July projection and to gradually approach the value assumed in the previous forecasting round (Table 4.1). The upward revision of the forecast GDP growth results from better than expected data readings in the first half of 2017 and the positive impact of reforms of the labour market in France on the growth in the French economy.

Throughout the projection horizon, the main driver of GDP growth in the United States will continue to be private consumption, fuelled by wages and employment growth. The increase in net value of households' financial and non-financial assets will also add to this trend. Given the strengthening consumption demand, faster global economic growth and the weakening US dollar (Figure 4.5), the years 2017-2019 will see a rebound in private investment. The favourable conditions for consumption and investment in the United States also result from the reduction in taxation of households and enterprises planned for 2018. At the same time, the US output growth over the projection horizon will be held back by sluggish labour productivity dynamics, against the background of full employment in the US economy. Demand may be also negatively affected by rising cost of credit due to the gradual tightening of the Fed's monetary policy (Figure 4.4).

GDP growth in the United Kingdom will remain low in the coming years despite the accommodative monetary policy pursued by the Bank of England (Figure 4.3, Figure 4.4). The uncertainty related to the terms of the UK's exit from the European Union has a dampening effect

Figure 4.4 Interest rate abroad (%)



Source: Bloomberg data, NBP calculations.

[45] The forecast of short-term interest rates in the euro area, assumed in the projection, was prepared on the basis of FRA quotations, and thus reflects market expectation of this category in the future.

on the activity in this economy, restraining especially investment demand of the corporate sector. Heightened inflation, driven by the weakening of the British pound, contains households' purchasing power, which, in turn, undermines consumer expenditure. At the same time, the depreciation of the British currency, which boosts price competitiveness of the domestic production will increase the contribution of net exports to GDP growth in the UK, thus mitigating the slowdown in the British economy.

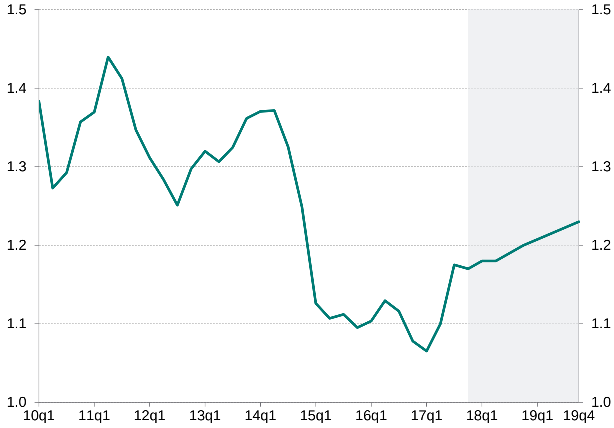
In the November projection, it is expected that, in line with market expextations, the euro exchange rate against the US dollar will gradually appreciate, despite the Fed's nominal interest rate increases (Figure 4.4, Figure 4.5).

The index of energy commodity prices in the global markets in the years 2017-2019 is running above the levels assumed in the previous projection, which is driven by the increase in all the index components observed in recent months (Figure 4.6). Starting from 2018 the index will begin to gradually decline on account of the anticipated lowering of the prices of hard coal.

The increase in crude oil prices in recent months was driven by cutbacks in oil production in the United States as the aftermath of the *Harvey* and *Nate* hurricanes. In 2018-2019, crude oil prices will stabilize due to the moderate growth in global demand being offset by the expected increase in oil extraction in the United States. The assumed path of natural gas prices is similar, which results from the high correlation in the fluctuations of prices of both commodities.

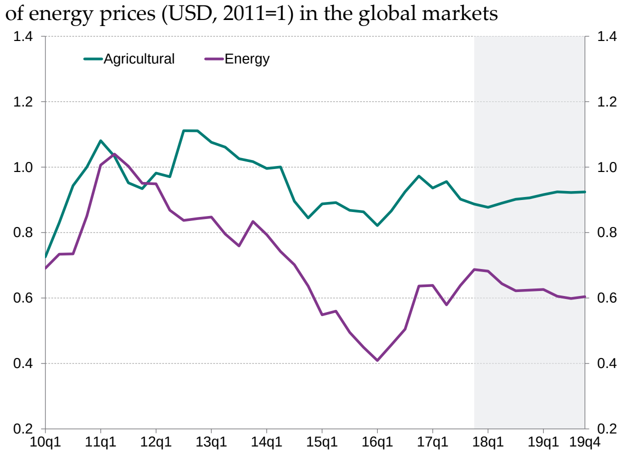
Disruptions in hard coal mining in Australia and Russia have led to a considerable increase in the prices of this commodity in the recent period. In 2018-2019, hard coal prices will be dampened by weakening demand from countries being the

Figure 4.5 EUR/USD exchange rate



Source: Bloomberg data, NBP calculations.

Figure 4.6 Index of agricultural prices (EUR, 2011=1) and index of energy prices (USD, 2011=1) in the global markets



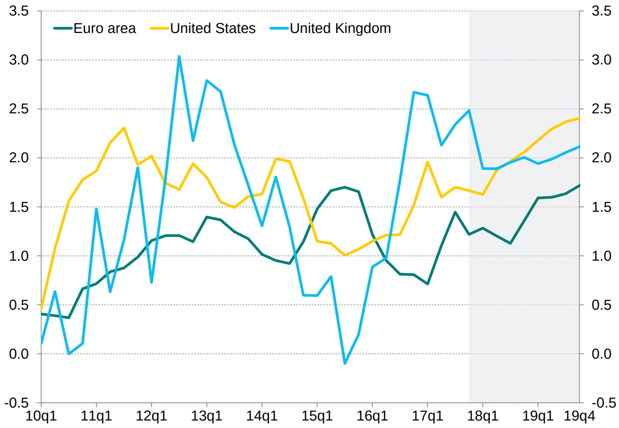
Source: Bloomberg data, NBP calculations.

largest consumers of this commodity (India, China, South Korea) and by the climate policy pursued by advanced economies.

The index of agricultural commodity prices over the projection horizon stands at a relatively low level (Figure 4.6). In the coming quarters, prices of those commodities will be held in check by increased supply of a large number of agricultural commodities (i.a. wheat, powdered milk, cocoa, sugar, potatoes) amid persistently low production costs, including low prices of energy and mineral fertilizers. In the longer-term projection horizon, along with the assumed return to the average level of supply, the agricultural commodity price index is supposed to gradually rise.

The current forecast assumes a moderate increase in inflation in Poland's external environment (Figure 4.7). In the euro area, price growth in the coming quarters will be supported by rising corporate profit margins, and, in the longer term, by higher cost pressure resulting from further improvement in the labour market situation. In the United States, due to increased labour utilization and rising positive output gap, inflation in 2017-2019 will run at a higher level than in the euro area. A stronger pick-up in price growth in the United Kingdom in 2017 is in turn related to the weakening of the British pound following the UK's decision to leave the European Union. The scale of inflation in all those countries will be contained by relatively low prices of energy commodities in the global markets (Figure 4.6)

Figure 4.7 Inflation abroad (y/y, %)



Source: Bloomberg, Eurostat data, NBP calculations.
Inflation as measured by the value added deflator.

