NBP Narodowy Bank Polski

Monetary Policy Council

March 2019

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 projection of inflation and GDP 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 21 February 2019, but the *Report* includes also data on LFS in 2018 Q4 published on 25 February 2019, as well as the first estimate of GDP in 2018 Q4 published on 28 February 2019.

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

Contents

Summary

In the second half of 2018, signs of a deterioration in global economic conditions became apparent. In 2018 Q3, the global GDP growth slowed down, primarily as a result of weaker economic growth in the euro area and in some Asian countries, including China. In 2018 Q4 and at the beginning of 2019, the slowdown was particularly pronounced in industrial output, especially in the production of capital goods. Retail sales growth was also lower.

Since November 2018, global consumer price growth has been slowing down, with both its previous rise and the recent fall having resulted mainly from fluctuations in global energy commodity prices. Core inflation in advanced economies remains relatively low.

Against this background, the ECB keeps the deposit rate below zero and expects its interest rates to remain at current levels at least through the summer of 2019. In December 2018, in line with its earlier guidance, the Eurosystem terminated net purchases under its asset purchase programme and is currently reinvesting in full the principal payments on the purchased securities. Alongside that, the US Federal Reserve – after raising the target range for the fed funds rate in December 2018 – stopped signalling further interest rate increases at the beginning of 2019. At the same time, the Fed – in line with the previously announced plan – continues to gradually reduce its balance sheet by limiting the reinvestment of assets. Yet, taking into account the deterioration of the global economic outlook, as well as signals coming from the ECB and the Fed in recent months, the expectations for monetary policy tightening by the major central banks have weakened.

The deterioration in the global economic outlook was also one of the factors negatively affecting financial market sentiment. In turn, weakening expectations of monetary policy tightening by the ECB and the Fed were acting in the opposite direction. As a result, in recent months, the prices of safe assets rose, while those of more risky securities in advanced markets – after strong fluctuations at the turn of the year – were significantly lower than at their peak in September 2018. At the same time, asset prices in the emerging markets remained slightly below the 2018 average.

In Poland, despite relatively robust economic growth and faster wage growth than in 2017, consumer price growth decreased at the end of 2018 (in December 2018 CPI inflation was running at 1.1% y/y, and in January 2019 – according to preliminary data – at 0.9% y/y). This was primarily driven by a weakening in domestic food and energy price growth. Continuously low core inflation was an additional factor contributing to low consumer price growth. The survey opinions of consumers on future inflation, after a temporary increase in December 2018 – probably to a large extent driven by concerns about a sharp rise in energy prices – in January and February 2019 fell back. Alongside that, economists surveyed by NBP continue to expect inflation to run close to the NBP target in the coming quarters.

Although towards the end of 2018 economic conditions in Poland deteriorated slightly, annual GDP growth remained relatively high in the second half of 2018. In 2018 Q3 and Q4, GDP growth stood at 5.1% y/y and 4.9% y/y respectively, i.e. it was only slightly lower than in the previous few quarters.

Consumer demand continued to be the main driver of growth, although it is rising somewhat slower than in 2017. Investment also made a significant contribution to GDP growth as it was supported by increasing absorption of EU funds and high capacity utilisation. In 2018 Q3, the contribution of net exports to GDP growth was negative, while in 2018 Q4 it turned out slightly positive.

Favourable economic conditions are conducive to further rise in employment and a decline in unemployment, although the pace of both the rise in employment and the decline in unemployment are gradually decelerating. On account of the strengthening position of employees in wage negotiations, nominal wage growth in the economy accelerated slightly in recent quarters. This was accompanied by a stabilisation of labour productivity growth, which translated into a somewhat higher growth in unit labour costs in the second half of 2018 compared to the first half of the year.

Taking into account the above macroeconomic developments, the Monetary Policy Council keeps the NBP interest rates unchanged, including the reference rate at the level of 1.50%. Since the previous *Report*, market interest rate expectations have considerably declined and suggest that the NBP interest rates will remain stable in the coming quarters. This is the effect of lower current and expected inflation as well as signs of deteriorating global economic conditions, amid declining expectations of monetary policy tightening by tha major central banks.

The downward revision of the expected interest rate path in Poland, together with declining bond yields in the global markets and low supply of Treasury securities in the primary market, supported price growth of Polish Treasury bonds. A decline in yields on Treasury bonds – especially those with longer maturity – in recent months also reflected investors' favourable assessment of Poland's economic fundamentals and the absence of significant macroeconomic imbalances. At the same time, share prices – after their previous declines – stabilized in the seconf half of 2018. However, the WIG index has risen by over 10% since the local low seen in October 2018. Growth in Polish bond and equity prices in recent months was accompanied by the stable exchange rate of the zloty

In the second half of 2018, broad money growth in the economy picked up. As in previous periods, growth in the value of household deposits made the largest contribution to the change in the M3 aggregate. In 2018 Q4, increase in net foreign assets and credit for the non-financial sector were the main sources of broad money creation. For several quarters lending growth has been close to the nominal GDP growth and the ratio of outstanding loan portfolio of non-financial sector to GDP has been stable, and stood at around 51.5% at the end of 2018.

External imbalance indicators evidence that the Polish economy is well balanced. In particular, in 2018 Q3, Poland's foreign debt to GDP ratio decreased and net international investment position to GDP improved compared to 2017. In the second half of 2018, the current account balance declined compared to the first half of the year, which was, however, accompanied by an increase in the surplus on the capital account due to a higher inflow of EU funds.

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. Chapter 3 includes *Minutes of the Monetary Policy Council decision-making meetings* held in November 2018 – February 2019, together with the *Information from the meeting of the Monetary Policy Council* in March 2019. *Minutes* of the MPC meeting held in March will be published on 21 March 2019 and so will be included in the next

Report. Chapter 5 presents the Monetary Policy Council voting records from the meetings held between October 2018 and January 2019. Furthermore, the *Report* includes a box: *Termination of the net purchases under the Eurosystem's asset purchase programme*.

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. The March projection takes into account data and information published up to 15 February 2019 – including information on statutory freeze on electricity prices – as well as preliminary information on changes in fiscal policy announced on 23 February 2019. In line with the March projection based on the NECMOD model, there is a 50-percent probability that the annual price growth will be in the range of 1.2-2.2% in 2019 (against 2.6-3.9% in the November 2018 projection), 1.7-3.6% in 2020 (compared to 1.9-3.9%) and 1.3-3.5% in 2021. At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of 3.3-4.7% in 2019 (against 2.7-4.4% in the November 2018 projection), 2.7-4.6% in 2020 (compared to 2.3-4.2%) and 2.4-4.3% in 2021.

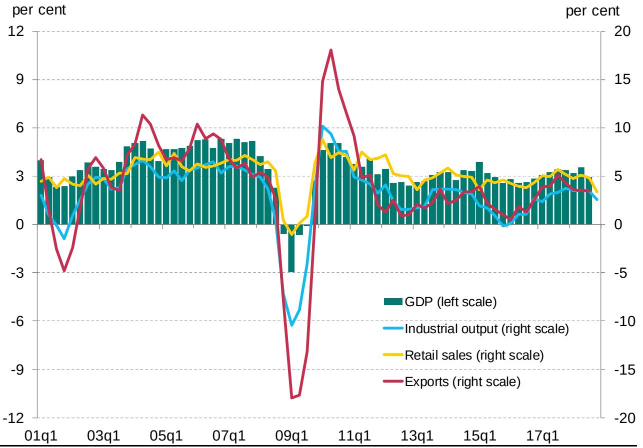
1. External developments

1.1 Economic activity abroad

In the second half of 2018, signs of a deterioration in global economic conditions became apparent. In 2018 Q3, the global GDP growth slowed down, primarily as a result of weaker economic growth in the euro area and in some Asian countries, including China. In 2018 Q4 and at the beginning of 2019, the slowdown was particularly pronounced in industrial output, especially in the production of capital goods. Retail sales growth was also lower (Figure 1.1).

In the euro area, economic growth slowed down in the second half of 2018 to the lowest level in four years, and it amounted to 1.6% y/y and 1.2% y/y in 2018 Q3 and Q4 respectively (Figure 1.2). This was the result of a marked decline in the contribution of net exports to growth, reflecting weakening growth of sales abroad. In 2018 Q4, industrial output growth also continued to be weak, and corporate confidence subdued, together with consumer confidence in many euro area countries.[1] One-off factors (the protests in France, the protracting problems of the German automotive sector) continued to have a negative impact on economic conditions as well. Despite a decline in private consumption growth, internal demand continues to be the main growth driver in the euro area. This is supported by the steadily rising employment and wages, as well as the continued expansionary monetary policy of the

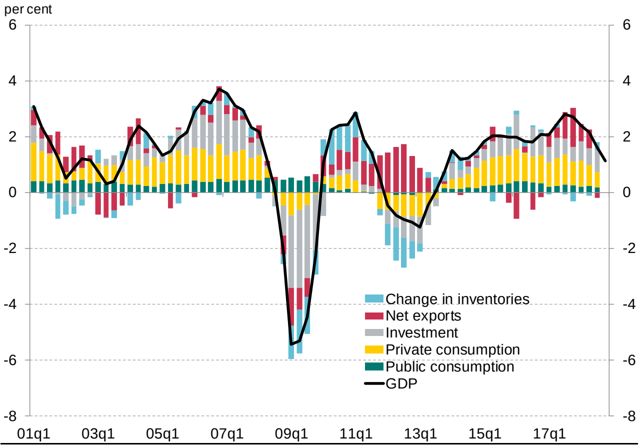
Figure 1.1 GDP growth and global economic activity indicators (y/y)



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)



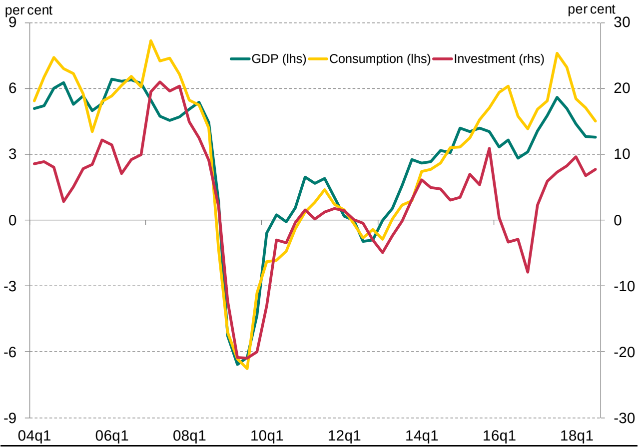
Source: Eurostat data.

[1] Similarly, the gradual decline in the PMI in 2018 is an evidence of the worsening economic conditions in the euro area. Also in January 2019 the PMI declined (from 51.1 points in December 2018 to 50.7 points).

European Central Bank (ECB; see Chapter 1.4 *Monetary policy abroad*).

Despite weaker economic growth in the euro area, GDP growth in Central and Eastern Europe remained high (in 2018 Q2 and Q3, it amounted to 3.7% y/y and 3.8% y/y respectively; Figure 1.3). However, the trend varied across individual economies. In Hungary and Slovakia the GDP growth rate increased in 2018 Q3, running significantly above the 2017 level, while data from the Czech Republic and Romania evidenced a slowdown in activity in these countries. Despite some softer growth in consumption, domestic demand remained the GDP driver in the region. At the same time, fast investment growth reflected the implementation of large projects in industry and strong demand in the construction sector. Alongside that, the contribution of net exports declined as a result of the production disruptions in the automotive industry and the fall in export orders for European supply chains.

Figure 1.3 Economic growth and its selected components in countries of Central and Eastern Europe (y/y)

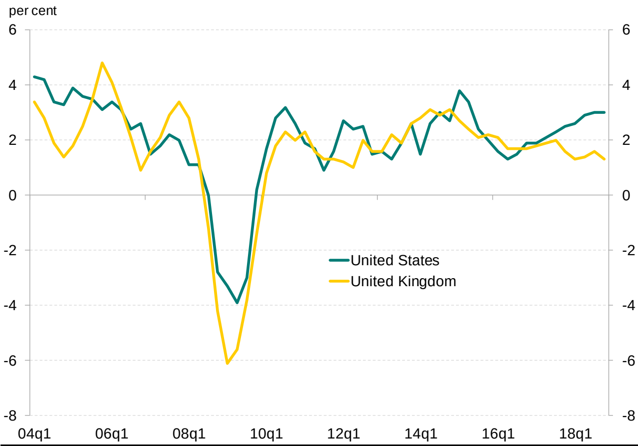


Source: Eurostat data, NBP calculations.

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).

In the United States, economic conditions were favourable in the second half of 2018, and in 2018 Q3 GDP growth amounted to 3.0% y/y[2] (Figure 1.4). Consumer demand continued to make the largest contribution to GDP growth in this economy. This was supported by the very good labour market conditions, the materialising effects of the tax reform, and the relatively high value of household assets, despite a correction on the stock exchange (see Chapter 1.5 *International financial markets*). Growth in economic activity in the United States was also backed by rising corporate investment. However, it was contained by weaker exports.

Figure 1.4 Economic growth in selected advanced economies (y/y)



Source: Bloomberg data.

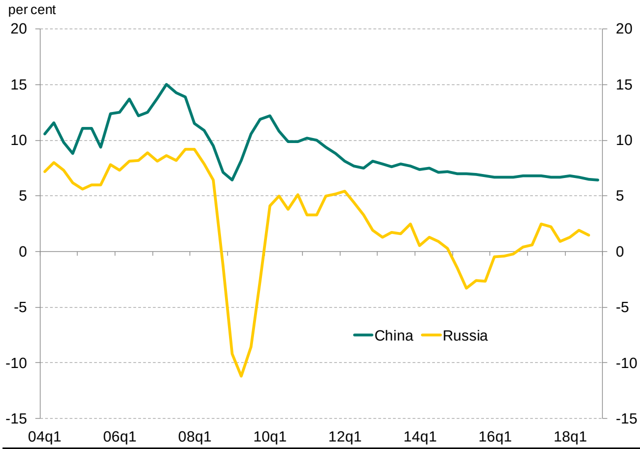
In the United Kingdom, GDP growth picked up in 2018 Q3 (to 1.6% y/y) due to faster private consumption growth and accumulation of inventories. However, in 2018 Q4, GDP growth was slightly lower and amounted to 1.3% y/y[3],

[2] In quarter-on-quarter terms (annualized), GDP growth in the United States slowed down from 4.2% in 2018 Q2 to 3.4% in 2018 Q3.
[3] In quarter-on-quarter terms, GDP growth in the United Kingdom slowed down from 0.6% in 2018 Q3 to 0.2% in 2018 Q4.

largely on account of weaker corporate investment demand. At the same time, slowing global economic growth and uncertainty around Brexit continue to have a negative impact on firms' investment plans.

In most of the major emerging market economies, at the end of 2018 economic growth was slightly lower than in the first half of the year (Figure 1.5). GDP growth in China declined to 6.5% y/y in 2018 Q3 and 6.4% y/y in 2018 Q4. The decline followed from weakening household consumption demand and exports – the two main pillars of economic growth in 2018 Q3. The scale of the slowdown was only partially contained by the activities of the Chinese authorities in stimulating growth in investment demand. In turn, the slowdown in GDP growth in Russia (from 1.9% y/y in 2018 Q2 to 1.5% y/y in 2018 Q3) reflected to a large extent the normalisation of agricultural production after two years of very good economic conditions. Yet the main driver of growth was production of the extractive sector, stimulated, among others, by the easing of the restrictions on oil production introduced by the countries belonging to the Organization of the Petroleum Exporting Countries and certain other exporters (the so-called OPEC+).

Figure 1.5 Economic growth in selected emerging market economies (y/y)

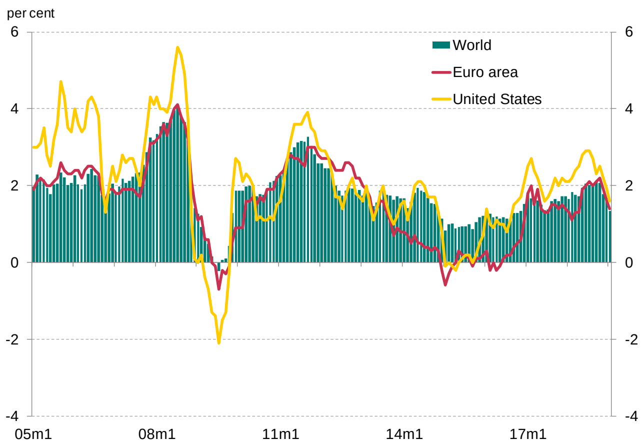


Source: Bloomberg data.

1.2 Inflationary developments abroad

Since November 2018, global consumer price growth has been slowing down, with both its previous rise and the recent fall having resulted mainly from fluctuations in global energy commodity prices (Figure 1.6; see also Chapter 1.3 *Global commodity markets*). Core inflation in advanced economies remains relatively low. Alongside that, in the second half of 2018, core inflation indices in emerging market economies, including those that had experienced substantial depreciations of their currencies in 2018, were higher than in the first half of the year.