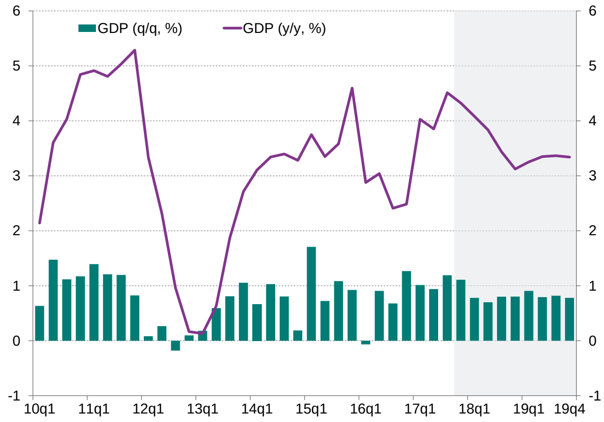
4.3 Polish economy in 2017-2019

In the second half of 2017, economic growth will remain at a robust rate of over 4% y/y (Figure 4.8). Growth in this period will primarily be driven by private consumption, which will result from a further improvement in the labour market conditions, and the payments of benefits under the "Family 500 plus" programme, boosting households' purchasing power as well as household sentiment (Figure 4.9). Furthermore, the second half of 2017 will see a pick-up in investment expenditures, particularly with regard to public investment. This will be related mainly to the inflow of funds from the EU budget under the financial framework 2014-2020.

In the coming years, the outlook for growth in domestic demand will remain favourable, yet the impact of the "Family 500 plus" programme in stimulating consumption growth will fade. Furthermore, economic growth in the euro area is expected to weaken at that time. The total effect of these developments will translate into a gradual slowdown in GDP growth rate to a level close to potential output growth.

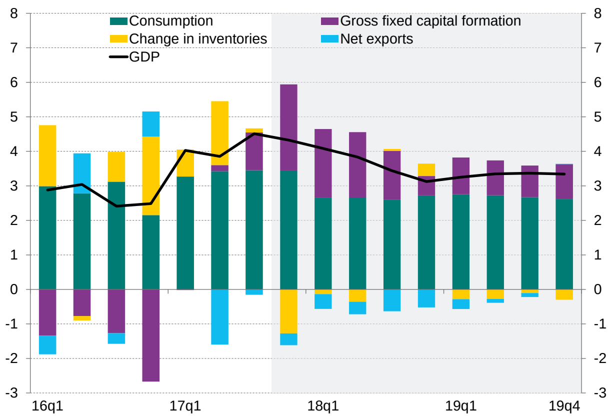
As demand and cost pressures mount over the projection horizon, core inflation will pick up (Figure 4.10). Rising consumption and investment expenditure will generate an output gap at a positive, albeit low level. Firms' growing problems related to the shortage of labour supply will also lead to wage growth exceeding labour productivity growth. Domestic inflation will be dampened by the persistently moderate price growth in the euro area, low global commodity prices and the appreciation of the effective exchange rate of the zloty. The domestic currency will appreciate especially against the US dollar following the expected weakening of the dollar vis-a-vis the euro. Despite the inflationary pressure stemming from the recovery in domestic economy, growth in food and energy prices is expected to decline in 2018-2019, as a result of the fading of supply-side factors boosting food and energy price inflation in 2017 (Figure 4.10).

Figure 4.8 Economic growth



Source: GUS data, NBP calculations.

Figure 4.9 GDP growth (y/y,%) – breakdown



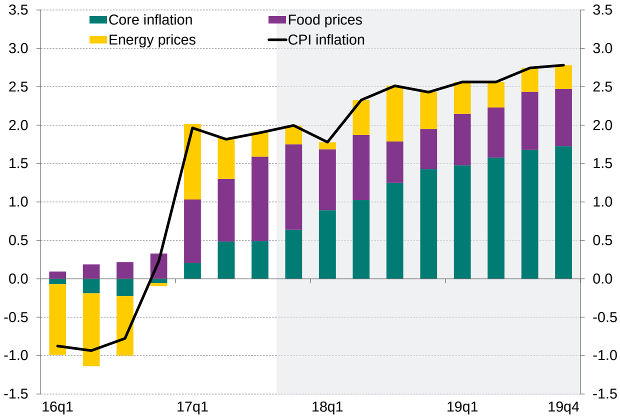
Source: GUS data, NBP calculations.

Domestic demand

Since the second half of 2016, households' consumption expenditure has been rising at more than 4% y/y (Figure 4.11), supported by favourable labour market conditions and the flow of funds from the "Family 500 plus" programme. Due to the intertemporal smoothing mechanism, the newly introduced child benefits boosted consumption not only in 2016, but also in 2017. When this effect has waned, in the subsequent years private consumption will rise somewhat less strongly. Consumption growth will continue to benefit from the developments in the labour market – as the unemployment rate is expected to fall and wage growth to gain momentum – even with households' purchasing power being curtailed by the rising inflation. The upbeat household sentiment is also boosting their propensity to consume. This is confirmed by GUS surveys showing that for the past 5 months respondents with an optimistic outlook for the future exceed the pessimists[46]. Consumers' declarations reveal favourable attitudes relating to major purchases and falling concerns about the country's economic outlook or the threat of unemployment. Over the projection horizon consumption growth will also benefit from low interest rates limiting the cost of financing consumer spending with credit.

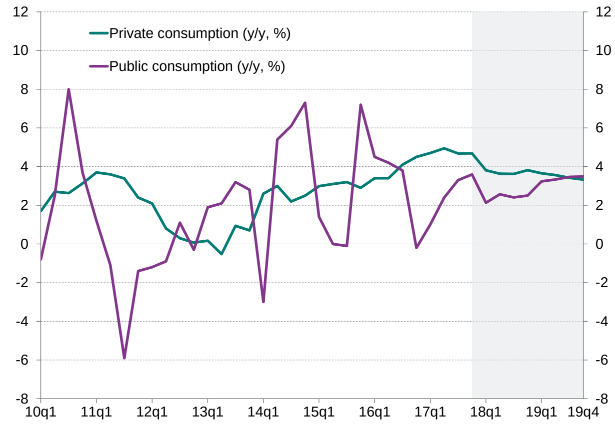
The fall in gross fixed capital formation in 2016 was caused, like in the other countries of the region, by the protracted transition period between the use of funds from the former (2007-2013) and current (2014-2020) EU financial framework (Figure 4.12)[47]. Lower absorption of EU funds primarily affected public investment; yet it also had a material impact on corporate investment, especially investment by state-owned enterprises and local government units,

Figure 4.10 CPI inflation (y/y, %) – breakdown



Source: GUS data, NBP calculations.

Figure 4.11 Private and public consumption



Source: GUS data, NBP calculations.

[46] *Koniunktura konsumencka. Wrzesień 2017 r.*, GUS, September 2017 (available in Polish only).

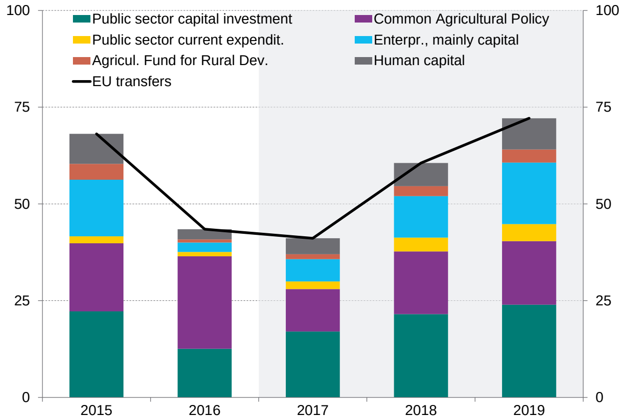
[47] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

concentrated mostly in the energy, transport and water sectors. A rebound in the number of corporate investment projects co-financed from the EU budget is expected in 2017 and the inflow of these funds is anticipated to pick up further in 2018-2019 (Figure 4.12).