Figure 1.6 CPI inflation globally and in selected economies (y/y)



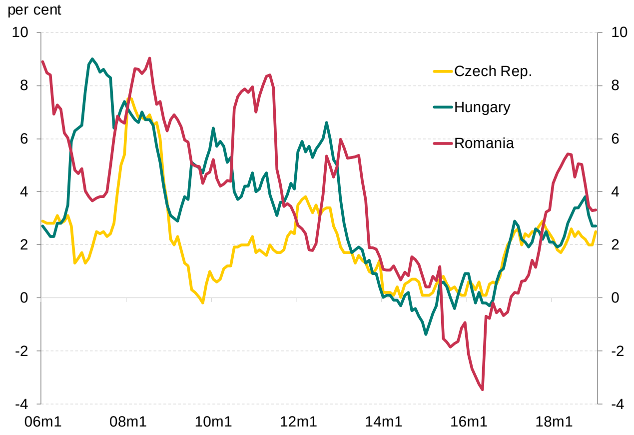
Source: Bloomberg data, NBP calculations.
World – GDP-weighted average consumer price inflation in economies comprising 80% of global GDP. United States – annual CPI inflation. Euro area – annual HICP inflation.

In the euro area, inflation continues to be lower than the level consistent with the ECB definition of price stability (in December 2018 it stood at 1.6% y/y, and in January 2019, at 1.4% y/y), primarily due to a substantial decrease in the contribution of energy prices. Despite the gradually accelerating wage growth, core inflation also remains low, running at around 1%.

In the United States, inflation continues to be higher than in many other advanced economies, despite a decline in recent months caused by the fall in energy prices (the CPI index stood at 1.9% y/y in December 2018, and at 1.6% y/y in January 2019). The core CPI inflation remains above 2% (both in December 2018 and in January 2019 it stood at 2.2% y/y), supported by the economic recovery seen over the past few years, which is reflected in the very good situation of employees in the labour market. The unemployment rate continues at historical lows, and wage growth is picking up.

The average CPI rate in the region of Central and Eastern Europe decreased over the last months of 2018, as energy and food price growth declined (Figure 1.7). At the same time, strong growth in production costs, including wages, caused core inflation to stabilise at a level close to 2%.

Figure 1.7 Inflation rate in the Czech Republic, Romania and Hungary (y/y)



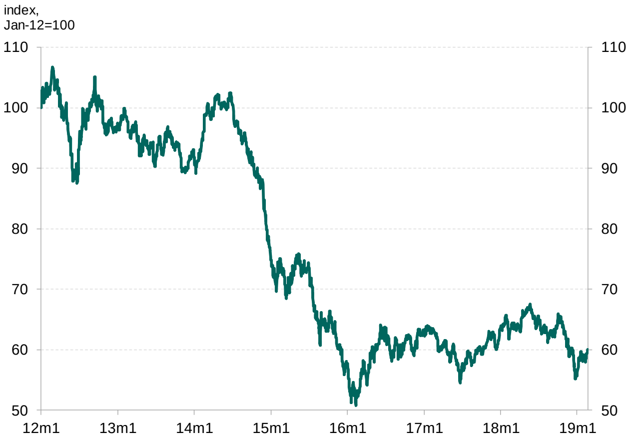
Source: Bloomberg data, NBP calculations.
Annual CPI inflation.

1.3 Global commodity markets

At the end of 2018, prices of commodities – in particular energy commodities – dropped sharply, but at the beginning of 2019 they increased slightly. As a result, those prices are now running at the level only slightly lower than seen a year before (Figure 1.8).

Oil prices have been highly volatile in the recent period. In 2018 Q4, they dropped by approx. 40%, before subsequent increasing by approx. 30%. Conseqently, in February 2019 they returned to the November 2018 level (Figure 1.9). Price falls recorded in the last months of 2018 were mainly driven by an increase in global oil stocks resulting from rising oil production in the United States. Concerns about weakening global economic

Figure 1.8 Commodity price index



Source: Bloomberg data, NBP calculations.
Thomson Reuters/CoreCommodity CRB index expresses prices of commodity futures for: 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.

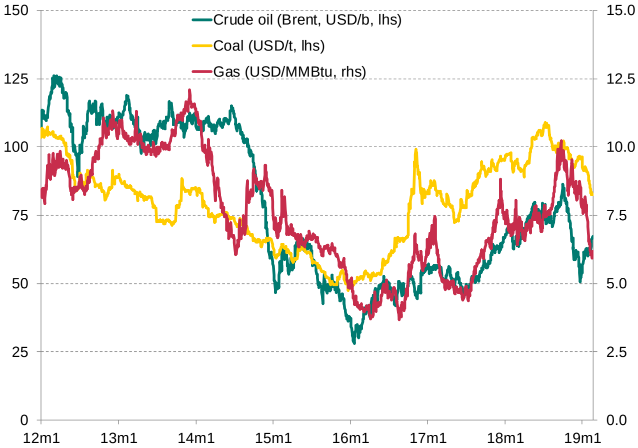
growth and the temporary exclusion of a few countries from applying sanctions imposed by the United States on oil imports from Iran worked in the same direction. In turn, growth in oil prices at the beginning of the year was supported by cuts in oil production by the OPEC countries, and a reduction in concerns about the negative impact of trade disputes between the United States and China on global economic growth. Despite the recent increases, oil prices remain lower than a year ago.

Prices of natural gas fell by over one third since the previous *Report*. This was mainly the effect of the earlier drop in oil prices, which translated into decreasing gas prices as those commodities are considered imperfect substitutes. After the recent falls, gas prices have been running 10% below their levels seen a year ago.

The declines in oil and gas prices had a dampening effect on prices of hard coal. However, their volatility in the recent period was less pronounced than that of other energy commodity prices. As a result, coal prices are currently running lower than in November 2018 and a year ago, though they are still relatively high compared to previous years.

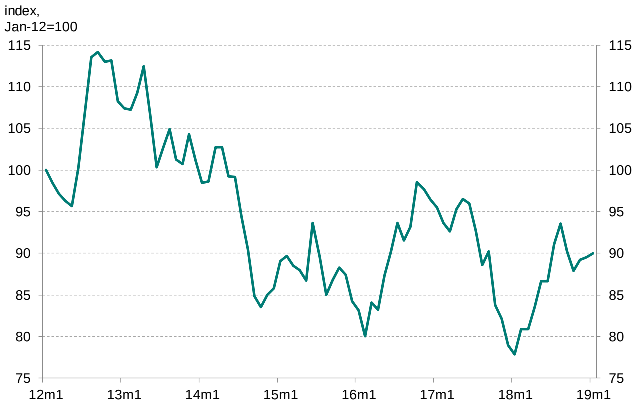
In 2018 Q4, prices of agricultural commodities declined slightly, yet remained higher than a year ago (Figure 1.10). Price increases in 2018 were driven by higher production costs and drought in many countries, as well as the relatively favourable global economic conditions. In turn, the safe level of stocks of agricultural commodities (such as cereals, oilseed plants, sugar), high supply (e.g. of coffee, cocoa) and the cyclical increase in production in certain markets (e.g. milk, pork) had a curbing effect on the general price level of agricultural commodities.[4]

Figure 1.9 Energy commodity prices



Source: Bloomberg data, NBP calculations.
USD/b – price expressed in US dollar per barrel of oil. USD/t – price expressed in US dollar per metric tonne. 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).

Figure 1.10 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.

[4] These trends continued in January 2019.

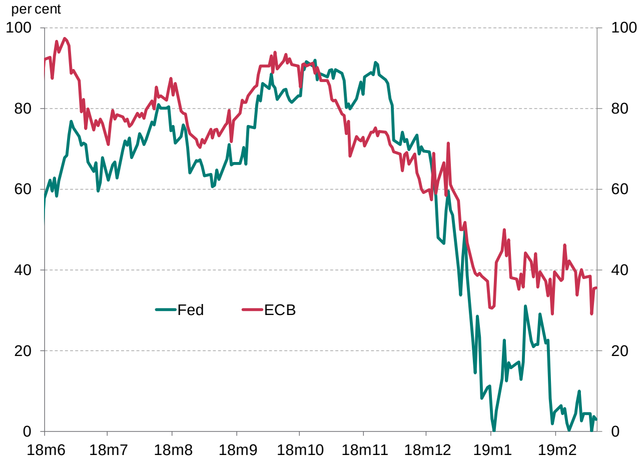
1.4 Monetary policy abroad

As the outlook for global economic growth has deteriorated in recent months, expectations about major central banks tightening their monetary policy have subsided (Figure 1.11).

The ECB keeps the deposit rate below zero. In effect, short-term interbank rates in the euro area remain negative. At the same time, the ECB expects its interest rates to remain at their current levels at least through the summer of 2019, with some of its representatives suggesting a possibility of extending this period. Moreover, the ECB has recently stated that the risks surrounding the euro area growth outlook had moved to the downside. In addition, during the January ECB Governing Council meeting, the possibility of extending the lending support programme, Targeted Longer-Term Refinancing Operations (TLTRO), was raised in the discussion. Given these conditions, market-implied expectations point to short-term interbank rates remaining negative throughout 2020 (Figure 1.12). In December 2018, in line with its earlier guidance, the Eurosystem terminated net purchases under its asset purchase programme and is currently reinvesting in full the principal payments on the purchased securities (Figure 1.13; see Box: *Termination of the net purchases under the Eurosystem's asset purchase programme*).

Meanwhile, the US Federal Reserve (Fed) stopped signalling further interest rate increases at the beginning of 2019, after raising the target range for the fed funds rate by 0.25 percentage points in December 2018, to 2.25%-2.50%. This is related to the elevated volatility in the financial markets and weaker prospects for global economic conditions, with still only moderate inflationary pressure (see Chapters 1.5 *International financial markets*, 1.1 *Economic activity abroad* and 1.2 *Inflationary developments abroad*). In this context, most market participants expect interest rates to remain unchanged in 2019 (Figure 1.14). At the same time, the Fed – in line with the previously announced

Figure 1.11 Market-implied probability of the Fed's and the ECB's interest rates increase in 2019

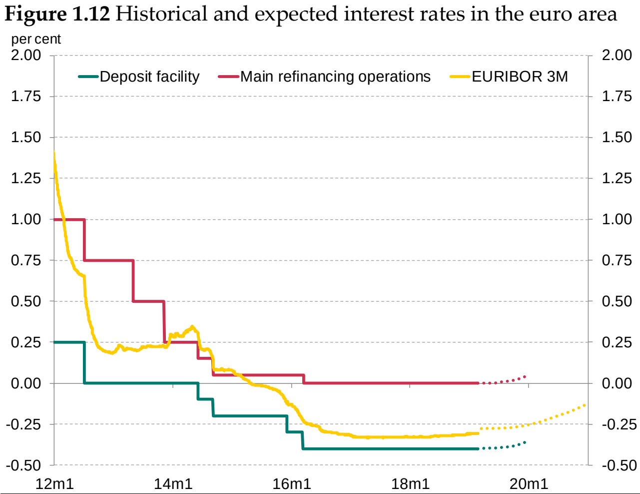


Source: Bloomberg data.

Fed – probability of the fed funds rate exeeding 2.50% at the end of 2019 based on fed funds futures contracts.

ECB – probability of the ECB deposit facility rate exceeding -0.30% at the end of 2019 based on overnight index swaps.

Figure 1.12 Historical and expected interest rates in the euro area



Source: Bloomberg data.

Expectations as of 21 February 2019. Expected interest rates based on the overnight index swaps for the rates on the deposit facility and the main refinancing operations; expected EUROIBOR 3M based on options.

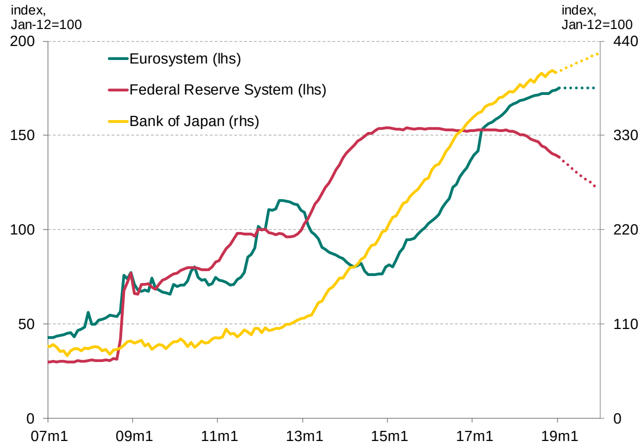
plan – continues to gradually reduce its balance sheet by limiting the reinvestment of assets, which has a tightening effect on monetary conditions. Yet recently, the Fed hinted at its willingness to modify the process of balance sheet reduction, should incoming data suggest a need to do so.

Interest rates of the central banks in the remaining advanced economies continue to run very low; in Japan, Switzerland, Sweden and Denmark they are negative. In addition, the Bank of Japan continues its asset purchase programme, while the Swiss National Bank declares its readiness to conduct currency interventions in order to prevent an excessive appreciation of the franc. At the same time, central banks in some advanced economies, including Canada, Israel and Korea, have slightly raised their interest rates.

Most central banks in Central and Eastern Europe have kept interest unchanged in the recent period. The Czech National Bank was an exception, having increased its interest rate again in November 2018. However, in the following months it left interest rates unchanged.

In turn, monetary policy in the largest emerging market economies was diversified. Amid increased volatility in the global financial markets coupled with heightened inflation, the central banks of Russia, South Africa and Mexico have increased interest rates. In contrast, the central banks of China and India have recently loosened their monetary policy.

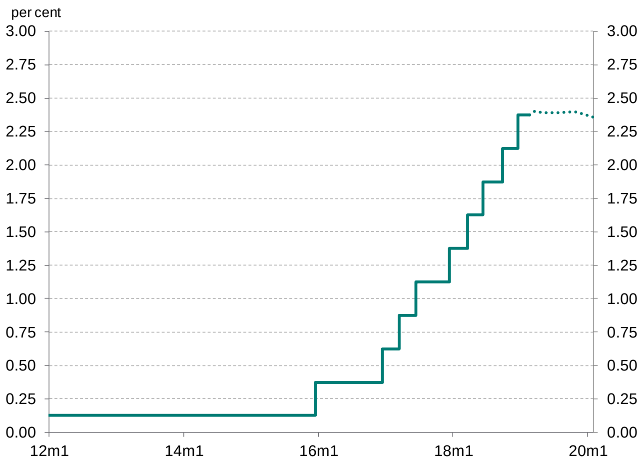
Figure 1.13 Total assets of the major central banks with a forecast



Source: FRED data, NBP calculations.

Forecast until December 2019: for the Eurosystem under an assumption of no change, for the Bank of Japan under an assumption of extrapolation of the average growth observed in 2018, for the Federal Reserve System under an assumption of a decline in accordance with the Fed's reinvestment policy principles and taking into account maturity structure of the Treasuries held by the central bank.

Figure 1.14 Historical and expected interest rates in the United States (midpoint of the target range for the fed funds rate)



Source: Bloomberg data.

Expectations as of 21 February 2019 based on fed funds futures contracts.

Box: Termination of the net purchases under the Eurosystem's asset purchase programme

In line with earlier guidance, in December 2018, the Eurosystem has terminated net purchases under the asset purchase programme after four years of its operation.[5] At the same time, the ECB finds it necessary to maintain an ample degree of monetary accommodation. Consequently, the ECB continues to expect interest rates to remain at their present levels at least through the summer of 2019, emphasising that the Eurosystem will reinvest, in full, the principal payments from maturing securities purchased under the asset purchase programme for an extended period of time past the date when it starts raising interest rates, and in any case as long as necessary.[6]

Macroeconomic background and implementing asset purchases

In 2014, inflation in the euro area was very low, and even negative at the turn of the years 2014-2015, against the background of still subdued – despite accelerating – economic growth, and substantial divergence of economic conditions across member countries (Figure B.1, Figure B.2, Figure B.3). At the same time, the unemployment rate remained much higher than before the global financial crisis (in September 2014 it stood at 11.5% against 7.3% at the beginning of 2008), varying significantly among individual countries (Figure B.4). In particular, in September 2014, the highest unemployment rate was seen in Greece (26.0%) and Spain (24.0%), whereas in Italy it stood at 12.7%, and the lowest was recorded in Germany (5.0%) and Austria (5.7%).

Figure B.1 HICP inflation

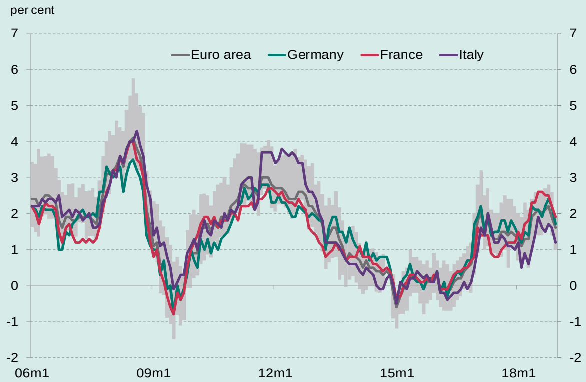
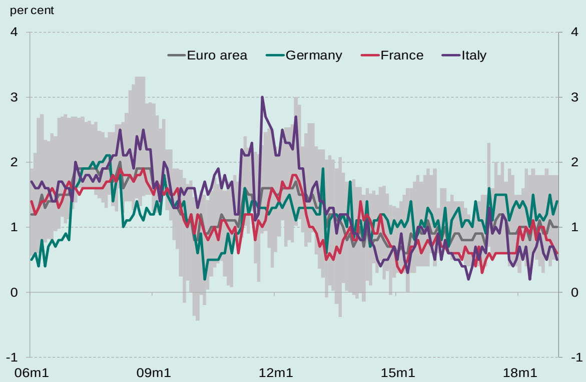


Figure B.2 Core inflation



Source: Eurostat data, NBP calculations.

Shaded area represents heterogeneity among euro area countries in a given month in the form of an interval between 20th and 80th percentile. Core inflation – overall HICP inflation excluding food, energy, alcohol and tobacco.

[5] In this Box the term "asset purchase programme" refers to all the programmes of financial asset purchases run by the Eurosystem between September 2014 and December 2018, i.e. the Asset-Backed Securities Purchase Programme (ABSPP), the Third Covered Bond Purchase Programme (CBPP3), the Public Sector Purchase Programme (PSPP) and the Corporate Sector Purchase Programme (CSPP).

[6] In this manner, the ECB strives to maintain the size of the portfolio of securities purchased under the asset purchase programme at the December 2018 level. Reinvestment of principal payments from securities purchased under the PSPP are guided by the ECB capital key. According to the ECB estimates, the average monthly reinvestments will amount to EUR 16.9 billion during 2019.

Figure B.3 Real GDP growth (y/y)

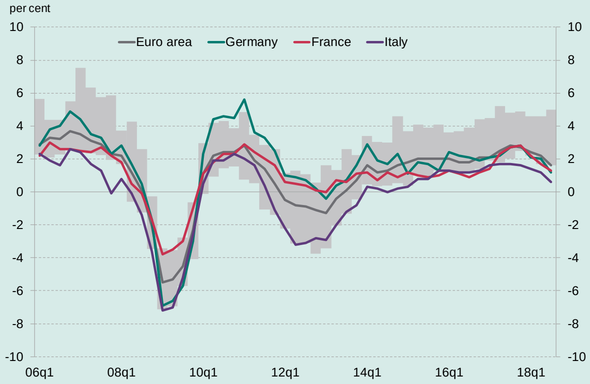
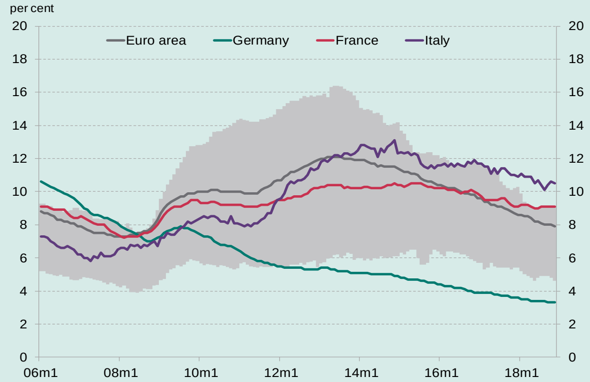


Figure B.4 Unemployment rate



Source: Eurostat data, NBP calculations.

Shaded area represents heterogeneity among euro area countries in a given month or quarter in the form of an interval between 20th and 80th percentile.

Against this backdrop, in 2014 the ECB continued taking measures to ease monetary conditions in the euro area. Above all, it lowered the deposit rate below zero, enhanced its forward guidance on keeping interest rates low, and provided banks with additional funding for lending by introducing Targeted Longer-Term Refinancing Operations (TLTRO). At the end of 2014, the Eurosystem launched purchase programmes of asset-backed securities and covered bonds (ABSPP, CBPP3).[7] Their combined monthly amount totalled around EUR 13 billion. Later on, at the beginning of 2015, the Eurosystem launched a programme of secondary-market purchases of public sector securities, mainly government bonds of the euro area countries (PSPP), while significantly expanding the monthly scale of asset purchases (to EUR 60 billion).[8] According to the initial assumptions, the extended asset purchase programme was designed to last until at least the end of September 2016, and in any case until the inflation path had sustainably returned to the levels consistent with the ECB definition of price stability (inflation below, but close to, 2%). In order to further stimulate the economy, in subsequent years the ECB prolonged the duration of the asset purchase programme several times, changed its monthly scale, and in 2016 also began to purchase corporate bonds of non-bank enterprises (CSPP; Table B.1).[9]

[7] Earlier, from May 2010 to September 2012, the Eurosystem conducted a programme of securities purchases, including government bonds of those euro area countries that experienced severe market tensions (*Securities Market Programme*, SMP). Purchases under this programme were sterilised, i.e. they left liquidity conditions in the banking system unaffected. The declared objective of the SMP programme was to improve the operation of the monetary transmission mechanism and not to ease the monetary policy stance. The securities purchased under the SMP are held to maturity and are not subject to reinvestment. At the end of January 2019, the size of the portfolio of these securities on the Eurosystem's balance sheet was EUR 73.1 billion. In turn, from July 2009 and from November 2011, the ECB started two one-year-long covered-bond purchase programmes. The covered bonds purchased under these programmes are also held to maturity and are not subject to reinvestment, and their portfolio amounted to EUR 8.3 billion on the Eurosystem's balance sheet as at the end of January 2019.

[8] Under the PSPP, originally bonds purchased were ones with a rating of at least BBB- (with few exceptions), maturities of 2 to 30 years and yields above the ECB deposit rate, which constituted at most 33% of an issuer's outstanding securities, and 25% of a given bond issue. During the programme, the ECB made adjustments to some of these limits: from November 2015 it admitted the purchase of bonds accounting for up to 33% of a given issue, from January 2016 also the local government bonds and from January 2017 bonds with a maturity of 1 year and/or yield lower than the ECB deposit rate. The structure (in terms of issuing countries) of the purchased eligible bonds was guided by the ECB capital key.

[9] Corporate bond purchases comprised the euro-denominated securities with a rating of at least BBB- and were conducted in both the secondary and primary markets, except that bonds of public undertakings were not purchased in the primary market, due to the prohibition of monetary financing stipulated in the Treaty. The Eurosystem was allowed to buy up to 70% of a given issue of corporate bonds (excluding the bonds issued by public undertakings, where the limit was the same as in the case of PSPP). Economic sector structure of bond issuers under the CSPP programme was established taking into account the economic sector structure of all bond issuers eligible for the programme. The highest share in the CSPP programme had the following sectors: utilities, infrastructure and transportation, automotive and parts, telecommunication. In mid-February 2019, the Eurosystem's balance sheet contained corporate bonds purchased under the CSPP that came from around 1200 bond issues conducted by more than 270 companies. The

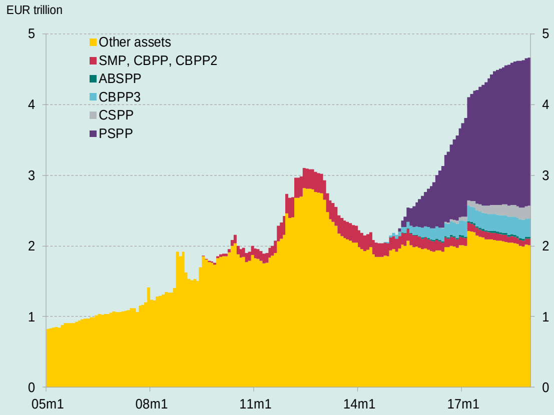
Table B.1 Schedule of the Eurosystem's asset purchase programme

Date	Stage of the Eurosystem's asset purchase programme
4 September 2014	Announcement of the CBPP3 and the ABSPP
20 October 2014	Launch of the CBPP3
21 November 2014	Launch of the ABSPP
22 January 2015	Announcement of the PSPP
March 2015	Increase in the scale of monthly purchases to 60 billion euro
9 March 2015	Launch of the PSPP
10 March 2016	Announcement of the CSPP
April 2016	Increase in the scale of monthly purchases to 80 billion euro
8 June 2016	Launch of the CSPP
April 2017	Reduction of the scale of monthly purchases to 60 billion euro
January 2018	Reduction of the scale of monthly purchases to 30 billion euro
October 2018	Reduction of the scale of monthly purchases to 15 billion euro
13 December 2018	Announcement of the termination of net asset purchases
19 December 2018	Termination of net asset purchases

Source: own compilation based on the ECB press releases.

ABSPP – Asset-Backed Securities Purchase Programme
CBPP – Covered Bond Purchase Programme (duration: July 2009 – June 2010)
CBPP2 – Second Covered Bond Purchase Programme (duration: November 2011 – October 2012)
CBPP3 – Third Covered Bond Purchase Programme
CSPP – Corporate Sector Purchase Programme
PSPP – Public Sector Purchase Programme
SMP – Securities Markets Programme (duration: May 2010 – September 2012)

Figure B.5 The Eurosystem’s Assets



Source: ECB data.

The total amount of the Eurosystem's asset purchase programme between September 2014 and December 2018 was EUR 2.6 trillion (22% of the euro area GDP in 2018).[10] Public sector bond purchases constituted the vast majority of the programme (EUR 2.1 trillion), while the scale of corporate bond purchases was much smaller (EUR 178 billion; Figure B.5, Figure B.6).[11] As a result, the Eurosystem's balance sheet more than doubled in that period, reaching EUR 4.7 billion (40% of GDP).

Impact of asset purchases on financial conditions and the economy

The literature of the subject tends to list two main channels through which the impact of the central bank's financial asset purchases translates into easier monetary conditions:

- The portfolio balance channel: the purchase of securities should raise their prices, and so – in the case of debt securities – lower yields. The decline in the yields of bonds purchased by the central bank should prompt investors to restructure their portfolios, by, among others, increasing exposure to other financial assets, which will propagate the easing of monetary conditions.
- The signalling channel: purchases of securities on a considerable scale should highlight the determination as well as institutional and legal capacities of the central bank to loosen monetary conditions, even after interest rates have hit their effective lower bound, and in addition enhance forward guidance. This should have a downward effect on the expected path of short-term interest rates, as well as contribute to higher inflation expectations and weaker exchange rate.

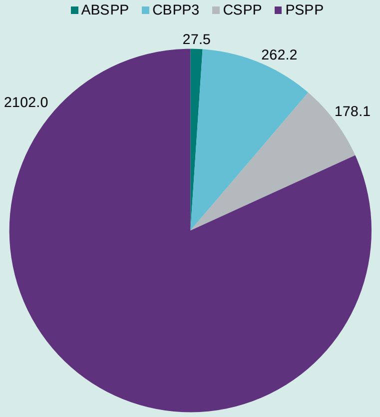
list of corporate bonds purchased under the CSPP, as well as economic sector and country distribution of the programme are available on the ECB website at: https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html.

[10] Euro area GDP in 2018 based on the European Commission forecast. For comparison, the scale of asset purchases following the global financial crisis in the United States (in 2008-2014) is estimated at 21% of GDP, in the United Kingdom (in 2009-2017) at 22% of GDP, in Sweden (in 2015-2017) at 6% of GDP, and in Japan (since 2009) at 79% of GDP so far.

[11] Under the PSPP programme, the Eurosystem has bought and keeps on its balance sheet a total of around 25% of the eligible universe of the euro area public sector bonds. In turn, the Eurosystem's share in the market of corporate bonds eligible for the CSPP may be estimated at around 15-20%.

The easing of monetary conditions – including lower bond yields – resulting from the central bank's purchases of financial assets may stimulate economic growth and inflation, mainly by reducing the financing costs for economic agents, including governments (the so-called fiscal space expansion following from lower costs and improved conditions for rolling over debt and deficit financing) as well as by the weakening of the exchange rate and the wealth effect of higher prices of financial assets.

Figure B.6 Structure of the Eurosystem's asset purchase programme (EUR billion)

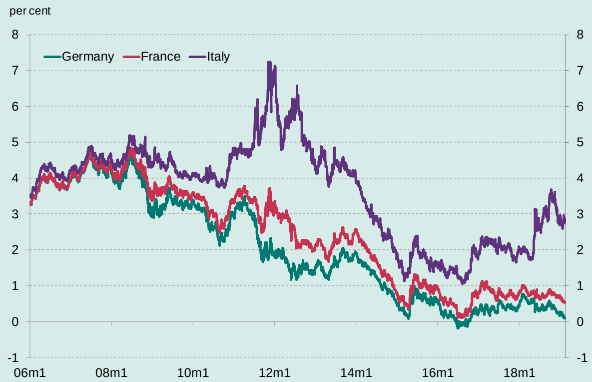


Source: ECB data.

The full names of the respective programmes are listed in the notes under Table B.1.

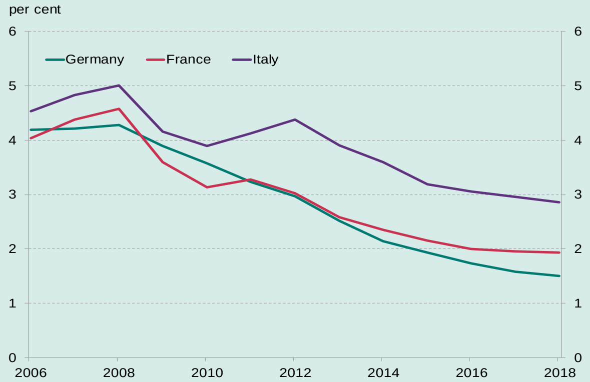
Investigating the impact of the Eurosystem's asset purchase programme on monetary conditions in the euro area is complex and involves uncertainty, primarily due to the concurrent application by the ECB of various monetary policy instruments. Nevertheless, empirical studies show that the Eurosystem's asset purchase programme had a downward impact on bond yields in the euro area (Figure B.7). In particular, most literature tends to estimate the decrease in average government bond yields in the euro area following the announcement and launch of the Eurosystem's asset purchase programme at the turn of 2014 and 2015 at around 30-60 basis points over a few quarters, with higher-yield bonds recording a significantly larger fall (Altavilla et al., 2015; Andrade et al., 2016; Blattner and Joyce, 2016; De Santis, 2016). Most of the decline in the yields occurred when expectations were rising during the period running up to the launch of the public sector bond purchase programme (PSPP), before the actual start of purchases of these securities (De Santis and Holm-Hadulla, 2017). According to the estimates of the ECB representatives, at its peak (i.e. in 2018) the downward impact of the entire asset purchase programme, along with the expected reinvestments, on the term premium comprised in the yields on 10-year government bonds in the euro area amounted to around 100 basis points (Praet, 2018).

Figure B.7 10-year government bond yields in selected euro area countries



Source: Bloomberg data.

Figure B.8 Average public debt servicing cost in selected euro area countries



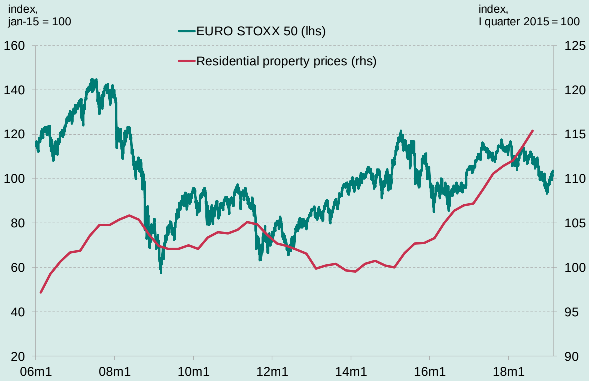
Source: European Commission data (AMECO).

General government interest expenditures as percent of gross public debt.

The fall in yields on securities purchased by the Eurosystem contributed to reducing financing costs in the economy as a whole. In particular, there was a gradual decline in the cost of public debt service in the euro area (Figure B.8), amid a concurrent marked extension of the average maturity of government bonds issued. At the same time, corporate financing conditions improved. Available empirical estimates suggest that the CSPP helped narrow down the spreads of the bonds of non-bank corporations in the euro area by around 10-25 basis points (EBC, 2016; De Santis et al., 2018; Abidi and Miquel-Flores, 2018). However, it should be noted that corporate bond purchases probably did not trigger issuance of debt securities by enterprises with no or little history of previous bond issues (EBC, 2017a). In addition, empirical studies and surveys suggest that the asset purchase programme may have also supported lending (Albertazzi et al., 2018; ECB, 2017b).

At the same time, the asset purchase programme probably strengthened the anchoring of inflation expectations at a level consistent with the ECB definition of price stability (Karadi, 2017) as well as had an impact – amid the gradual tightening of monetary policy in the United States – on the weakening of the euro against the US dollar.

Figure B.9 Average house prices and stock price index for the euro area



Source: Bloomberg and Eurostat data.

EURO STOXX 50 – stock index of 50 largest companies from 11 countries of the euro area; daily data.
House price index – index of transaction prices of both new and existing residential properties in all euro area countries, quarterly data.

In addition, during the first months following the announcement of the asset purchases, the euro area stock index picked up markedly. At the moment it is running close to the level seen before the announcement of the programmes, though displaying a significant divergence across countries (Figure B.9).[12] In turn, house prices in the euro area rose steadily during the asset purchase programmes, albeit at different rates in individual countries.[13] In this context, in the Financial Stability Review of November 2018, the ECB highlighted mild signs of a possible overvaluation in residential and commercial real estate markets in the euro area (ECB, 2018). At the same time, the ECB representatives emphasise that possible risks to financial stability, including those resulting from developments in real estate prices, should be mitigated by macroprudential policy tools (Constâncio, 2018).