Over the projection horizon, domestically-funded corporate investment spending is also expected to increase (Figure 4.13). The need to rebuild the fixed asset base is indicated by the currently low investment rate, accompanied by the corporate capacity utilisation hitting the highest levels since 2008 (as reported in both the NBP and GUS studies). Moreover, economic recovery has resulted in a marked improvement in the forecasts of demand, orders and production as voiced by enterprises.[48] The optimistic business sentiment is also reflected in the rising readings of GUS confidence surveys in industry, construction and commerce.[49] Credit- or leasing-funded capital expenditure is facilitated by the historically low interest rates, although own funds remain the main source of financing for corporate investment.[50] Given the above favourable conditions, in the NBP surveys enterprises are reporting an increase in capital expenditure[51]. A large group of respondents are planning to expand the scale of investment projects already in progress; the propensity to undertake new investments is also increasing.

After sharp falls in 2016, public investment began to take off gradually in 2017 Q2, in line with the expectations of the previous forecasting rounds. The level of spending in this category is much

Figure 4.12 Expenditure financed with EU funds (in PLN billion) – breakdown



Source: NBP calculations.

[48] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

[49] *Koniunktura w przemyśle, budownictwie, handlu i usługach*, GUS, September 2017 (available in Polish only). Data available in English: *Business tendency survey in industry, construction, trade and services 2000-2017*, GUS, http://stat.gov.pl/en/topics/business-tendency/business-tendency/business-tendency-survey-in-industry-construction-trade-and-services-2000-2017,1,2.html.

[50] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017. According to these surveys, new investment projects are typically self-financed (45.4% of investors), while the proportion of investors funding them with bank credit is a little over half of that (25.8%).

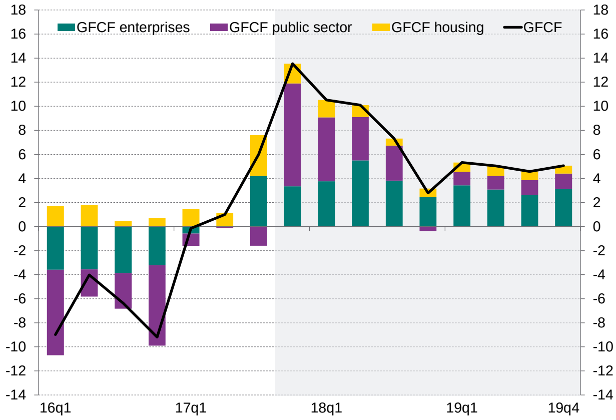
[51] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

more closely related to the absorption of funds from the EU budget than corporate investment. The Ministry of Economic Development's data on agreements for the use of funds under the individual operational programmes show that the capital expenditure of the public sector may be expected to pick up further in the subsequent quarters (Figure 4.12)[52]. This will result in a robust public investment growth in the second half of 2017 and in 2018. In 2019, transfers from the EU will continue to rise, although more slowly than in the two preceding years. As a result, in the last year of the projection period public investment growth will slow down.

The housing market is currently in expansion, which has been reflected in the number of dwellings completed, whose 12-month average has exceeded the highs reached during the previous cycle in 2008-2009. Yet, unlike in 2006-2008, the surging demand is met by appropriately large supply, which is curbing price growth. This is the effect of the improved efficiency of operation of this market. Another factor helping to balance the housing market is the fact that, unlike in the previous expansion phase, demand is not generated by a sharp rise in lending, but – to a much greater extent – by households using their own funds.[53]

Over the projection horizon, housing investment will increase at a slightly higher rate than GDP growth. Household demand will be fuelled by rising disposable income and low interest rates, providing room for more property purchases funded with credit. The scale of recovery in this market will be dampened by regulatory changes, some recently introduced, others planned. The above relates in particular to the currently

Figure 4.13 Gross fixed capital formation (y/y, %) – breakdown



Source: GUS data, NBP calculations.

[52] *Lista projektów realizowanych z funduszy europejskich w Polsce w latach 2014-2020*, the Ministry of Economic Development (available in Polish only), https://www.funduszeeuropejskie.gov.pl/strony/o-funduszach/projekty/lista-projektow/lista-projektow-realizowanych-z-funduszy-europejskich-w-polsce-w-latach-2014-2020/.

[53] Data for the seven largest cities show that 63% of the value of dwelling purchased is funded from own funds. *Information on Dwelling Prices and the Situation in the Market for Residential and Commercial Property in Poland in 2017 Q2*, NBP, September 2017.

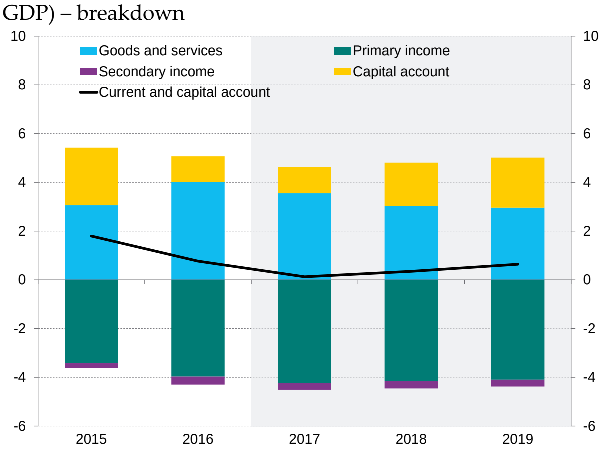
effective tightened principles for sale of land from the Agricultural Property Stock of the State Treasury, including plots designated for development, the taking effect of the law on mortgage loans that introduces new procedural requirements for loan extension, as well as the termination of the "Flat for the Young" government scheme in 2018. At the same time, the National Real Estate Resource Act, passed in July 2017, which introduces the system of cheap rental flats – under "Apartment Plus" programme – and the draft law on Individual Housing Accounts are programmes with a highly lagged effect; in the projection period, they will have no material impact on the development segment.

The projection assumes public consumption growth to continue at a pace below GDP growth until the end of 2018. The assumption is underpinned by the provisions of the 2017 Budget Act and the Draft 2018 Budget Act, which envisage a relatively slow growth in the current expenditure of local government units and in subsidies financing current expenditure of other units of the sector. In particular, the Draft 2018 Budget Act provides for a further freeze on wages of part of the government sector workers. Owing to the absence of detailed data on the continuation of measures aimed at reducing government sector expenditures in 2019, this expenditure is assumed to grow in line with neutral fiscal policy. This means faster public consumption growth in the final year of the projection.

Current and capital account balance

In 2017, following the decline in the trade balance, the total current and capital account balance is expected to fall to 0.1% of GDP (Figure 4.14). The deterioration in the balance on trade in goods and services will be driven by relatively high import growth (Figure 4.15), resulting from a marked increase in private consumption and gradually

Figure 4.14 Current and capital account balance (percent of GDP) – breakdown



Source: NBP calculations.

rising investment demand in the Polish economy. In addition, the trade balance in 2017 will be negatively affected by rising prices of imported energy commodities (Figure 4.16). Despite those changes, the trade balance in 2017 will remain at a high positive level and will mostly offset the deficit on the primary income from direct and portfolio investment. Higher earnings of foreign investors in Poland relative to that of Polish investors abroad result both from the higher amount of invested capital and its higher rate of return.

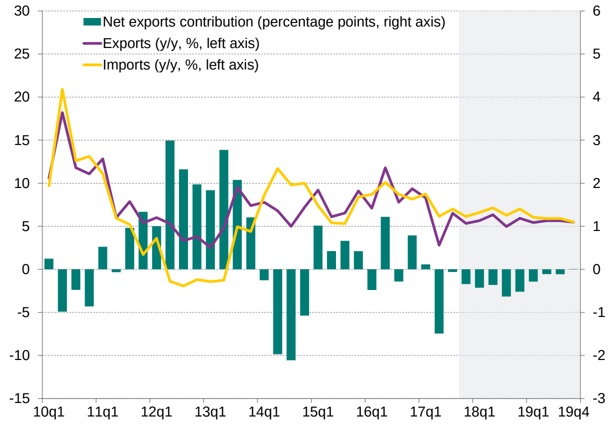
The rising compensation of immigrants performing short-term work in Poland, related to increased inflow of Ukrainian citizens to Poland and recorded in the primary income account as debits, will also contribute to a deterioration in the total current and capital account balance in 2017. The scale of deterioration in the total current and capital account in 2017 will be partly mitigated by the surplus in the capital account where EU investment transfers are recorded.