As with the analysis of the impact of the Eurosystem's asset purchase programme on monetary conditions, estimating its influence on economic growth and inflation in the euro area is difficult and involves considerable uncertainty. This is not only due to the simultaneous application of various monetary policy tools by the ECB, but also due to the complex transmission mechanisms of these instruments to economic processes. Consequently, the number of studies on the subject is relatively limited. Nevertheless, those that are available suggest that the Eurosystem's asset purchases were effective in stimulating economic growth and inflation in the euro area. Studies employing theoretical models estimate the impact of the asset purchases at 0.3-0.9 percentage points rise in annual GDP growth rate and 0.6-0.8 percentage points increase in inflation rate in 2015 and 2016 (Hohberger et al., 2018; Sahuc, 2016). Similar estimates of the impact follow from empirical research. According to these research, the initial stage of the Eurosystem's asset purchase programme (as announced in January 2015) resulted in an average increase in annual GDP growth rate of around 0.2-0.9 percentage points and a rise in inflation rate of around 0.3-0.6 percentage points in the horizon of up to two years (Wieladek and Pascal, 2016; Blatter and Joyce, 2016; Gambetti and Musso, 2017). According to current ECB estimates, the overall asset purchase programmes, along

[12] From the beginning of September 2014 to the end of January 2019, stock prices rose primarily in Germany and France, while e.g. in Italy and Spain they fell.
[13] From 2014 Q3 to 2018 Q3, house price index in the euro area increased by 14.5%. The rise concerned all the countries of this currency area except for Italy, which saw a decline of 4.9%. In particular, in Germany the prices rose by 22.3%, in Spain by 24.2% and in France by 6.1%.

with the other monetary policy tools applied from mid-2014, will result in a cumulative increase in both GDP and consumer price index of 1.9% in 2016-2020 (Praet, 2018).[14,15]

References

Abidi, N., Miquel-Flores, I. (2018). *Who benefits from the corporate QE? A regression discontinuity design approach.* ECB Working Paper Series No 2145, April 2018.

Adam, K., Tzamourani, P. (2016). *Distributional consequences of asset price inflation in the euro area.* European Economic Review, 89, 172-192.

Albertazzi, U., Becker, B., Boucinha, M. (2018). *Portfolio rebalancing and the transmission of largescale asset programmes: Evidence from the euro area*. ECB Working Paper Series No 2125, January 2018.

Altavilla, C., Carboni, G., Motto, R. (2015). *Asset purchase programmes and financial markets: lessons from the euro area.* ECB Working Paper Series No 1864, November 2015.

Ampudia, M., Georgarakos, D., Slacalek, J., Tristani, O., Vermeulen, P., Violante, G. (2018). *Monetary policy and household inequality.* ECB Working Paper Series No 2170, July 2018.

Andrade, P., Breckenfelder, J., De Fiore, F., Karadi, P., Tristani, O. (2016). *The ECB's asset purchase programme: an early assessment*. ECB Working Paper Series No 1956, September 2016.

Blattner, T. S., Joyce, M. A. (2016). *Net debt supply shocks in the euro area and the implications for QE*. ECB Working Paper Series No 1957, September 2016.

Casiraghi, M., Gaiotti, E., Rodano, L., Secchi, A. (2018). *A "Reverse Robin Hood"? The distributional implications of non-standard monetary policy for Italian households.* Journal of International Money and Finance, 85, 215-235.

Claeys, G., Darvas, Z. M., Leandro, A., Walsh, T. (2015). *The effects of ultra-loose monetary policies on inequality*. Bruegel Policy Contribution Issue 2015/09.

Constâncio, V. (2018). *Financial stability risks and macroprudential policy in the euro area* Speech at the ECB and Its Watchers XIX Conference, Frankfurt am Main, 14 March 2018.

De Santis, R. A. (2016). *Impact of the asset purchase programme on euro area government bond yields using market news*. ECB Working Paper Series No 1939, July 2016.

De Santis, R. A., Holm-Hadulla, F. (2017). *Flow effects of central bank asset purchases on euro area sovereign bond yields: evidence from a natural experiment*. ECB Working Paper Series No 2052, May 2017.

De Santis, R. A., Geis, A., Juskaite, A., Vaz Cruz, L. (2018). *The impact of the corporate sector purchase programme on corporate bond markets and the financing of euro area non-financial corporations*. ECB Economic Bulletin Issue 3/2018.

Domanski, D., Scatigna, M., Zabai, A. (2016). *Wealth inequality and monetary policy.* BIS Quarterly Review, March 2016.

ECB (2016). *The corporate bond market and the ECB's corporate sector purchase programme.* Economic Bulletin Issue 5/2016.

ECB (2017a). *The ECB's corporate sector purchase programme: its implementation and impact*. Economic Bulletin Issue 4/2017.

ECB (2017b). *The euro area bank lending survey. Third quarter of 2017*. October 2017.

ECB (2018). *Financial Stability Review*. November 2018.

Gambetti, L., Musso, A. (2017). *The macroeconomic impact of the ECB's expanded asset purchase programme (APP)*. ECB Working Paper Series No 2075, June 2017.

Guerello, C. (2018). *Conventional and unconventional monetary policy vs. households income distribution: An empirical analysis for the Euro Area.* Journal of International Money and Finance, 85, 187-214.

Hohberger, S., Priftis, R., Vogel, L. (2019). *The Distributional Effects of Conventional Monetary Policy and Quantitative Easing: Evidence from an Estimated DSGE model.* Journal of Banking & Finance, accepted manuscript.

Hohberger, S., Romanos, P., Vogel, L. (2018). *The Macroeconomic Effects of Quantitative Easing in the Euro Area: Evidence from an Estimated DSGE Model*. Bank of Canada Staff Working Paper 2018-11, March 2018.

Karadi, P. (2017). *The ECB's announcements of non-standard measures and longer-term inflation expectations*. ECB Research Bulletin No. 33, 18 April 2017.

Lenza, M., Slacalek, J. (2018). *How does monetary policy affect income and wealth inequality? Evidence from quantitative easing in the euro area.* ECB Working Paper Series No 2190, October 2018.

Praet, P. (2018). *Assessment of quantitative easing and challenges of policy normalization.* Speech at The ECB and Its Watchers XIX Conference, Frankfurt am Main, 14 March 2018.

[14] On this ground it can be concluded that the ECB estimates the impact of the entire asset purchase programme, along with the remaining monetary policy tools applied from mid-2014, on annual GDP growth and inflation to be around 0.4 percentage point on average in the period 2016-2020.

[15] In addition, the literature regarding the effects of the ECB accomodative monetary policy – including the Eurosystem's asset purchase programme – points to the possible redistribution effects and their impact on economic inequalities. However, the general direction of this impact is ambiguous. On the one hand, such a policy may contribute – through the improvement of economic conditions, including a decrease in unemployment – to constraining income inequalities. On the other hand – through increase in financial asset prices – it may lead to a deepening of wealth inequalities (Lenza and Slacalek, 2018; Ampudia et al., 2018; Hohberger et al., 2019; Claeys et al., 2015; Casiraghi et al., 2018; Adam and Tzamourani, 2016; Domanski et al., 2016).

Sahuc, J. G. (2016). *The ECB's asset purchase programme: A model-based evaluation.* Economic Letters 145 (2016): 136-140.
Wieladek, T. Pascual, A. G. (2016). *The European Central Bank's QE: A New Hope*. CESifo Working Paper No. 5946, June 2016.

1.5 International financial markets

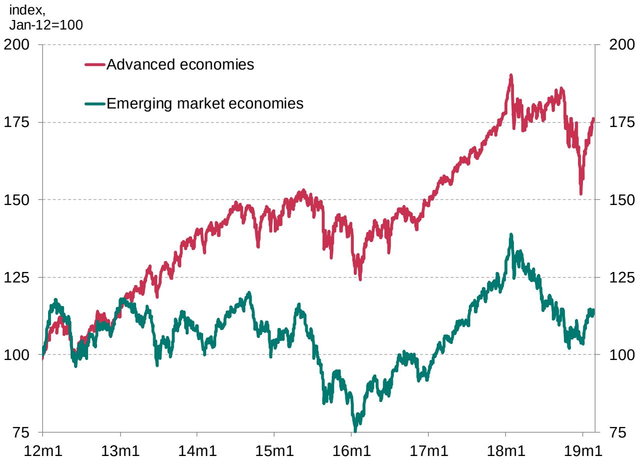
In recent months, the prices of safe assets rose, while those of more risky securities in advanced markets – after strong fluctuations at the turn of the year – were significantly lower than at their peak in September 2018. At the same time, asset prices in the emerging markets remained slightly below the 2018 average, although the situation in the economies most affected by capital outflows in mid-2018 (especially in Argentina and Turkey) had stabilised.

Sentiment in the financial markets was adversely affected by the deterioration in the global economic outlook and the heightened uncertainty related primarily to trade policies of the major economies, the temporary suspension of activity of certain federal institutions in the United States at the turn of the year (the shutdown), and the possibility of a no-deal Brexit (see Chapter 1.1 *Economic activity abroad*). Acting in the opposite direction were weakening expectations of monetary policy tightening by the major central banks (see Chapter 1.4 *Monetary policy abroad*).

Under these conditions, stock prices in advanced markets fell markedly in 2018 Q4, and, despite rising at the beginning of 2019, they are currently considerably below their peak of September 2018 (Figure 1.15). Alongside that, stock prices in emerging market economies – after their earlier prolonged decline – rose somewhat in recent months.

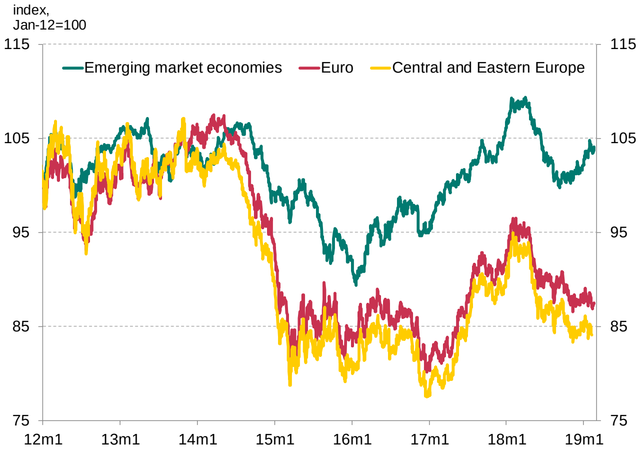
At the same time, the exchange rates of the emerging market currencies strengthened against the US dollar after a significant depreciation in the first three quarters of 2018, while the exchange rates of the euro and the currencies of Central and Eastern Europe remained relatively stable against the US dollar (Figure 1.16).

Figure 1.15 Equity prices



Source: Bloomberg data.
Advanced economies – MSCI World Equity Index; emerging market economies – MSCI Emerging Markets Equity Index.

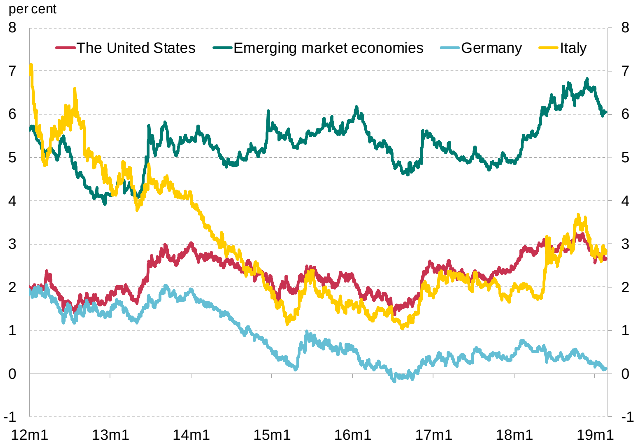
Figure 1.16 Exchange rates against the US dollar (rise indicates appreciation)



Source: Bloomberg data.
Emerging market economies – MSCI Emerging Market Currency Index; Central and Eastern Europe – GDP-weighted average of exchange rates of the Czech koruna, the Romanian leu, and the Hungarian forint against the US dollar.

In turn, bond yields in most markets fell significantly. This was driven by declining inflation expectations resulting from the pronounced fall in oil prices at the end of 2018, and weakening expectations of monetary policy tightening by the major central banks (Figure 1.17; see Chapter 1.3 *Global commodity markets*). As a result, yields on 10-year bonds in Germany were at their lowest level in over two years (0.1% at the end of February 2019), while bond yields in the United States were around their lowest level in a year (2.7% at the end of February 2019). In Italy, in turn, bond yields – despite a fall due to reaching an agreement between the Italian government and the European Commission in December 2018 on the 2019 budget – are still significantly higher than in the vast majority of other euro area countries (2.8% at the end of February 2019).

Figure 1.17 Government bond yields



Source: Bloomberg data.

The United States, Germany and Italy – 10 year government bond yield; emerging market economies – Bloomberg Barclays Emerging Markets Sovereigns.

2. Domestic economy

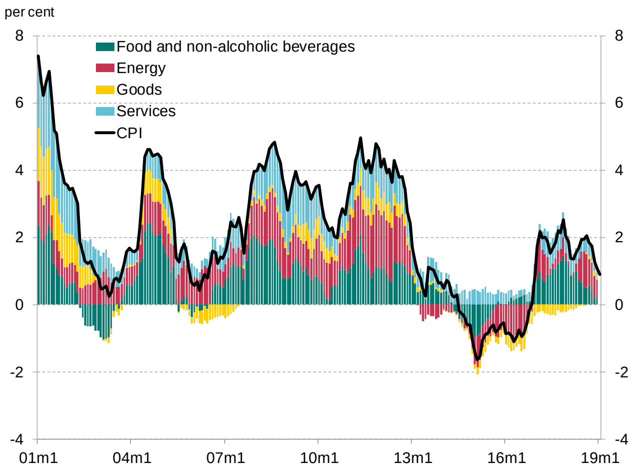
2.1 Consumer prices

Despite relatively robust economic growth and faster wage growth than in 2017, consumer price growth in Poland decreased at the end of 2018 (in December 2018 CPI inflation was running at 1.1% y/y, and in January 2019 – according to preliminary data – at 0.9% y/y[16] ; Figure 2.1). This was primarily driven by a weakening in domestic food and energy price growth. Factors behind low inflation included: decreasing inflation in Poland's key trading partners (that started in November 2018 and followed the decline in global oil prices in 2018 Q4),[17] strong competition in global and domestic markets, and moderate domestic demand pressure (Figure 2.3).

Core inflation remains low (Figure 2.2). In particular, inflation net of food and energy prices has subsided slightly in recent months (to 0.6% y/y in December). Against the background of moderate demand pressure and strong competition, this stemmed from a one-off decline in service price growth (to 0.9% y/y)[18], amid persistently low and stable non-food price growth (0.4% y/y in December).[19]

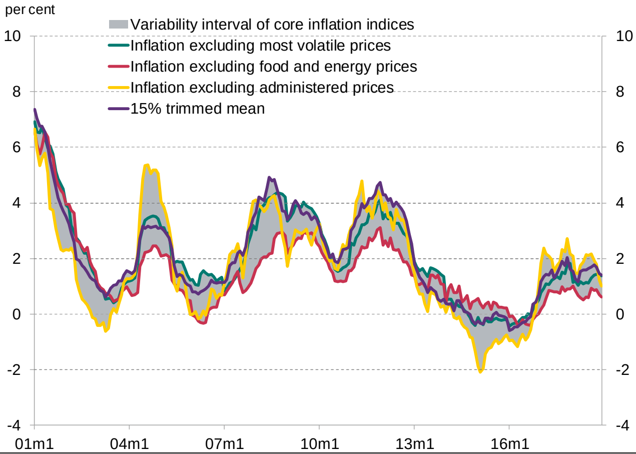
Food price growth slowed down at the end of 2018 (to 0.9% y/y in December). This was a result of large supply of some agricultural produce (notably

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.

[16] Data on inflation in January 2019 may be revised after the change in the weights in the CPI basket carried out by GUS at the beginning of each year. Due to the preliminary nature of the data, GUS has not published information on price changes of all the components of the CPI basket.

[17] HICP inflation in the euro area declined to 1.4% y/y in January 2019, as compared with 2.2% y/y in October 2018.

[18] The dip in service price growth occurred in November and was driven by price promotions launched at that time in mobile telephony, internet provision and TV services.

[19] Growth in prices of pharmaceuticals as well as those of clothing and footwear sped up, while price growth of means of transport and tobacco products lost momentum.

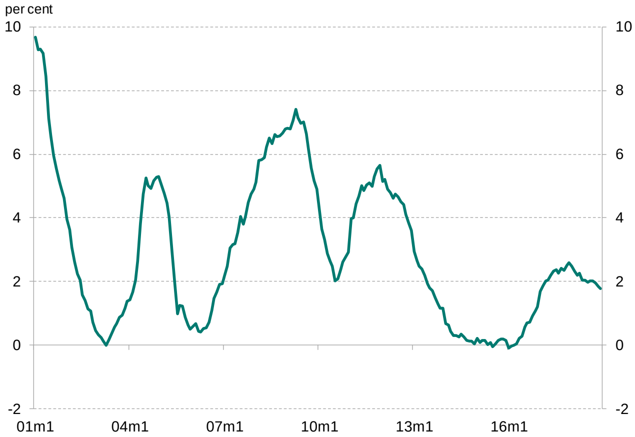
fruit), the cyclical increase in production in some markets (e.g. meat and milk), and, with regard to the egg market – the base effect (related to the sharp rise in egg prices in 2017 Q4). At the same time, food price growth was pushed up by rising production costs (e.g. those of bread) and drought in many countries, causing falls in production (e.g. of cereals, vegetables and sugar).

In recent months, energy price growth has also slowed (to 3.2% y/y in December). This was driven, in the first place, by a fall in global oil prices in 2018 Q4, which translated into lower domestic prices of fuel. Energy price growth was also dragged down by flagging prices of heating fuels related to a recent decrease in global coal prices (Figure 2.4).

The decline in global oil prices in recent months has also caused the annual growth in producer prices to decrease (Figure 2.5). Concurrently, the zloty exchange rate – having weakened slightly compared to the previous year's levels – put an upward pressure on PPI growth. Growth in producer prices of goods sold domestically continues to exceed that of export production, yet the differential has narrowed substantially due to slower growth in the prices of energy goods, which are typically sold domestically.

In December 2018, both consumers' and enterprises' survey opinions about future inflation developments moved upwards. This was probably to a large extent a result of concerns about a sharp increase in energy prices in 2019[20] (Figure 2.6). However, after the bill freezing energy prices had been passed, in January and February 2019, the survey opinions of consumers on future inflation fell back. Alongside that, economists surveyed by NBP continue to expect inflation to run close to the NBP target in the coming quarters (Table 2.1).

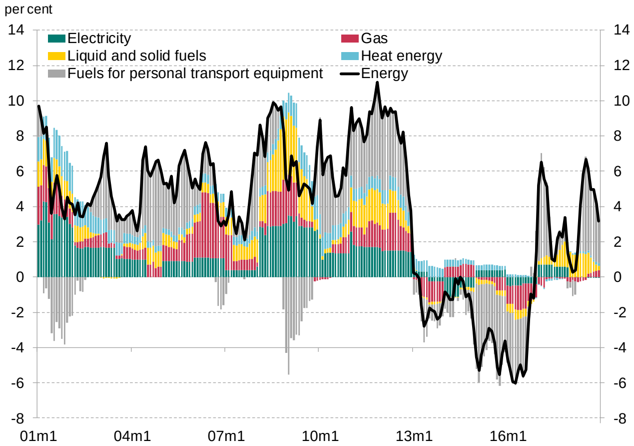
Figure 2.3 Inflation index of goods sensitive to domestic economic conditions (y/y)



Source: GUS data, NBP calculations.

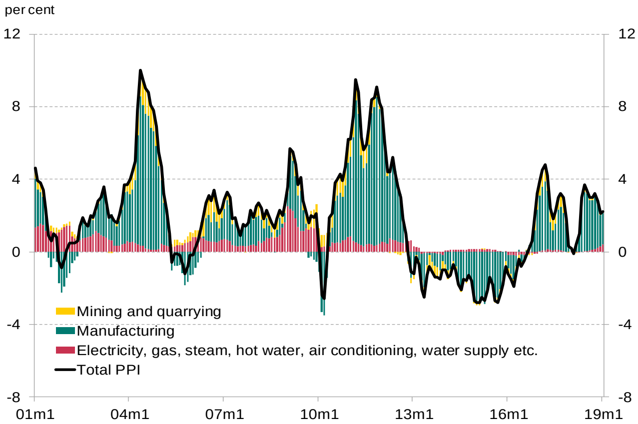
The aggregate of the CPI components sensitive to changes in domestic economic conditions. For more on the index calculation methodology, see: Hałka, A., Kotłowski, J. (2014), Does the domestic Output Gap Matter for Inflation in a Small Open Economy, Eastern European Economics, vol. 52.

Figure 2.4 Energy price growth and its components (y/y)



Source: GUS data, NBP calculations.

Figure 2.5 Composition of PPI inflation (y/y)



Source: GUS data, Eurostat.

[20] Concerns about a sharp rise in the prices of electricity charged to end-consumers stemmed from a substantial increase in wholesale energy prices in 2018.

2.2 Demand and output

Although towards the end of 2018 economic conditions in Poland deteriorated slightly, annual GDP growth remained relatively high in the second half of 2018.

In 2018 Q3 and Q4, GDP growth stood at 5.1% y/y and 4.9% y/y respectively, i.e. it was only slightly lower than in the previous few quarters (Figure 2.7). Consumer demand continued to be the main driver of growth, although it is rising somewhat slower than in 2017. Demand is supported by growing wages and employment, still very high consumer sentiment, and rising consumer loans, even though employment growth is gradually slowing down and household sentiment has slightly deteriorated over the recent period.

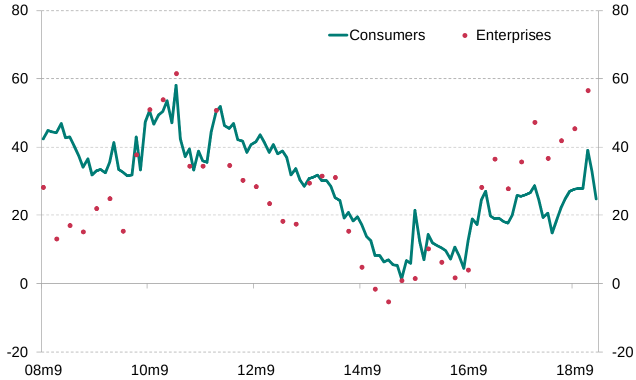
Investment also made a significant contribution to GDP growth. In 2018 Q3, apart from public investment, which has already been growing for several quarters, also investment in the corporate sector began to grow, particularly in medium and large enterprises. Investment growth is supported by increasing absorption of EU funds and high capacity utilisation.

In 2018 Q3, the contribution of net exports to GDP growth was negative. Export growth was lower than in 2017 as a result of the deterioration in business conditions in the euro area, particularly in Germany. At the same time, import growth remained high, supported by strong domestic demand. However, in 2018 Q4, the contribution of net exports to GDP growth was slightly positive.

2.2.1 Consumption

Consumption continues to be the main driver of economic growth in Poland. Household consumption is still high, although its growth was slightly weaker in the second half of 2018 than in previous quarters (4.5% y/y in 2018 Q3 and 4.3% in 2018 Q4; Figure 2.8).

Figure 2.6 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 to the *NBP Survey of Professional Forecasters* (per cent)

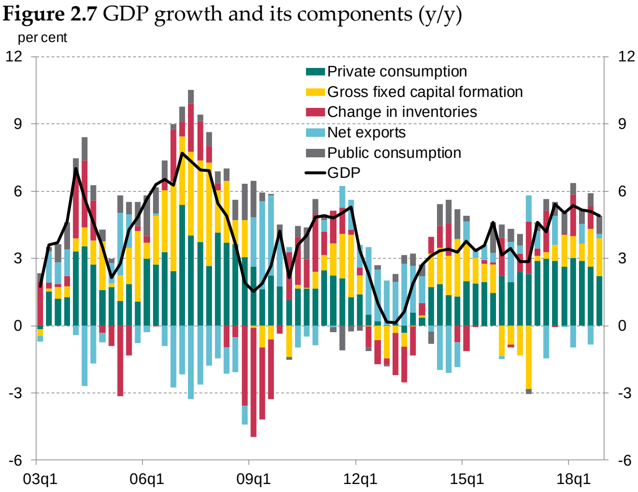
	Survey conducted in:				
	18q1	18q2	18q3	18q4	19q1
Thomson Reuters Survey, inflation expected in 4 quarters	2.2	2.1	2.4	2.3	2.4
NBP Survey, inflation expected in 4 quarters	2.1	2.2	2.3	2.3	-
NBP Survey, inflation expected in 8 quarters	2.4	2.5	2.4	2.6	-

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 2019 Q1, when February 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 2.7 GDP growth and its components (y/y)



Source: GUS data, NBP calculations.

The sustained growth of consumption follows from favourable labour market conditions for employees reflected in a further rise in wages and employment, even though employment in the second half of 2018 was growing at somewhat slower pace than before. Consumption growth was additionally supported by the robustly high household sentiment, despite a slight weakening in consumer confidence indicators in recent months (Figure 2.9). Finally, a factor fuelling private consumption growth was a marked pick-up in consumer loans.

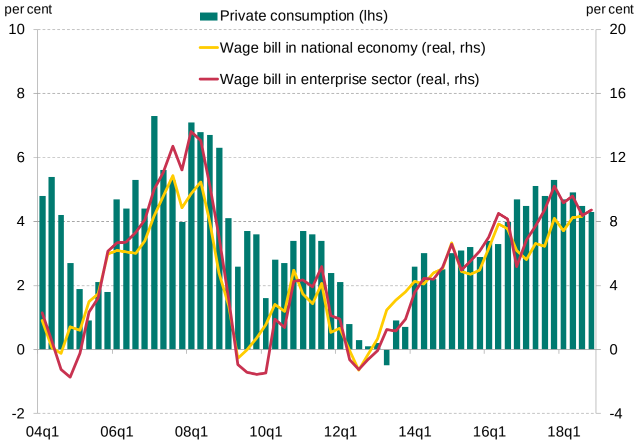
2.2.2 Investment

In the second half of 2018 there was a marked recovery in investment (Figure 2.10**)**. Gross fixed capital formation increased by 9.9% y/y in Q3 and by 6.7% y/y in Q4. NBP estimates indicate that in this period growth of all the main components of investment was positive.

Corporate investment rose in 2018 Q3. Real growth of investment of medium-sized and large enterprises (with at least 50 employees) accelerated to 14.4% y/y (against 13.5% y/y in Q2; Figure 2.10). According to preliminary GUS data, investment of the micro and small enterprise sector also increased significantly. As in the previous quarter, all sectors of the economy made a positive contribution to investment growth (Figure 2.11), with high investment growth recorded in most of the sectors.

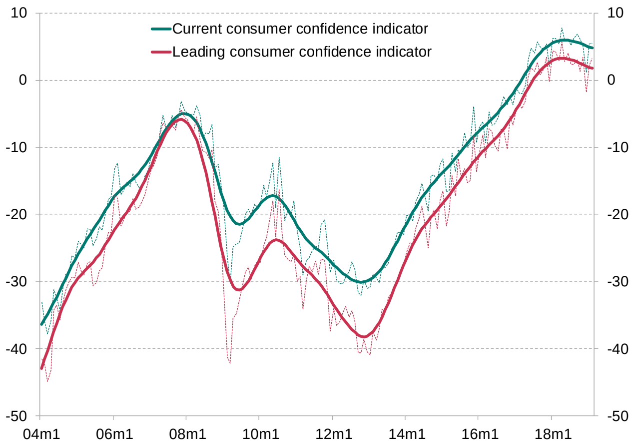
Public enterprise investment continued to rise faster, while growth of private enterprise investment declined somewhat due to the weaker growth in investment of foreign firms. The structure of outlays in both sectors of ownership also varied. Whereas public enterprises primarily undertake construction investment, co-financed from EU funds, private enterprises increase outlays mainly on machinery and equipment, which is driven by the very high capacity utilisation (Figure 2.12). According to NBP survey data, in the recent period the share of firms planning to start new investments in 2019 Q1 rose significantly, and

Figure 2.8 Growth in private consumption and wage bill in national economy and enterprise sector (y/y)



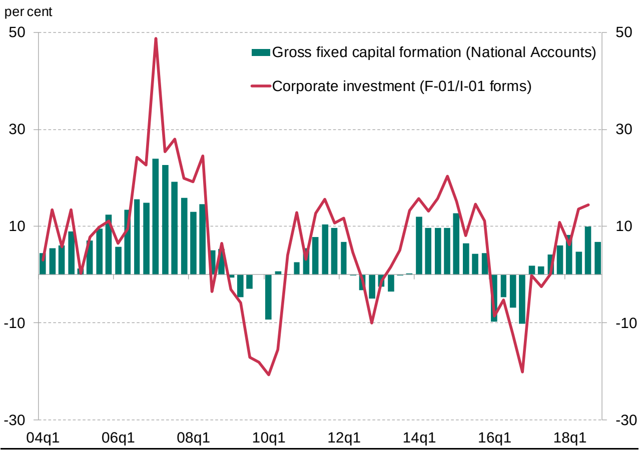
Source: GUS data, NBP calculations.

Figure 2.9 Consumer confidence indicators



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

Figure 2.10 Growth in investment (y/y)



Source: GUS data, NBP calculations.
Data on corporate investment from the survey conducted by GUS on revenues, costs and financial results as well as gross fixed capital formation (based on F-01/I-01 forms).

investment plans for the whole year remain relatively high.[21] At the same time, signs of gradually deteriorating economic conditions could reduce the propensity of enterprises to significantly increase gross fixed capital formation.

Public investment remained the main driver of investment growth. In particular, in 2018 Q3 investment of local government units continued to grow rapidly (nominal growth of 74.0% y/y). Local government investment was financed with both domestic and EU funds.

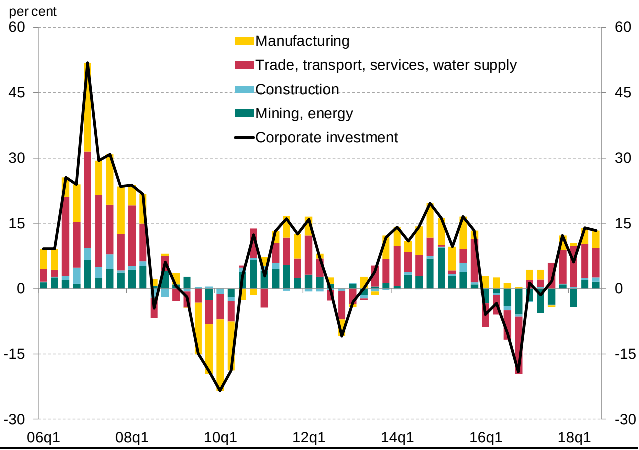
The growth rate of housing investment was still relatively high, although it declined somewhat compared to the previous quarters. In Q3, the expected profitability of housing investment continued to be higher than the profitability of other forms of household investments.[22] Growth of housing investment is also supported by the favourable situation of employees in the labour market and strong consumer confidence.

2.2.3 Public finance

In 2018, financial performance of the general government continued to improve, as indicated by the balance of the entire sector (in ESA2010 terms) in the period January-September (surplus amounting to PLN 4.9 billion as compared with a deficit of PLN 9.2 billion in the corresponding period of 2017), as well as data confirming favourable situation of both the state budget and the sub-sector of social insurance funds in the period January-December. According to preliminary estimates of the Ministry of Finance, the general government deficit (ESA2010) in the entire 2018 amounted to approx. 0.5% of GDP against 1.4% of GDP in 2017 (Figure 2.13).

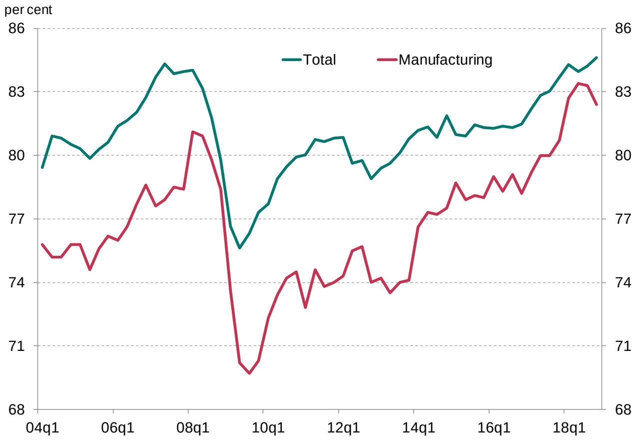
The very good financial performance of the general government (ESA2010) in the first three quarters of 2018 was primarily related to the robust growth of

Figure 2.11 Corporate investment by sectors (y/y, current prices)



Source: GUS data (F-01/I-01 forms), NBP calculations.

Figure 2.12 Corporate capacity utilisation (seasonally adjusted)



Source: *NBP Quick Monitoring Survey. Economic climate in the enterprise sector* (total) and GUS data (manufacturing).

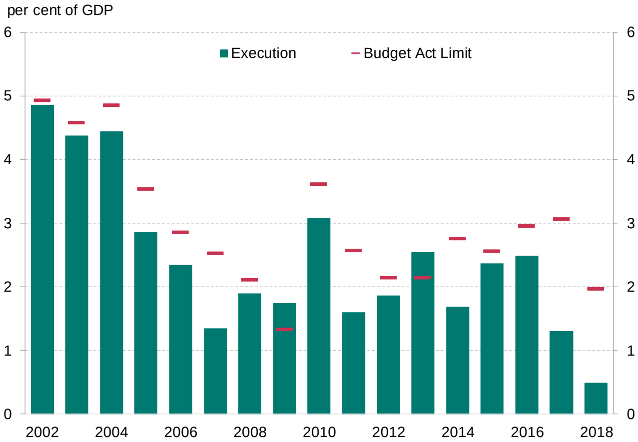
[21] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019.

[22] *Information on home prices and the situation in the housing and commercial real estate market in Poland in 2018 Q3*, NBP, January 2019.

the sector's tax revenue (9.6% y/y) and social insurance contributions (8.4% y/y), which was fuelled by high economic activity growth and favourable labour market conditions. At the same time, current general government expenditure continued to increase at a moderate pace (4.3% y/y), accompanied by a steep rise in investment expenditure (by 28.5% y/y). Particularly sharp was a rise in investment of local government units (79.7% y/y[23]).

The 2019 Budget Act, adopted by the Sejm in January 2019, on the revenue side, envisages further measures aimed at improving the tax collection[24], amid the absence of changes in the basic tax rates (except for a reduction in the CIT rate for small and medium-sized enterprises from 15% to 9%). The Act also provides for a moderate pickup in state budget expenditure (to 4.8% y/y against 3.2% in 2018, comparing expenditure limits) related to, among others, pay rises for teachers, the uniformed services and the public administration.

Figure 2.13 State budget deficit



Source: MF data, NBP calculations.

Besides the changes assumed in the Budget Act, fiscal policy in 2019 will be shaped by a package of measures announced in February 2019 (among others, broadening of the Family 500 plus programme, additional benefits for pensioners), measures designed to counteract increases in electricity prices charged to its recipients adopted at the end of 2018[25] as well as slower general government investment growth. Weaker growth in the general government investment in 2019 will result from the likely slowdown in the capital expenditure of the local government sub-sector

[23] Data derived from domestic reporting (on a cash basis).

[24] These measures are expected to bring additional revenues of approx. 0.4% of GDP in 2019.