It is expected that in 2018-2019 the surplus in the capital account will rise along with the increased utilization of EU investment funds under the EU financial framework 2014-2020. Considering the simultaneous slowdown in domestic demand, which will halt import growth and the downward trend in the surplus on the trade in goods and services, a further improvement in the ratio of the total current and capital account balance to GDP is expected over the projection horizon.

Potential output

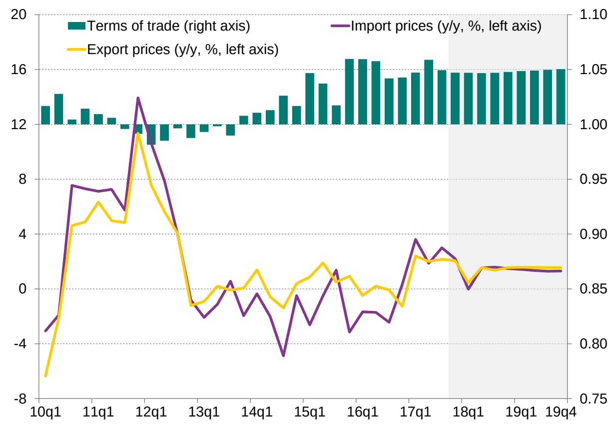
Potential output growth will accelerate somewhat over the projection horizon, while still remaining close to the 3% y/y level, significantly lower than the levels observed before the global financial crisis (Figure 4.17).

Figure 4.15 Foreign trade



Source: GUS data, NBP calculations.

Figure 4.16 Export and import prices



Source: GUS data, NBP calculations.

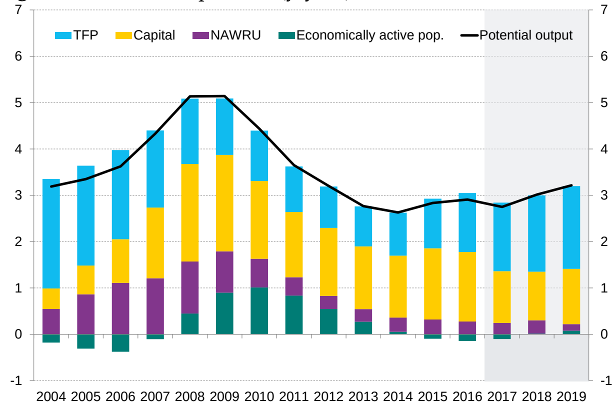
The growth of Poland's economic potential over the projection horizon, to a larger extent than in the previous years, will be positively affected by the rising total factor productivity (TFP), whereas the role of the increase in productive capital accumulation will weaken. Similarly to the previous years, further decline in the equilibrium unemployment rate NAWRU will positively affect the forecast of potential output growth, yet this effect will gradually level off (Figure 4.17, Figure 4.18).

The process of real convergence of the Polish economy over the past twenty years has largely been effected through the increase in the total factor productivity. In this period Poland recorded one of the largest contributions of TFP to GDP growth among EU countries. Although TFP growth is expected to increase in Poland in the coming years, it will not return over the projection horizon to the level observed before the global financial crisis. This is so because the possibilities of increasing TFP, associated with further improvement in factor allocation, as well as the import of technology as part of foreign direct investment, are gradually coming to an end.[54]

Potential output growth will also benefit from the increasing level of productive capital. However, due to the decline in the investment rate, as a result of a significant decrease in investment spending of the public and corporate sectors in 2016, growth rate of fixed assets over the projection horizon will be smaller than in the previous years.

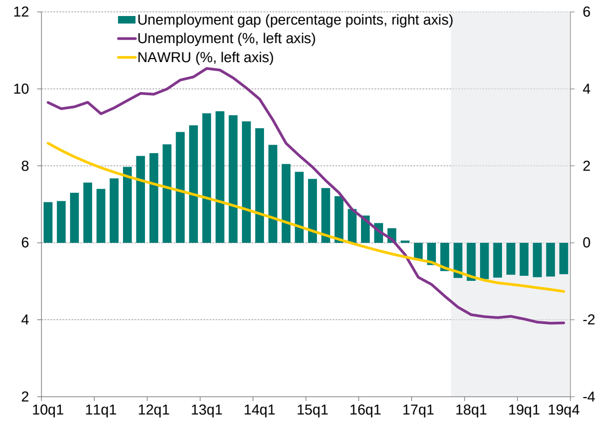
Potential output growth over the projection horizon will be limited by continuing negative demographic trends observed in Poland, i.e. the ageing and decreasing population (LFS). This trend is corroborated by the declining size of the

Figure 4.17 Potential product (y/y, %) – breakdown



Source: NBP calculations.

Figure 4.18 Unemployment

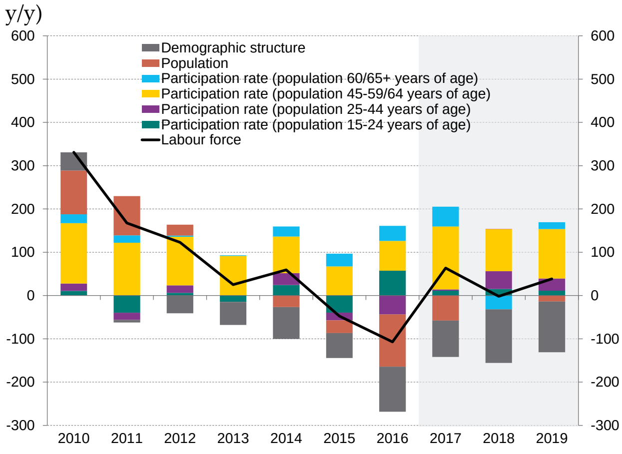


Source: GUS data, NBP calculations.

[54] *Potencjał innowacyjny gospodarki: uwarunkowania, determinanty, perspektywy*, NBP, May 2016 (available in Polish only).

cohorts entering the labour market and the increased share of persons at post-productive age.[55] The negative impact of demographic changes will be substantially mitigated by the favourable labour market conditions encouraging labour force participation (Figure 4.19). This will especially affect people at the pre-retirement age (50-59/64), whose participation rate is still significantly lower than in Western European countries. At the same time, following the lowering of the statutory retirement age as of 1 October 2017, the labour force participation rate in the oldest age group will probably decrease as compared to the levels observed in the years 2016-2017.

Figure 4.19 Change in economically active population (thous., y/y)



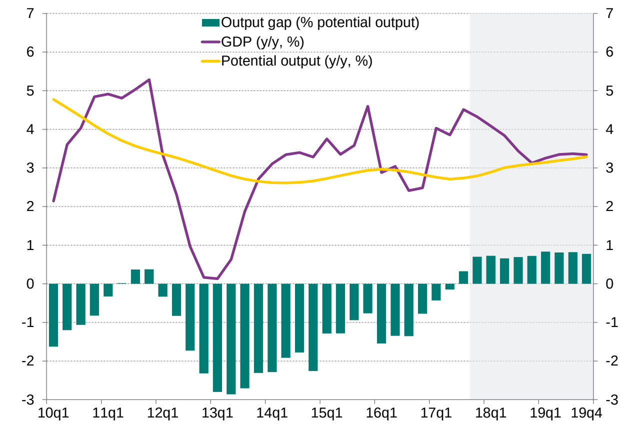
Source: GUS data, NBP calculations.