[25] The adopted measures included a reduction in excise tax on electricity and in the transitional charge (which are classified as the sector's income in ESA2010 terms) and compensation for electricity-trading companies. See the Act of 28 December 2018 amending the Excise Tax Act and some other Acts (Journal of Laws 2018, item 2538).

and the weaker momentum in EU fund absorption, which, however, will remain relatively high.[26]

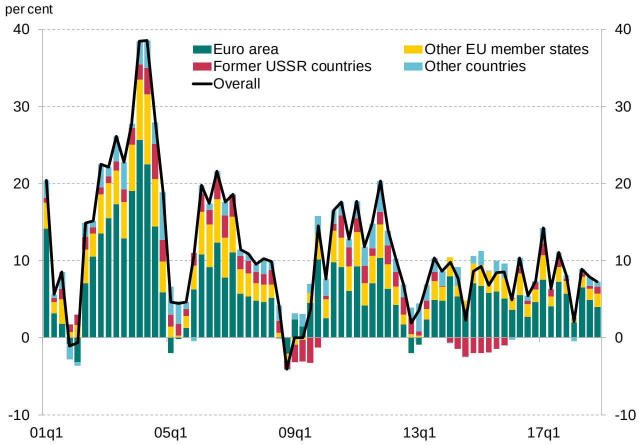
2.2.4 External trade[27]

In the second half of 2018, following a slowdown in the world trade, export growth of goods declined against its 2018 Q2 level. The decline concerned in particular exports to the euro area and – in terms of commodity group – intermediate goods. Average export growth in 2018 was weaker than the year before.

The weaker export growth was driven, above all, by slower exports to the euro area (Figure 2.14), probably due to lower economic growth in the region in the second half of 2018 (see Chapter 1.1 *Economic activity abroad*). The decline in the growth of exports to the euro area was partially offset by a pick-up in exports to the remaining countries of the European Union. In terms of commodity groups, slower growth was seen primarily in the intermediate goods, which could have resulted in part from the problems of the automotive industry in the euro area related to the introduction of new exhaust emission standards (WTLP[28]). The decline was not compensated for by the accelerated growth in exports of capital goods – observed over several past quarters – whose contribution to total exports remains considerably smaller.

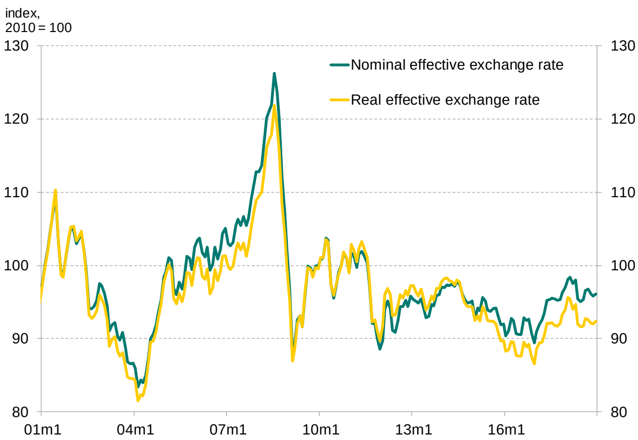
The slight weakening in Polish export growth occurred against the background of a relatively stable exchange rate of the zloty (Figure 2.15) with the actual exchange rate against euro and dollar running above the export profitability exchange rates as declared by enterprises. At the same time, the exchange rate of the zloty did not pose a barrier to import profitability.[29]

Figure 2.14 Contribution to export growth by destination (y/y)



Source: GUS data, NBP calculations.

Figure 2.15 Nominal and real effective exchange rate (rise indicates appreciation)



Source: BIS data.

[26] Weaker growth in the general government investment in 2019 will occur despite the anticipated stabilisation of the sector's expenditure at a relatively high level, whereas the 2018 pickup was the effect of expenditure rising from the low level the year before.
[27] In this chapter, the GUS data on exports and imports of goods in PLN terms are analysed. Trends in trade of services are not described, as no detailed data are available on the breakdown of the value of this trade by the type of service and its destination.
[28] WLTP – Worldwide Light Vehicle Test Procedure.
[29] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2018 and *NBP Quick Monitoring. Economic climate in the enterprise sector*, NBP, January 2019

In the second half of 2018, import growth was close to that of 2018 Q2, remaining above export growth for several quarters (Figure 2.16). Some acceleration in the intermediate good imports was accompanied by lower growth of other good imports, including a significant weakening in passenger car imports.

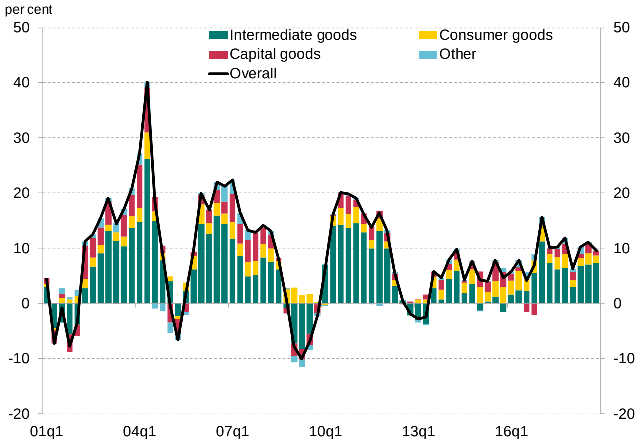
2.2.5 Output

Although economic conditions deteriorated slightly in the second half of 2018 and at the beginning of 2019, activity continued to grow in all sectors of the economy (Figure 2.17). In 2018 Q3 and Q4, growth of value added in industry and construction was somewhat lower than in 2018 Q2. In 2018 Q3, this was accompanied by an acceleration in value added growth in services, which, however, also declined in 2018 Q4.

In 2018 Q4, industrial output grew at a similar pace as in Q3, yet slower than in Q2 (5.4% y/y against 5.3% y/y in 2018 Q3 and 7.0% in 2018 Q2). Activity growth in industry was supported by strong domestic demand, which allowed output growth to remain relatively high despite further deterioration in business conditions in the euro area, particularly in the German industry (Figure 2.18). In January, output growth in the Polish industry remained relatively high.[30] However, survey economic sentiment indicators and data on industrial orders suggest that it may fall in the subsequent months.

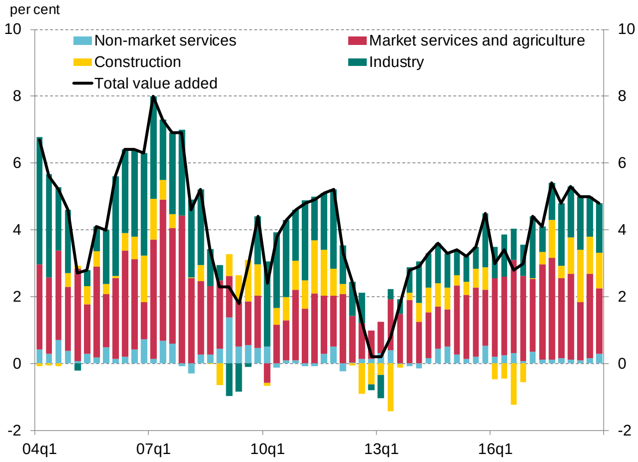
While in 2018 Q4 construction output growth declined only slightly (to 16.8% y/y from 18.3% y/y in 2018 Q3 and 21.9% y/y in 2018 Q2) and remained high, in January 2019 it decelerated significantly (to 3.2% y/y). A gradual fall in growth of infrastructure construction output, including construction of roads and power networks, contributed to the slowdown (Figure 2.19). In Q4, this factor was partly offset by some acceleration in construction of buildings (particularly in residential

Figure 2.16 Contribution to import growth by commodity (y/y)



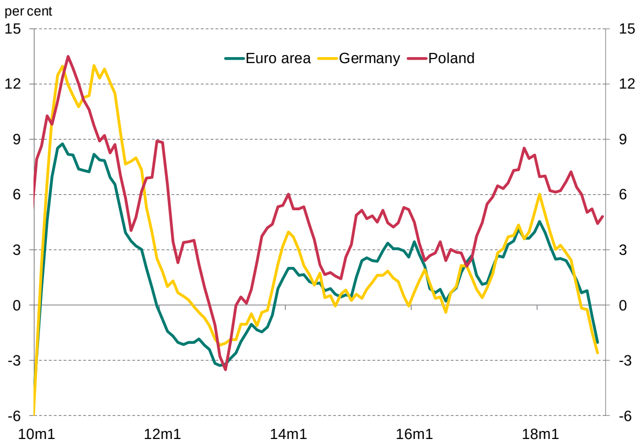
Source: GUS data, NBP calculations.
Data based on GUS classification of the main product categories for the value of Polish exports and imports in zlotys. "Other" comprises passenger cars, motor gasoline and goods else not classified.

Figure 2.17 Growth of gross value added by sectors (y/y)



Source: GUS data, NBP calculations.

Figure 2.18 Industrial output growth in the euro area, Germany and Poland (y/y, seasonally-adjusted data, 3-month moving average)



Source: GUS and Eurostat data, NBP calculations.

[30] Industrial output grew by 6.1% y/y in January 2019 against 5.0% on average in 2018 Q4.

construction), which, however, strongly decelerated at the beginning of 2019. Lower growth in both residential and commercial construction could be attributed to supply-side constraints (see Chapter 2.5.2 *Real estate market*).

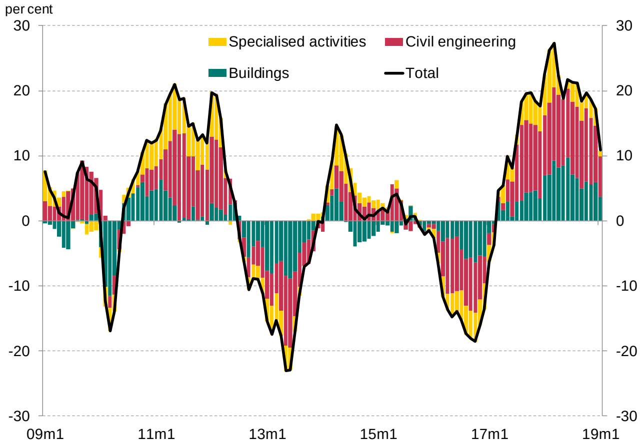
In market services, after a fall in 2018 Q2, growth of value added picked up in 2018 Q3 to reach the level seen in the previous few quarters, which was followed by a renewed slowdown in 2018 Q4 (Figure 2.20). Weaker momentum in economic activity in trade, which has been observed since 2018 Q2, was offset in Q3 by an acceleration in growth of value added in transportation. However, in 2018 Q4, business conditions in transportation also weakened, which was accompanied by a fall in value added growth in finance and insurance activity.

2.3 Financial situation in the enterprise sector

In the second half of 2018, the financial performance of enterprises was good, but continued to vary across sectors. In 2018 Q3, the gross financial result remained high and rose by 9.5% against 2017 Q3 (Figure 2.21). The enterprises surveyed by NBP[31] assessed their situation as good and stable also in 2018 Q4, even though part of the incoming data point to the possibility of some deterioration in business conditions in the enterprise sector at the end of 2018 (see Chapter 2.2.5 *Output*).

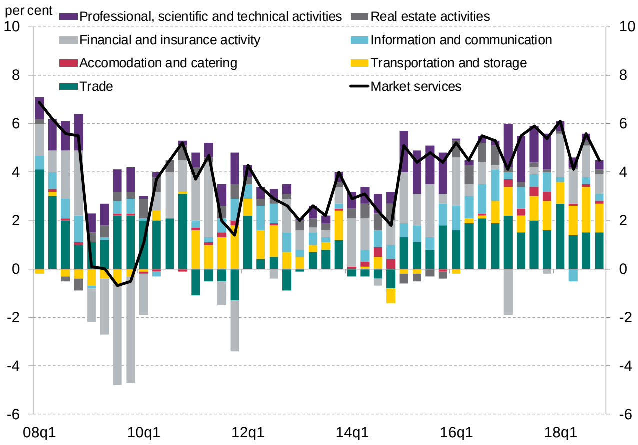
In 2018 Q3, sales growth decreased slightly due to a sharp fall in its external component, which was not fully compensated by the increase in domestic sales growth. In turn, growth in sales costs picked up somewhat. This was caused by the rising costs of raw materials and wages as well as the sharp increase in energy costs, whose share in the total costs of enterprises is, however, small. Accordingly, growth in costs outweighed that in

Figure 2.19 Construction and assembly output growth by construction objects (y/y, 3-month moving average)



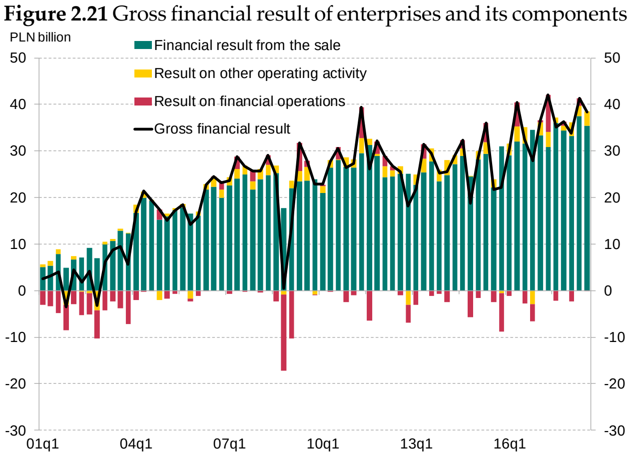
Source: GUS data, NBP calculations.

Figure 2.20 Growth of gross value added in market services by branches (y/y)



Source: GUS data, NBP calculations.

Figure 2.21 Gross financial result of enterprises and its components



Source: GUS data, NBP calculations.
Data from the survey conducted by GUS on revenues, costs and financial results as well as gross fixed capital formation (based on F-01/I-01 forms).

[31] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019.

revenues, and the enterprises' result from sale fell slightly (by 1.6% compared to 2017 Q3). Alongside that, their sales profitability ratio decreased in relation to 2017 Q3, while continuing at a relatively high level. In turn, positive exchange rate differences and higher dividend revenues translated into a marked improvement in the result on other activities of enterprises. As a consequence, their total financial result increased in 2018 Q3.

Financial efficiency ratios also reflect good standing of the enterprise sector (Table 2.2). Both the share of profitable firms and net turnover profitability remain high. Despite the decline in the liquidity ratio in 2018 Q3 compared to 2017 Q3, firms do not expect a significant deterioration in liquidity in 2019 Q1.

Table 2.2 Selected financial efficiency ratios in the enterprise sector (per cent)

	2017				2018		
	q1	q2	q3	q4	q1	q2	q3
Sales profitability ratio	5.1	4.6	5.2	4.6	4.8	5.1	4.7
Net turnover profitability	4.4	5.3	4.1	3.9	3.9	4.6	4.2
Percentage of profitable enterprises (sa)	75.0	74.4	74.5	74.7	75.7	75.4	74.9
1st degree liquidity ratio	37.4	35.3	36.3	38.4	37.0	36.1	34.8

Source: GUS data, NBP calculations.
Data from the survey conducted by GUS on revenues, costs and financial results as well as gross fixed capital formation (based on F-01/I-01 forms).

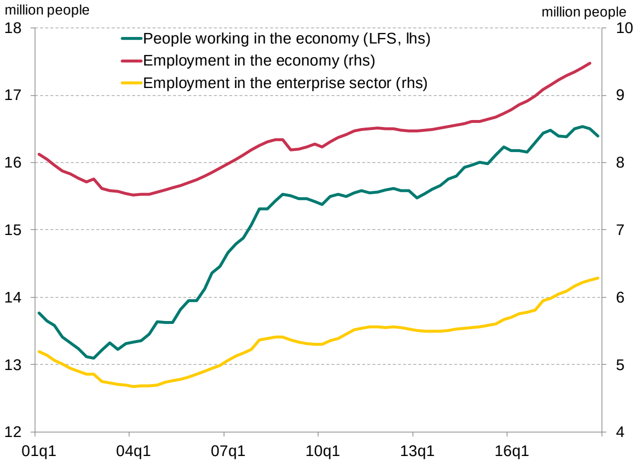
2.4 Labour market

Favourable economic conditions are conducive to further rise in employment, although at slightly slower rate as indicated by the latest data (Figure 2.22).[32]

According to the LFS data, gradual increase in employment takes place amid a falling number of economically active people of working age (the number of economically active people aged over 15 decreased by 0.7% y/y in 2018 Q4). This fall reflects a decline in the working age population accompanied by a relatively stable labour force participation rate. However, LFS data do not include temporary employees from abroad, whose number is currently estimated at around 1 million people.[33]

Rising employment contributes to the decline in the unemployment rate, although this decline – like the growth in employment – is slowing down gradually. The LFS unemployment rate fell to 3.6%

Figure 2.22 Number of people working and the level of employment, seasonally adjusted data



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. This data does not include temporary immigration. 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 contracts. In addition, data on average employment in the enterprise sector does not cover the public sector and sole proprietors.

[32] The Job Offers Barometer, measuring the number of job offers posted online, rose by 6.1% y/y in January 2019. By contrast, the number of job offers at labour offices declined by 14.9% y/y in December 2018. However, this was most likely connected with the change in the rules for placing offers in labour offices in the case of employing foreigners on the basis of a seasonal work permit.
[33] The LFS covers people staying in Poland for at least 12 months.

in 2018 Q4, from 3.8% in the previous quarter (seasonally adjusted; Figure 2.23).