The presence of immigrants, especially Ukrainian citizens, on the domestic labour market, positively affects labour supply. At the same time, due to the definition of Polish residents used in the LFS survey[56], they are included in the cohorts of the economically active and employed persons only to a limited extent. As a consequence, in the NECMOD model Ukrainian immigrants positively affect productivity of the Polish economy through an increase in the total factor productivity and a decline in the equilibrium unemployment rate, and to a much lesser extent through an increase in labour input.

Output gap

In line with the current projection, the output gap, which has been negative since 2012, closed in 2017 Q3. This resulted from the fiscal stimulus, generated by the payment of benefits under the "Family 500 plus" programme, and the end of the period of declining investment as the inflow of EU capital funds has rebounded. In the

Figure 4.20 Output gap



Source: GUS data, NBP calculations.

[55] The NECMOD model distinguishes four age groups. The term "persons at post-productive age" refers to the oldest group, comprising women aged 60 or more and men aged 65 or more. The boundaries for this age group do not follow the changes in the statutory retirement age.

[56] Polish residents are considered persons who have stayed or intend to stay in Poland for a least 12 months, including immigrants who have come to Poland for a period of at least 12 months.

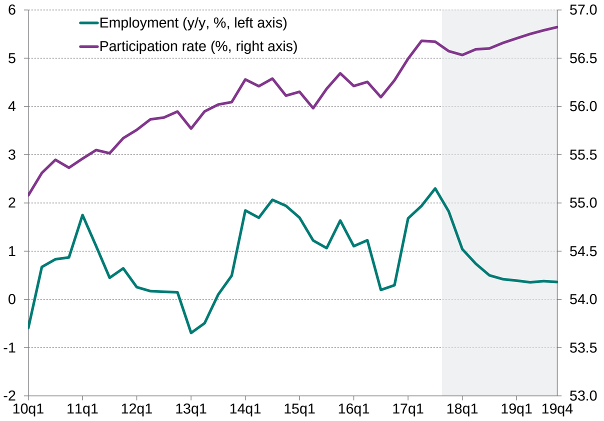
subsequent years, the output gap will rise and will run at a positive level, but not exceeding 1% of the potential output (Figure 4.20). Thus, production capacity growth will lag behind GDP growth. Nevertheless, the relatively small positive output gap suggests only moderate increase in demand pressure in the economy in the coming years, and the improving economic activity will gradually translate, although to a limited extent, into rising CPI inflation.

Labour market

After a high increase in the number of employed persons in the first half of 2017, employment growth is expected to slow down over the projection horizon (Figure 4.21). Although the determinants of demand for labour remain favourable, as suggested i.a. by the forecasts of the employment level declared by the enterprises surveyed by NBP[57] reaching the highest level since 2007, the shrinking labour supply is increasingly curbing employment growth. The number of the unemployed who could undertake employment is small, which is reflected in the record low and declining LFS unemployment rate (Figure 4.18, Figure 4.22). As a result, enterprises face mounting difficulties with finding suitable employees, already reported by half of the surveyed companies[58], although the inflow of immigrants from Ukraine partly mitigates this problem. Another sign of this trend is the growing number of job vacancies. Matching demand and supply in the labour market will be managed primarily by higher intensity of labour utilisation, supported by increase in expenditure on fixed capital formation leading to capital deepening.

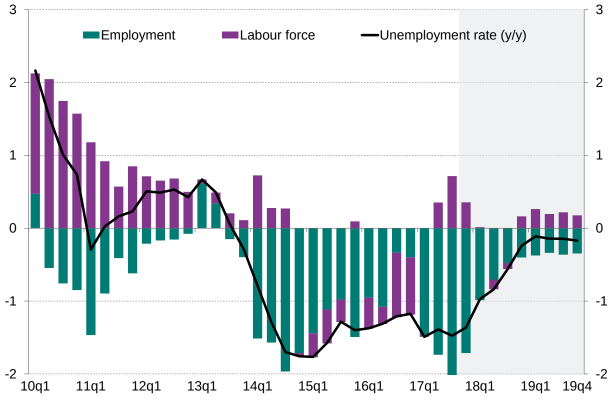
Falling unemployment, a large number of job offers, and diminishing probability of losing a job

Figure 4.21 Employment and labour force participation



Source: GUS data, NBP calculations.

Figure 4.22 Change in unemployment rate – decomposition



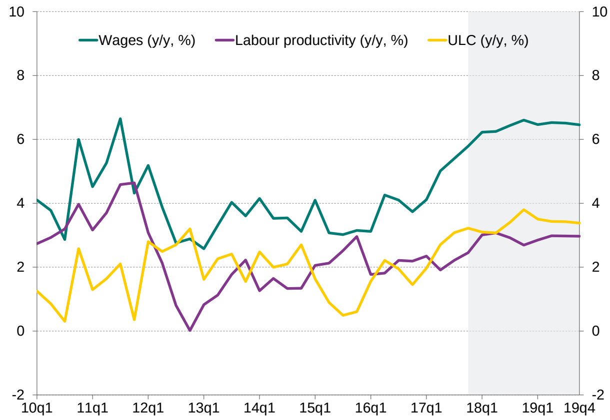
Source: GUS data, NBP calculations.

[57] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

[58] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

will result in further wage growth acceleration over the projection horizon (Figure 4.23). Wage growth will also be supported by rising labour productivity. On the other hand, only 9% of companies declare problems with finding employees as a barrier to development[59], which may dampen the scale of future wage increases. The presence on the domestic labour market of immigrants from Ukraine, who have less potential to exert pressure on the employer, also has a mitigating effect on growing wage pressure. The projection scenario of accelerating wage growth is corroborated by the results of NBP surveys pointing to a rise in the share of companies forecasting wage increases, higher percentage of employees benefiting from wage increases, as well as planned rise in the amount of those increases.[60]

Figure 4.23 Unit labour costs



Source: GUS data, NBP calculations.

Exchange rate

The current exchange rate continues to stay significantly below the level resulting from fundamental factors. This is suggested, among other things, by a surplus on the total current and capital account in 2017. Moreover, exchange rate is not a barrier to export activity of Polish enterprises[61]. Over the projection horizon, the effective exchange rate of the zloty is expected to strengthen slightly and gradually approach the equilibrium exchange rate. This is supported by the growing inflow of EU transfers and the high trade surplus, which will underpin positive balance on the total current and capital account in 2018-2019. The strengthening of the zloty is also driven by the ongoing process of real convergence of the Polish economy, reflected in higher growth of the domestic potential output relative to that of Poland's main trading partners. The scale of the expected zloty exchange rate

[59] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

[60] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

[61] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2017.

appreciation is partly curbed by the declining interest rate disparity. This results from the forecast gradual interest rate increases in the United States and in the United Kingdom amid the assumed no changes in NBP's monetary policy parameters. Due to the expected depreciation of the US dollar against the euro over the projection horizon, the Polish zloty will appreciate more against the US currency than against the common European currency.

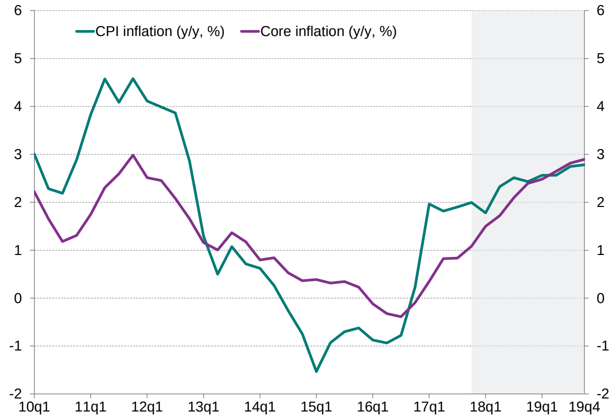
Components of CPI inflation

CPI inflation in the current forecasting round will follow a gradual upward trend and in 2019 will run slightly above 2.5%. Such a path of CPI inflation is determined, on the one hand, by a pick-up in core inflation and, on the other hand, the fading of temporary factors boosting energy and food price inflation in 2017 (Figure 4.24).