Amid low unemployment, many companies face recruitment difficulties. The percentage of firms reporting such problems as a barrier to development rose to 10% in 2018 Q4, while the percentage of firms reporting vacant positions – despite a slight decline – remains relatively high (41.6% in 2018 Q4).[34] On account of the strengthening position of employees in wage negotiations, a high percentage of firms are reporting wage pressure.[35]

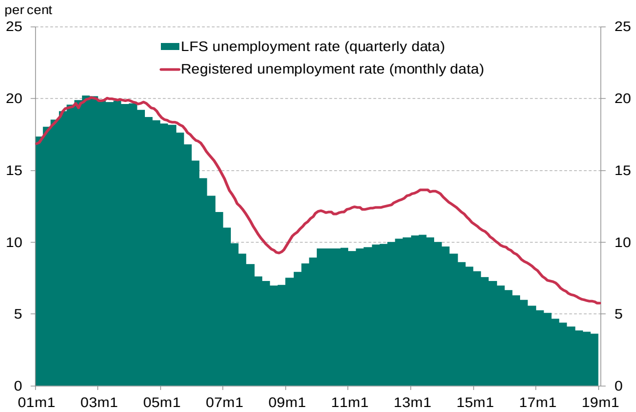
As a result, nominal wages in the economy are rising faster than in previous years (7.7% y/y in 2018 Q4; Figure 2.24). Their growth in recent quarters picked up slightly due to increased wage growth in the public sector, accompanied by stable wage growth in the private sector.[36] At the same time, non-wage working conditions are improving. In particular, the number of employees working on the permanent contracts continues to rise (by 2.7% y/y in 2018 Q4), while the number of those employed on the temporary contracts is falling (by 8.6% y/y, in 2018 Q4).

The slight acceleration in wage growth in recent quarters was accompanied by a stabilisation of labour productivity growth. Consequently, growth in unit labour costs increased somewhat compared to the first half of 2018 (to 2.7% in 2018 Q4; Figure 2.25).

2.5 Monetary policy and asset markets

The Monetary Policy Council keeps the NBP interest rates unchanged, including the reference rate at the level of 1.50%. Since the previous *Report*, market interest rate expectations have considerably declined and suggest that the NBP interest rates

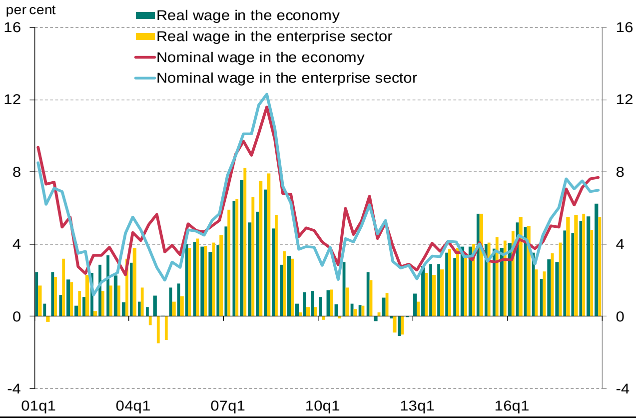
Figure 2.23 Unemployment rate, seasonally adjusted data



Source: GUS data, NBP calculations

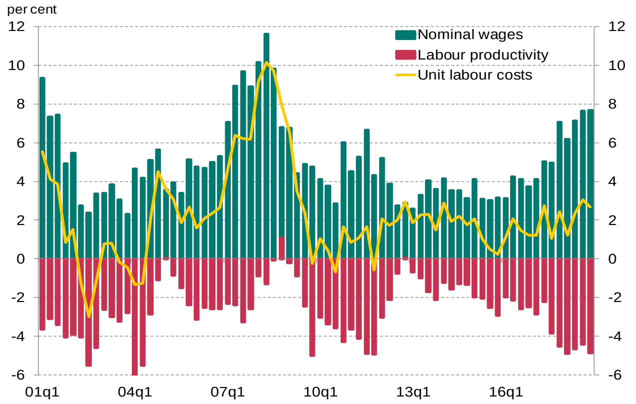
Data adjusted by NBP for seasonal factors and breaks related to change in GUS methodology in 2012. There are three reasons for the difference between the registered unemployment rate and the LFS rate: 1) the definition of an unemployed person is different, 2) the definition of the population to which the number of the unemployed is referred is different, 3) registered unemployment rate is based on the number of uneployed people registered in labour offices, while LFS unemployment rate is based on survey results.

Figure 2.24 Annual wage growth in the economy and in the enterprise sector (y/y, nominal and real)



Source: GUS data.

Figure 2.25 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.

[34] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019.

[35] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019.

[36] The pick-up in wage growth in the public sector (i.e. in entities that are owned by the state or local government or have mixed ownership with the state or local government holding a majority stake) in recent quarters mainly stemmed from heightened wage growth in the mining sector, education, and the health service.

will remain stable in the coming quarters (Figure 2.26). This is the effect of lower current and expected inflation as well as signs of deteriorating global economic conditions, amid declining expectations of monetary policy tightening by the major central banks.

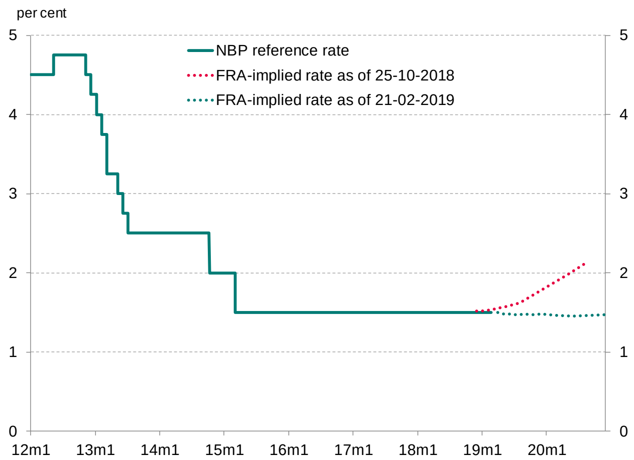
2.5.1 Financial market

Prices of Polish Treasury bonds have been supported by declining bond yields in the global markets, low supply of Treasury securities in the primary market and the downward revision of the expected interest rate path in Poland. Consequently, recent months have seen a decline in yields on Treasury bonds, especially those with longer maturity (Figure 2.27). This also reflects investors' favourable assessment of Poland's economic fundamentals and the absence of significant macroeconomic imbalances. As a result, the average yield on 10-year Treasury bonds in February 2019[37] stood at 2.7% and that of 2-year Treasury bonds at 1.5%.

In the second half of 2018, share prices stabilised after the previously observed declines and did not follow any marked trend (Figure 2.28). However, the WIG index has risen by over 10% since the local low seen in October 2018. Apart from still favourable economic conditions in Poland, in 2019 this rise has also been supported by growing equity prices in the major world markets.

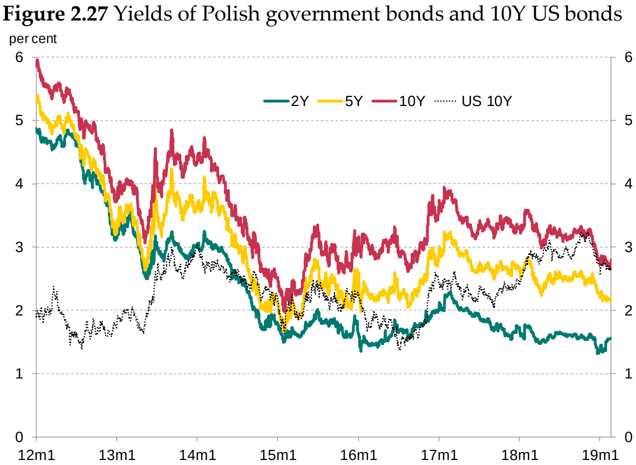
Growth in Polish bond and equity prices in recent months was accompanied by the stable exchange rate of the zloty (Figure 2.29). The 3-month implied volatility of the zloty against the euro significantly declined in the second half of 2018 and is now lower than the volatility of both the basket of emerging markets currencies and the basket of the seven major world currencies. This suggests a relative resilience of the Polish currency to global developments, supported by good macroeconomic fundamentals of the Polish economy. As a result, in

Figure 2.26 NBP reference rate and 3M FRA-implied interest rate



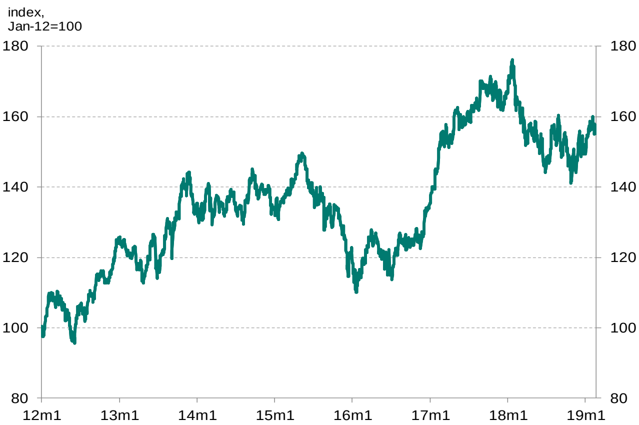
Source: NBP and Bloomberg data, NBP calculations.

Figure 2.27 Yields of Polish government bonds and 10Y US bonds



Source: Bloomberg data.

Figure 2.28 The main stock market index in Poland (WIG)



Source: Bloomberg data.

[37] Data for the period 1-21 February 2019.

February 2019 the average exchange rates of the zloty against the euro and the US dollar remained close to those seen in mid-2018.

2.5.2 Real estate market[38]

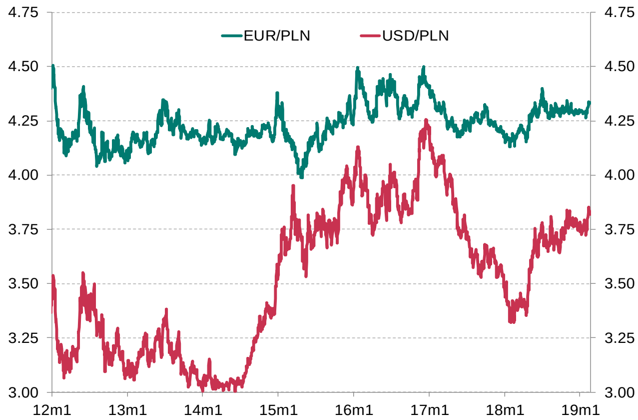
In 2018 Q3, expansion in the residential real estate market continued, despite a slight slowdown. For the third quarter in a row, the number of dwellings sold declined somewhat, yet the supply of dwellings remained relatively high (Figure 2.30). Moreover, the market saw a large number of building permits issued, completed dwellings made ready for occupancy, and dwellings under construction. Growing activity in the housing market was accompanied by an increase in home prices, partly driven by rising production costs (Figure 2.31).

Solid demand for dwellings is underpinned by the very good situation of employees in the labour market (see Chapter 2.4 *Labour market*) and strong consumer sentiment. The high level of home sales is also driven by stable interest rates on mortgage loans and the relatively high expected profitability of home rental as compared with other forms of household investment.

Growing demand for dwellings and the estimated rates of return on housing projects contribute to a persistently high number of both building permits issued and dwellings completed and made ready for occupancy[39] (Figure 2.30). Nevertheless, growth in the supply of dwellings remained slightly slower than growth in demand. Consequently, dwellings were purchased at even earlier stages of the investment process.

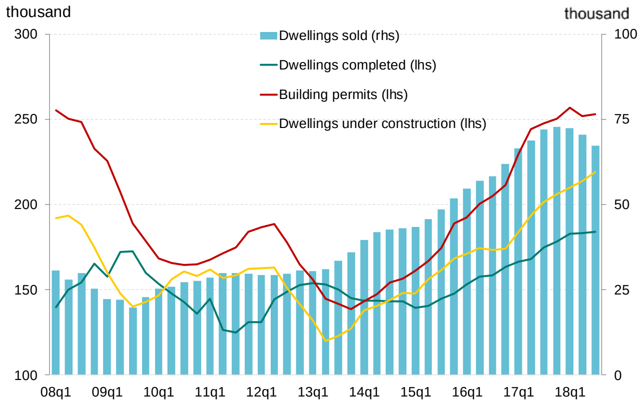
The production level of dwellings reached may, however, hinder its further increase, given the

Figure 2.29 Nominal exchange rate of euro and US dollar in Polish zloty



Source: Bloomberg data.

Figure 2.30 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 and Łódź).

[38] For more information on the situation in the 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 2018 Q3*, NBP, January 2019.
[39] According to GUS data, in the last four quarters the number of building permits issued was 2.1% y/y higher than in the period 2016 Q4 – 2017 Q3. At the same time, the number of completed dwellings made ready for occupancy increased by 1.1% y/y, and the number of construction starts rose by 8.6% y/y as compared to the corresponding period of the preceding year.

supply-side constraints faced by real estate developers. High activity in the entire construction sector[40] entails shortages of workers, which translates into rising wages, and growing prices of materials. Moreover, high demand for prime development land led to an increase in its prices. However, the existing land stock owned by real estate developers should ensure the supply of new dwellings in the coming years.

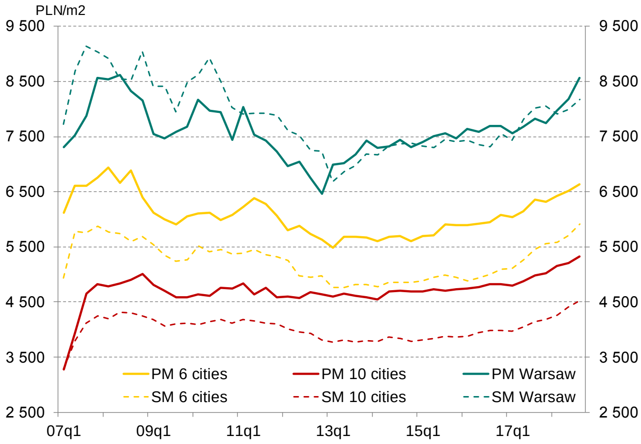
The commercial real estate market saw a rise in the supply of office space in 2018 Q3, which is backed by higher rates of return on this type of investment in Poland than abroad and the high availability of external funding amidst very low interest rates abroad, including in the euro area (see Chapter 1.4 *Monetary policy abroad*).[41] In 2018 Q3, higher supply was accompanied by rising rental demand for office space, which reduced the vacancy rate[42] in large cities. In turn, in the retail and service premises the construction of new space is slowing down.

2.6 Money and credit

In the second half of 2018, broad money (M3) growth in the economy picked up (reaching 7.5% in 2018 Q3 and 8.4% in 2018 Q4[43] compared to 6.5% in 2018 Q2).[44] As in previous periods, growth in the value of household deposits, in particular current deposits, made the largest contribution to the change in the M3 aggregate (Figure 2.32).

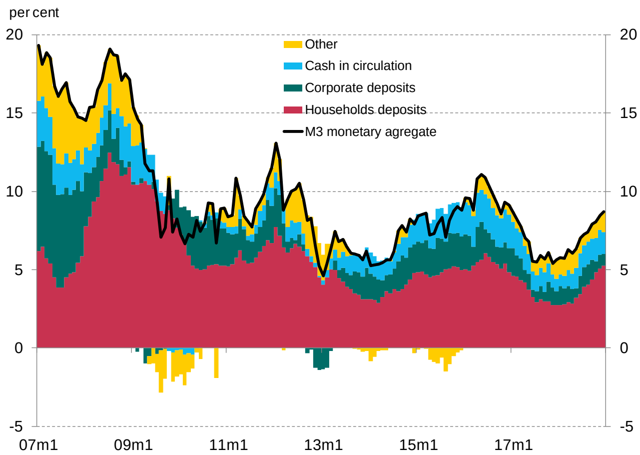
In 2018 Q4, increase in net foreign assets[45] and credit for the non-financial sector[46] were the main

Figure 2.31 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 and Zielona Góra.

Figure 2.32 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.

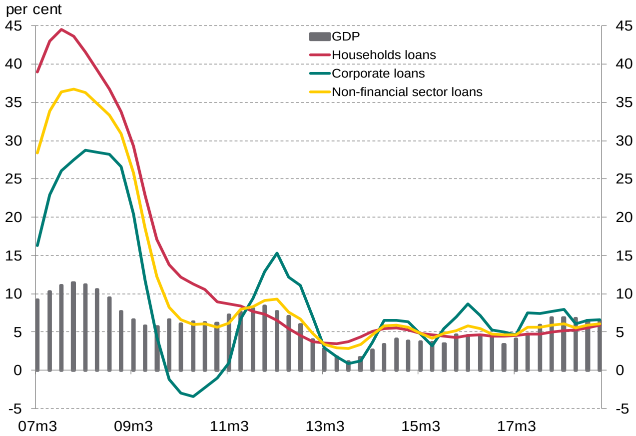
[40] Dwellings and non-residential construction accounts each for approx. 25% of the total construction sector, while civil and water engineering for approximately 50%.
[41] However, the costs of maintenance of office real estate are on the rise, which may translate into a decline in the expected rates of return on investment in this type of real estate.
[42] The vacancy rate is the ratio of non-leased space to the total space for rental.
[43] In January 2019, M3 growth amounted to 8.3%.
[44] In this chapter, growth in broad monetary aggregate (M3) and loans is defined as the three-month average of the annual growth of transaction changes in the given quarter. The data concern monetary financial institutions.
[45] The increase in net foreign assets was due to transactions of domestic commercial banks, as well as transactions of NBP.
[46] In this chapter, lending growth for a given economic sector is defined as the annual growth of transaction changes in the monetary claims of financial institutions from this sector.

sources of broad money creation. For several quarters lending growth has been close to the nominal GDP growth (Figure 2.33). Consequently, the ratio of outstanding loan portfolio of non-financial sector to GDP has been stable, and at the end of 2018 stood at around 51.5%.