The increase in core inflation over the projection horizon will be driven by rising cost and demand pressure in the Polish economy (Figure 4.24). Problems of enterprises with the shortage of adequately skilled workers due to insufficient labour supply will translate into wage growth exceeding labour productivity growth. As a result, unit labour costs growth will accelerate to exceed the level of 3% y/y in 2018-2019 (Figure 4.23). Higher core inflation will also be the result of increasing demand pressure. Yet, sensitivity of prices with respect to changes in domestic economic conditions has decreased in recent years. [62]

The impact of domestic factors on CPI inflation will be mitigated by low growth rate of import prices over the projection horizon, resulting from limited inflation in the euro area and the appreciation of the zloty. Price growth in the corporate sector will also be curbed by the

Figure 4.24 CPI and core inflation



Source: GUS data, NBP calculations.

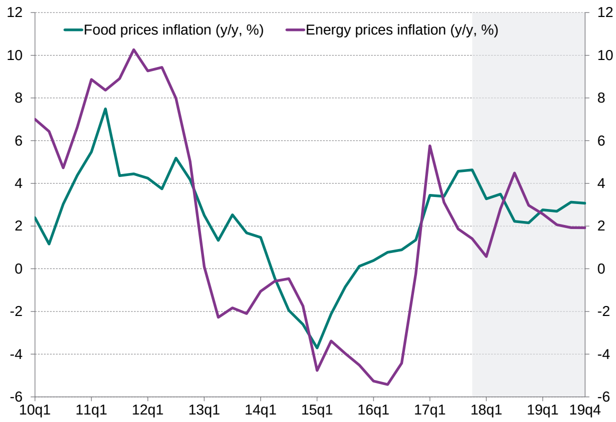
[62] Szafranek, Karol, 2017. Flattening of the New Keynesian Phillips curve: Evidence for an emerging, small open economy, *Economic Modelling*, Elsevier, vol. 63(C), pp. 334-348.

forecast gradual decline in the global energy commodity price index, expected from 2018, combined with the depreciation of the US dollar, the currency in which commodities are quoted.

In the first half of 2017, energy price inflation stayed at an elevated level due to the base effect of low prices of energy commodities in the global markets in 2016. This effect will fade away in the coming quarters, and amid the decline in global energy commodity prices, expressed in PLN, will contribute to a slowdown in energy price inflation in 2018-2019 (Figure 4.25). Growth of energy prices in 2018 will also be curbed by the expected decline in natural gas prices for households due to the likely closing, by the end of 2017, of PGNiG's negotiations with Gazprom concerning the reduction in wholesale gas prices.

Food price inflation, which in the first half of 2017 significantly accelerated on account of rising wholesale prices of vegetables and agricultural commodities in the world markets, will continue to run at an elevated rate until the end of 2017 (Figure 4.25). This is suggested by rising costs of production related to lower availability of some agricultural commodities and products (i.a. butter, milk, fruit). The rise in food prices in 2017 has also been backed by high demand from households. In 2018-2019, the impact of factors boosting food price inflation will fade, causing it to slow down. This will be supported by strong competition in this market and relatively low energy prices affecting agricultural production costs. In the coming quarters, food price inflation will also be curbed by the abolition of sugar production quotas as of October 2017. The gradual rise in the prices of agricultural commodities in the global markets, forecast over the projection horizon, will largely be offset by the expected appreciation of the zloty against the euro.

Figure 4.25 Food and energy price inflation



Source: GUS data, NBP calculations.

4.4 Current versus previous projection

Data released after the cut-off date of the July projection has resulted in an upward revision of the GDP growth forecast in 2017-2018 and CPI inflation in 2018-2019 (Table 4.2, Figure 4.26, Figure 4.28).

GDP

The upward revision of the GDP growth path in 2017 was mostly driven by higher private consumption growth than assumed in the July projection (Figure 4.27). This resulted from higher than expected growth in this category in 2017 Q2 as well as from more favourable readings and prospects of wage and employment growth that improved the assessment of the current and future financial situation of households.

In 2017, the estimate of the contribution of net exports to economic growth was also revised upwards since the balance of trade in the second half of 2017 will probably be higher than expected. The reason for this revision is the positive balance of payments data for July and August 2017.

The impact of higher private consumption and net exports on GDP growth over the short-term projection horizon was partly offset by the lower forecast of public consumption. This resulted from lower growth of current expenditure of the public finance sector in the first half of 2017 than assumed in the July projection, as well as lower expected growth in these expenditures in the second half of 2017, as indicated by monthly reports on the implementation of the state budget.

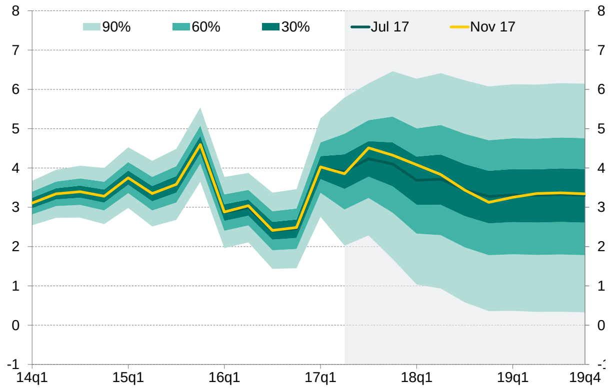
GDP estimate for 2017 is also reduced by the lower forecast of accumulation as a result of the downward revision of the inventory forecast in the second half of 2017. This is supported by the

Table 4.2 November projection versus July projection

	2017	2018	2019
GDP (y/y, %)			
November 2017	4.2	3.6	3.3
July 2017	4.0	3.5	3.3
CPI inflation (y/y, %)			
November 2017	1.9	2.3	2.7
July 2017	1.9	2.0	2.5

Source: NBP calculations.

Figure 4.26 November projection versus July projection: GDP growth (y/y, %)

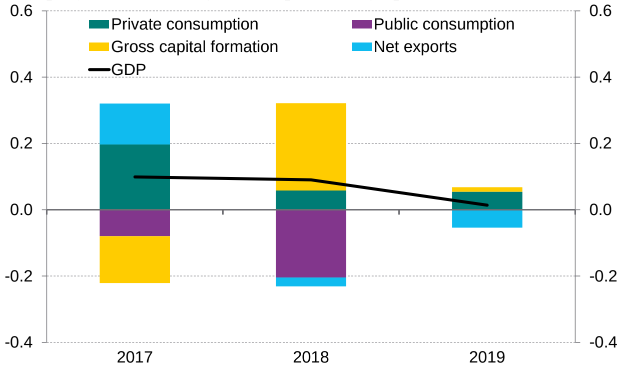


Source: GUS data, NBP calculations.

results of the *NBP Quick Monitoring Survey*, pointing to the possible lower than expected growth of inventories of finished products. At the same time, the path of gross fixed capital formation was not revised, as lower public and corporate investment growth, accompanying lower than expected absorption of EU structural funds, is compensated by higher residential housing investment.

According to the results of the current projection, in 2018 investment growth will run at a level exceeding earlier expectations. This will be driven by higher growth of gross fixed capital formation in public sector as a result of the postponement of some of the projects co-financed by EU funds from 2017 to 2018. Additionally, more favourable financial situation of households will results in higher residential housing investment. At the same time, public consumption will run below earlier expectations. This revision results primarily from the adoption of the assumption on the continuation of the wage freezes in some sectors of public administration in 2018, as indicated by the *Draft Budget* for 2018.

Figure 4.27 Decomposition of deviations between November and July projection: GDP growth (percentage points)



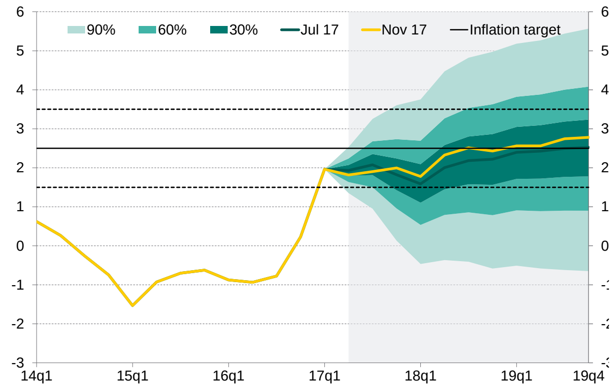
Source: NBP calculations.

The data presented in the chart may vary slightly from those in Table 4.2, due to rounding of numbers to one decimal place.

Inflation

In 2017, as a result of lower than expected growth in prices of services related to dwellings and transport services, the core inflation forecast was revised downwards slightly (Figure 4.29). The impact of this revision on the growth of the consumer price index is compensated by slightly higher food and energy price inflation. Domestic energy prices are increased by higher global energy commodity prices, although their impact is partly mitigated by the appreciation of the zloty against the US dollar. At the same time, inflationary pressure in the domestic food market is increased by lower availability of some agricultural commodities and products, among others, butter and milk.

Figure 4.28 November projection versus July projection: CPI inflation (y/y, %)



Source: GUS data, NBP calculations.

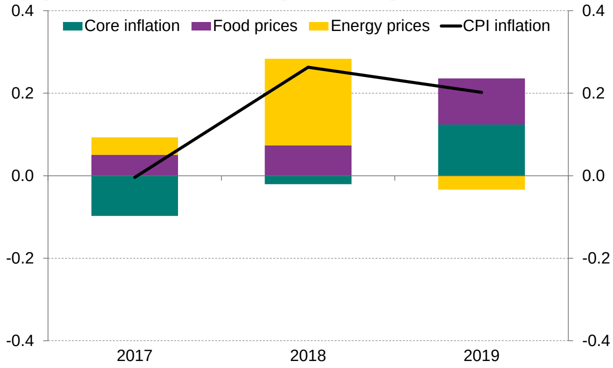
According to the assumptions of the current projection, energy commodity prices will continue to grow at a higher pace than assumed in the July projection also in 2018. This translates into higher forecast of domestic prices of fuels and natural gas bills in this horizon.

To smaller extent, the upward revision of the inflation path in 2018 is also the result of higher food price growth related to growing costs of agricultural production and increased household demand.

The upward revision of CPI inflation in 2019 is primarily due to the higher than expected path of core inflation. This is related to the upward revision of forecast growth in cost and demand pressure, translating with a delay into prices of core goods and services.

Increased CPI inflation in 2019 is also related to a higher domestic food price growth. This is driven by slightly faster growth of prices of agricultural commodities in the global markets in this period, as indicated by commodity futures price quotes used as the basis for forecasts of this price category.

Figure 4.29 Decomposition of deviations between November and July projection: CPI inflation (percentage points)



Source: NBP calculations.

The data presented in the chart may vary slightly from those in Table 4.2, due to rounding of numbers to one decimal place.

4.5 Forecast uncertainty sources

The central scenario of the November projection, presenting the most likely macroeconomic developments in Poland, is subject to uncertainty reflected in the fan charts (Figure 4.1, Figure 4.2). The balance of its factors points to a near-symmetrical distribution of risks to CPI inflation and GDP growth (Table 4.3). Under the assumption of no change in the NBP reference rate, the probability of CPI inflation running within the symmetric band for deviations from the NBP inflation target (1.5% – 3.5%) gradually declines from its currently high level to 43% at the end of the projection horizon (Table 4.3). The major uncertainty sources for the November projection are presented below.

Table 4.3 Probability of inflation running:

	Below 1.50%	Below 2.50%	Below 3.50%	Below the central projection	In the range (1.5-3.5%)
17q4	0.08	0.92	1.00	0.50	0.92
18q1	0.34	0.85	0.99	0.50	0.65
18q2	0.21	0.56	0.87	0.50	0.66
18q3	0.20	0.49	0.78	0.50	0.58
18q4	0.25	0.51	0.77	0.49	0.52
19q1	0.24	0.48	0.72	0.49	0.49
19q2	0.25	0.48	0.71	0.49	0.46
19q3	0.22	0.43	0.67	0.49	0.44
19q4	0.22	0.43	0.65	0.49	0.43

Source: NBP calculations.

Improvement in global economic conditions

Faster than forecast in the November projection GDP growth in Poland may be related to a stronger recovery abroad, particularly in the United States. This scenario assumes that the positive impact of the economic policy of President Donald Trump on economic conditions in the US would be greater than estimated for the projection.

The reforms of the US administration assume in particular tax changes aimed at reducing the fiscal burden of both households and enterprises. These changes may have a stronger impact on the improvement in household and corporate sentiment than in the base scenario, supporting further stock price increases and faster growth of consumption and investment expenditure. The prospect of higher than assumed in the projection economic activity in the United States as well as a better conditions on US stock markets may also be related to the planned increase in infrastructure expenditure and the announced changes in the law regulating, among others, the banking sector.

Faster economic growth in the United States would stimulate exports from the euro area, Poland's most important trading partner. This would boost corporate investment in the monetary union, where for some time now companies have put off decisions to increase their production capital. Over the longer projection horizon, a higher economic activity in the euro area may also result from a stronger improvement in its competitiveness due to structural reforms implemented in some of the member countries.

Deterioration in the prospects of growth in the global economy

The GDP growth rate in Poland might be running below the baseline scenario of the projection if the materialization of economic uncertainty factors as well as geopolitical changes lead to a weakening of the global economic conditions.

Activity in the world's largest economy – the United States is a significant source of uncertainty for the November projection. Expectations towards the administration of President Donald Trump regarding the planned fiscal easing and deregulatory changes, have led to a marked improvement in the sentiment of economic agents in the US, reflected, among others, in stock indices growing faster than corporate profits. If household and corporate sentiment deteriorated as a result of a smaller scope of reforms or a delay in their implementation and a stock market corrected, the future rate of economic growth of the US economy would be lower than assumed in the baseline scenario.

Uncertainty about the outlook for Poland's external environment is also associated with economic conditions in the euro area. The stability of the financial system in euro area in connection with the prolonged period of very low interest rates and high share of non-performing loans in the balance sheets of some banks continues to be a risk factor. A deterioration in corporate and household sentiment as a result of a protracted period of uncertainty regarding the terms on which the United Kingdom leaves the European Union could also contribute to lower GDP growth in the euro area. The disintegration tendencies currently observed in some of the member states and next year's elections in Italy are also risk factors for lower economic activity in the euro area.

A deterioration in the growth outlook for external economies may also result from the development of the military programme of North Korea. Experts in international relations indicate that an armed conflict on the Korean peninsula is currently unlikely, but in the case of its outbreak, the global economic conditions would deteriorate markedly. Military conflict would cause a significant disruption in trade, as South Korea is one of the most important producers of intermediate goods used in global value chains. At the same time, an increase in risk aversion in financial markets and a deterioration in consumer and corporate sentiment would weaken global economic activity.

Labour supply in Poland

The future labour force in Poland constitutes the largest internal source of risk for the central scenario of the current projection. This is a result of difficulty in assessing how many people who are entitled to retire under the current law that lowers the retirement age will become economically inactive. In the November projection it is forecast that the favourable conditions in the labour market resulting in a high number of vacancies will encourage people to remain economically active, but these estimates are subject to significant uncertainty. It is also difficult to assess to what extent the currently observed positive structural changes in the labour market, leading to an increase in economic activity of people in the age group 45-59/64, will continue in the projection horizon.

Another risk factor for labour supply in Poland is related to continued growth in employment of immigrants from Ukraine over the projection horizon. It is difficult to assess what consequences for the labour market the regulation (in force since 11 June 2017) enabling visa-free movement of Ukrainian citizens in the European Union would have. In particular, it cannot be ruled out that some immigrants from Ukraine will decide to seek work in countries which have relaxed the visa and immigration policy previously restrictive towards them.

The materialisation of the above risk factors, resulting in lower labour supply, would lead to a slowdown in economic growth over the projection horizon, restricting the space to increase domestic production in response to growing consumer and investment demand.

At the same time, a factor potentially increasing the size of the labour force in Poland is the return migration of Poles from the United Kingdom as a result of the future exit of the United Kingdom from the European Union. Difficulties in access to the British labour market for foreigners may also persuade Poles to postpone planned departures.

Oil prices in the global markets

Another source of uncertainty for the inflation path in the baseline scenario are changes in global prices of oil and of other energy commodities. A risk factor for the forecast of oil prices is the impact of disruptions in oil production in Iraq due to the heightened tensions following the independence referendum in Kurdistan. At the same time, the OPEC supply policy remains unspecified after the current restrictions on oil production expire on 31 March 2018. Demand factors related to the prospects of growth in the global economy, in particular in the emerging Asian economies, also add to the uncertainty associated with the path of oil prices assumed in the baseline scenario.

Table 4.4 Central path of inflation and GDP projection

	2015	2016	2017	2018	2019
Consumer Price Index CPI (%, y/y)	-0.9	-0.6	1.9	2.3	2.7
Core inflation net of food and energy prices (%, y/y)	0.3	-0.2	0.7	1.9	2.7
Food prices (%, y/y)	-1.6	0.8	4.0	2.8	2.9
Energy prices (%, y/y)	-4.2	-3.8	3.0	2.7	2.1
GDP (%, y/y)	3.8	2.7	4.2	3.6	3.3
Domestic demand (%, y/y)	3.3	2.4	4.6	4.1	3.5
Private consumption (%, y/y)	3.0	3.8	4.7	3.7	3.5
Public consumption (%, y/y)	2.4	2.8	2.4	2.4	3.4
Gross fixed capital formation (%, y/y)	6.1	-7.9	5.8	7.6	5.0
Contribution of net exports (percentage points y/y)	0.6	0.3	-0.4	-0.5	-0.1
Exports (%, y/y)	7.7	9.0	6.0	5.7	5.5
Imports (%, y/y)	6.6	8.9	6.9	6.8	5.8
Gross wages (%, y/y)	3.3	3.8	5.1	6.4	6.5
Total employment (%, y/y)	1.4	0.7	1.9	0.7	0.4
Unemployment rate (%)	7.4	6.2	4.7	4.1	3.9
NAWRU (%)	6.1	5.8	5.4	5.0	4.8
Labour force participation rate (%, y/y)	56.2	56.2	56.6	56.6	56.8
Labour productivity (%, y/y)	2.4	2.0	2.2	2.9	2.9
Unit labour cost (%, y/y)	0.9	1.8	2.7	3.3	3.4
Potential output (%, y/y)	2.8	2.9	2.7	3.0	3.2
Output gap (% potential GDP)	-1.1	-1.3	0.1	0.7	0.8
Index of agricultural commodity prices (EUR; 2011=1.0)	0.88	0.90	0.92	0.89	0.92
Index of energy commodity prices (USD; 2011=1.0)	0.51	0.50	0.64	0.64	0.61
Inflation abroad (%, y/y)	1.5	1.0	1.3	1.4	1.7
GDP abroad (%, y/y)	2.0	1.8	2.1	1.9	1.7
Current and capital account balance (%, GDP)	1.8	0.8	0.1	0.3	0.6
WIBOR 3M (%)	1.75	1.70	1.73	1.73	1.73

Source: Bloomberg, Eurostat, GUS, NBP calculations.

LFS data on total employment, labour force participation rate and unemployment rate. Index of agricultural prices is based on futures quoted mainly on European stock exchanges. Index includes prices of wheat, oilseed, pork, potatoes, sugar, cocoa, coffee, skimmed milk powder, butter and frozen concentrated orange juice allowing for weights reflecting the consumption structure of Polish households. The index of the prices of energy commodities includes the prices of crude oil, coal and natural gas allowing for the consumption structure of these commodities in Poland.

5 The voting of the Monetary Policy Council members in May – September 2017

■ Date: 17 May 2017

Subject matter of motion or resolution:
Resolution No. 2/2017 of 17 May 2017 on approving the report on monetary policy in 2016.

Voting of the MPC members:

For:		**Against:**
	A. Glapiński	
	G. M. Ancyparowicz	
	E. Gatnar	
	Ł. J. Hardt	
	E. M. Łon	
	E. J. Osiatyński	
	R. Sura	
	K. Zubelewicz	
	J. Żyżyński	

J. J. Kropiwnicki was absent.

■ Date: 17 May 2017

Subject matter of motion or resolution:
Resolution No. 3/2017 of 17 May 2017 on the evaluation of the activities of the NBP Management Board as regards the implementation of monetary policy guidelines for 2016.

Voting of the MPC members:

For:		**Against:**
	A. Glapiński	
	G. M. Ancyparowicz	
	E. Gatnar	
	Ł. J. Hardt	
	E. M. Łon	
	E. J. Osiatyński	
	R. Sura	
	K. Zubelewicz	
	J. Żyżyński	

J. J. Kropiwnicki was absent.

■ Date: 30 May 2017

Subject matter of motion or resolution:
Resolution No. 4/2017 of 30 May 2017 on approving the report on the operations of Narodowy Bank Polski in 2016.

Voting of the MPC members:

For:		**Against:**
	A. Glapiński	
	G. M. Ancyparowicz	
	Ł. J. Hardt	
	J. J. Kropiwnicki	
	E. M. Łon	
	E. J. Osiatyński	
	K. Zubelewicz	
	J. Żyżyński	

E. Gatnar and R. Sura were absent

■ Date: 4 July 2017

Subject matter of motion or resolution:
Resolution No. 1/DRF/2017 of 4 July 2017 on the appointment of a registered auditor for the Annual Financial Statements of Narodowy Bank Polski for years 2017 and 2018.

Voting of the MPC members:

For:		**Against:**
	A. Glapiński	
	G. M. Ancyparowicz	
	E. Gatnar	
	Ł. J. Hardt	
	J. J. Kropiwnicki	
	E. M. Łon	
	E. J. Osiatyński	
	R. Sura	
	K. Zubelewicz	
	J. Żyżyński	

- Date: 19 September 2017

Subject matter of motion or resolution:
Resolution No. 5/2017 of 19 September 2017 on adopting monetary policy guidelines for 2018.

Voting of the MPC members:

For:	A. Glapiński	**Against:**	K. Zubelewicz
	G. M. Ancyparowicz		
	E. Gatnar		
	Ł. J. Hardt		
	J. J. Kropiwnicki		
	E. M. Łon		
	E. J. Osiatyński		
	R. Sura		
	J. Żyżyński		

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