Household loans continued to be the main driver of lending growth. Growth of these loans has been increasing gradually since 2016, and in 2018 Q4 amounted to 5.8% y/y[47] (Figure 2.34). Although consumer loans have been rising significantly faster than housing loans (9.3% y/y and 4.8% y/y respectively in 2018 Q4), growth in the total value of household loans was primarily accounted for by growth in housing loans. The growth rate of zloty-denominated housing loans was relatively high (11.4% y/y) and slightly stronger than in the previous quarter and the year earlier. Meanwhile, decline of FX housing loans continued throughout 2018 by approx. 8% y/y, i.e. it was more pronounced than in previous years. The increase in household loans was supported, among others, by stable interest rates, favourable labour market conditions as well as strong consumer sentiment. Demand for loans was backed by an easing of credit standards and some terms of granting consumer loans by banks, including a reduction of margins and an extension of the maximum loan maturity.[48] At the same time, a significant tightening of standards of granting housing loans had the opposite effect.

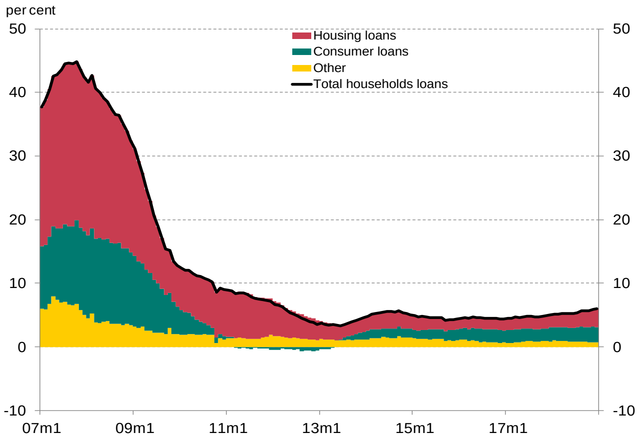
Corporate loans also made a significant contribution to the growth of loans for the non-financial sector. In 2018 Q4, their growth picked up slightly (to 6.6% y/y[49]), although it remained lower compared to the previous year (Figure 2.35). Somewhat higher growth in corporate loans reflected a further acceleration of operating loans (to 10.8%), while growth of investment loans remained at the level of 2018 Q3 (2.8%), i.e. lower

Figure 2.33 Nominal GDP and loans to non-financial sector growth (y/y)



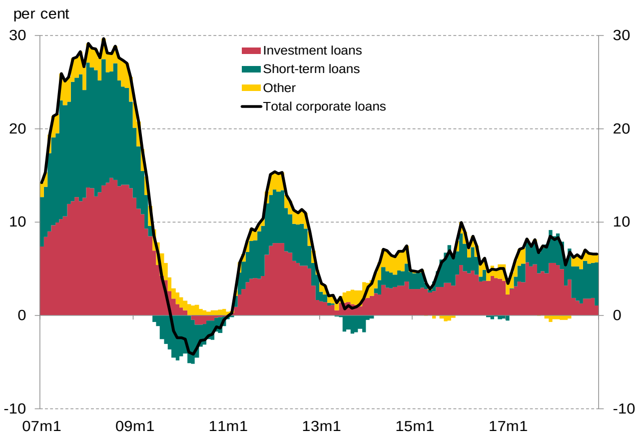
Source: NBP data.
Loans - loans and other claims, annual growth rate, 3-month moving average.

Figure 2.34 Composition of growth in household loans (y/y)



Source: NBP data.
The category *Other* covers loans connected with credit cards, loans to individual entrepreneurs, loans to individual farmers and other receivables.

Figure 2.35 Composition of growth in corporate loans (y/y)



Source: NBP data.
The category *Investment loans* covers loans for investments and real estate purchases. The category *Other* covers car loans, loans for security purchases and other receivables.

[47] In January 2019, growth of household loans amounted to 6.0%.
[48] *Senior loan officer opinion survey on bank lending practices and credit conditions. 2018 Q4*, NBP, February 2019.
[49] Also in January 2019, growth of corporate loans amounted to 6.6%.

than in previous years. These data are consistent with the results of the enterprise surveys, which suggest that firms prefer to finance investment with their own funds.[50] As a result, in the term structure of firms' liabilities the share of long-term liabilities declined in favour of short-term ones. A tightening of lending policy by some banks in the second half of 2018, in particular with regard to small and medium-sized enterprises, also contained lending growth.

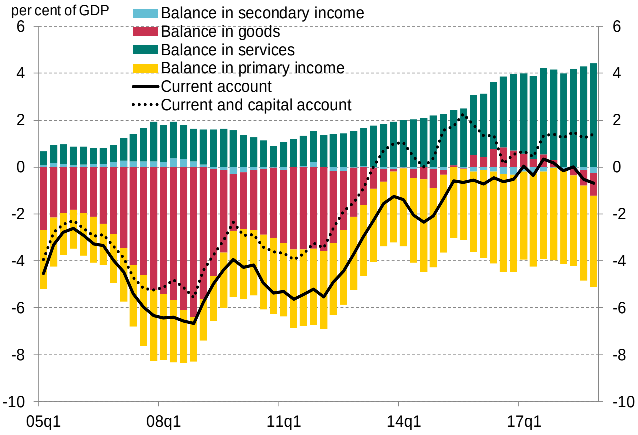
2.7 Balance of payments

In the second half of 2018, the current account balance declined compared to the first half of the year (Figure 2.36). In 2018 Q3, the current account deficit stood at - 0.5% of GDP[51] (compared to 0.0% of GDP at the end of 2018 Q2), and the estimated monthly data for 2018 Q4 suggest its further deepening to -0.7% of GDP.

The lower current account balance mainly reflected the widening deficit of the trade in goods, which was a result of the continued higher import than export growth (see Chapter 2.2.4 *External trade*). At the same time, the surplus in trade services remained high, largely due to the positive balance in the category of other services[52] and transport services. In the second half of 2018, the primary income account balance was close to its level recorded in previous quarters, i.e. remained significantly negative owing to the high income of foreign direct investors in Poland.

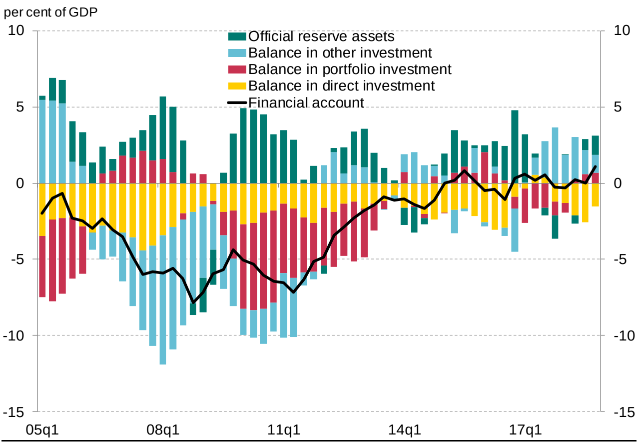
The surplus on the capital account increased due to the higher inflow of EU funds, above all, under the European Regional Development Fund and the Cohesion Fund. As the rise in capital account surplus offset the higher current account deficit, the combined current and capital account balance

Figure 2.36 Current account balance (4-quarter rolling sum)



Source: NBP data.
Data for 2018 Q4 are based on estimated monthly data for October, November, December 2018 and NBP estimate of nominal GDP in 2018 Q4.

Figure 2.37 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).
Data for 2018 Q4 are based on estimated monthly data for October, November, December 2018 and NBP estimate of nominal GDP in 2018 Q4.

[50] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, No 01/19, NBP, January 2019.
[51] Data on the balance of payments is presented in terms of a 4-quarter rolling sum.
[52] Other services include construction, finance, telecommunication, computer and information services.

remained close to that in 2018 Q2, amounting to 1.4% of GDP in Q4.

The financial account balance in the second half of 2018 increased and stood at 1.1% of GDP in 2018 Q4 (compared to 0.2% of GDP at the end of 2018 Q2; Figure 2.37). The biggest change was seen in the balance of the official reserve assets, which rose mainly as a result of the transactions carried out by NBP.[53]

In the second half of 2018, direct investment balance was still negative, yet in 2018 Q4 it narrowed reflecting a decline in residents' liabilities towards foreign direct investors.[54] In turn, the portfolio investment balance was positive in the second half of 2018, largely following a further reduction in the involvement of foreign investors in the Polish sovereign bond market.

External imbalance indicators evidence that the Polish economy is well balanced. In particular, in 2018 Q3, Poland's foreign debt to GDP ratio decreased and net international investment position to GDP improved compared to 2017 (Table 2.3).

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

	2016	2017				2018			
		q1	q2	q3	q4	q1	q2	q3	q4
Current account balance/GDP	-0.5	0.0	-0.4	0.3	0.2	-0.2	0.0	-0.5	-0.7
Current and capital balance/GDP	0.5	0.7	0.4	1.3	1.4	1.2	1.5	1.2	1.4
Trade balance/GDP	4.0	4.0	3.9	4.2	4.1	3.9	3.9	3.6	3.5
Official reserve assets (in monthly imports of goods and services)	6.4	5.7	5.2	5.0	4.7	4.8	4.7	4.7	4.9
Foreign debt/GDP	76	72	71	70	67	67	67	65	-
Net international investment position/GDP	-62	-62	-63	-62	-61	-60	-57	-57	-
Official reserve assets/short-term foreign debt and forecast current account balance	116	115	108	100	102	100	94	91	-
Official reserve assets/short-term foreign debt	116	116	108	103	106	107	103	99	-

Source: NBP data.
The last two indicators include foreign debt and the level of official reserves at the end of the period. Data for 2018 Q4 are based on estimated monthly data for October, November, December 2018 and NBP estimate of nominal GDP in 2018 Q4.

[53] These were mainly the central bank's own transactions, including reverse repo operations, as well as transactions conducted on behalf of NBP's clients, including the European Commission and the Ministry of Finance.
[54] A significant decline of debt (by PLN 16 billion) was recorded in December 2018. This was a result of a decrease in resident's liabilities towards foreign investors due to trade credits as well as other debt instruments.

3. Monetary policy in November 2018 – March 2019

At the meetings held between November 2018 and March 2019 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%.

This chapter includes the previously published *Minutes of the Monetary Policy Council decision-making meetings* held between November 2018 and February 2019 as well as the *Information from the meeting of the Monetary Policy Council* in March 2019. *Minutes* of the MPC meeting held in March 2019 will be published on 21 March, and thus included in the next *Report*.

Minutes of the Monetary Policy Council decision-making meeting held on 7 November 2018

During the meeting, the Council noted that global economic conditions remain favourable, although signs of a weakening had appeared in some economies. It was pointed out that GDP growth in the euro area had declined in 2018 Q3, in part probably on account of a slowdown in international trade. At the same time, it was observed that conditions for further consumption growth remained favourable in the euro area, owing to strong consumer sentiment as well as rising employment and wages. Economic conditions in the euro area also continued to benefit from the accommodative monetary policy of the ECB. However, some Council members underlined that some indicators of economic conditions, particularly in Germany – Poland's main trading partner, had deteriorated recently. In turn, economic growth in the United States had picked up slightly, what confirmed that economic conditions there were still very strong, supported by further rise in employment and the fiscal stimulus.

While analysing developments in energy commodity prices, it was pointed out that despite a recent decline, they stayed markedly higher than the year before. It was noted that geopolitical factors continued to have a significant impact on oil prices. In particular, it was stressed that their recent fall resulted from a temporary relaxation of US sanctions on purchases of oil from Iran by other countries. Another factor with a dampening effect on oil prices was the rise in oil output in the United States, as well as in Saudi Arabia and other OPEC+ countries. At the same time, the growth in demand for oil, despite signs of weakening global economic conditions, remained relatively strong.

When discussing inflation developments abroad, it was pointed out that the earlier significant increase in global energy commodity prices contributed to higher inflation in many countries. Alongside that, core inflation in the external environment of the Polish economy, including the euro area, remained moderate.

Referring to monetary policy in the external environment of the Polish economy, it was noted that the ECB was keeping the deposit rate below zero. Concurrently, the ECB continued to purchase financial assets, although on a reduced scale since October, and reaffirmed its guidance to terminate the purchase programme by year-end. Some Council members judged that interest rates in this region might remain low for longer than currently signalled by the ECB, should the expected economic slowdown in the euro area prove stronger than indicated by the current forecasts and the rise in inflation be driven mainly by increasing energy prices, with continuously moderate core inflation.

It was noted that in the United States, the Federal Reserve continued to gradually tighten monetary policy. Some Council members pointed out that the further gradual monetary policy tightening by the Fed, combined with mounting concerns about the outlook for the global economy, had recently translated into some fall in asset prices in international markets. At the same time, it was emphasised that yields on Polish Treasury bonds and the exchange rate of the zloty had remained stable, despite the deteriorating sentiment in global financial markets. In the opinion of the Council, this reflects a favourable assessment of Poland's economic situation and its fundamentals, including the absence of external and internal macroeconomic imbalances.

Discussing the developments in Poland’s economy, it was underlined that incoming data indicated continuously favourable economic conditions in Poland, although GDP growth in 2018 Q3 was probably lower than in the first half of 2018. It was noted that activity growth remained to be driven by rising – albeit at a slightly lower rate than in the previous quarters – consumption, still supported by increasing employment and wages, together with very strong consumer sentiment. This was accompanied by investment growth, at a pace which had probably picked up in 2018 Q3 owing to, in particular, a significant acceleration in local government investment. However, some Council members pointed out that data for recent months – including the decline in the PMI index as well as slower growth in industrial and construction-assembly output, coupled with weaker retail sales growth – were signalling a likely gradual weakening in economic activity.

With reference to the outlook for economic growth, it was pointed out that according to available forecasts, GDP growth in the coming quarters would gradually decline in the wake of weakening economic growth abroad, and slower growth of both domestic consumption and investment. Some Council members emphasised that looking ahead consumption growth would be less strongly supported by rising wage bill owing to weaker employment growth and a likely stabilisation in wage growth. Also the potential increase in electricity prices for households would probably have a downward effect on households' ability to increase their other expenditures. In turn, with regard to investment, those Council members noted that given the anticipated slowdown in activity growth abroad and in Poland, coupled with a high degree of EU fund utilisation, it was difficult to expect any further acceleration. Yet certain Council members argued that despite the expected slowdown, GDP growth was forecast to remain above 3% in the years to come. The majority of the Council members highlighted the continued uncertainty around the scale of the anticipated GDP slowdown globally, and as a consequence, also in Poland.

While analysing current developments in the labour market, it was pointed out that the unemployment rate remained low and the annual growth of employment in the enterprise sector was still relatively high, although the level of employment in this sector had declined for the second consecutive month. It was underlined that this was accompanied by higher wage growth than in the previous year, however, without any further acceleration. Some Council members judged that wage growth would probably continue at its current pace also in the coming quarters, as indicated by a decline in the share of firms experiencing increasing wage pressure. According to those Council members, wage growth may also be dampened by a rise in energy prices, which increases companies' operating costs. Certain Council members, in turn, indicated that the inflow of foreign workers was declining, and in 2019 some of them could even leave the Polish labour market in response to changes in the immigration policy of Germany. This, together with the likely step-up in wage demands in the public sector, might stimulate wage growth in the subsequent quarters. However, it was stressed that the impact of the new migration policy of Germany on migration flows remained uncertain.

Discussing inflation developments in Poland, it was observed that despite the relatively fast GDP growth and higher wage growth than last year, the annual consumer price growth remained moderate. According to the GUS flash estimate, in October inflation even declined. At the same time, it was emphasised that core inflation continued to be low.

While discussing the near-term outlook for inflation, it was noted that significant uncertainty existed at the moment about developments in the CPI index in 2019 related, in particular, to a potential rise in the energy prices for households, whose scale is currently unknown. Some Council members highlighted that in line with current forecasts, including the results of the November NBP projection, inflation in 2019 might exceed 2.5%. It was underlined that the rise in the forecast inflation for 2019 was to be mainly driven by the assumed significant increase in electricity prices for households, stemming from the relatively high global prices of energy commodities, as well as the rise in the prices of both carbon dioxide emission allowances and the so-called green certificates and other certificates of origin. Higher energy prices may also be a result of introducing the emission charge on fuels from 2019. Core inflation, in turn, is forecast to grow only gradually, and should remain below 2.5% in 2019. The majority of the Council members stressed that given the above, higher inflation in 2019 might stem predominately from potential exogenous supply shocks that may increase price growth, while simultaneously having an adverse effect on the situation of firms and households, and thus on the pace of economic growth.

With reference to the medium-term outlook for inflation, certain Council members observed that energy price growth might also act as a factor rising inflation in the coming years. Moreover, certain Council members judged that the increase in energy prices might translate into higher inflation expectations. In this context, other Council members pointed to the risk of inflation running above 2.5% over the next few years. However, most Council members emphasised that in line with the November NBP forecast – based on conservative assumptions on the scale of energy price increases – inflation should remain within a band for deviations from the NBP inflation target and, following a marked rise in 2019, would embark on a downward slope in 2020. In the opinion of these Council members, the likelihood of a persistent increase in inflation due to rising energy costs is contained by the intense competition among companies and the expected slowdown in GDP growth. Referring to inflation expectations, these Council members emphasised that no risk of their excessive growth could be seen in the longer term.

While discussing NBP monetary policy, the majority of the Council members decided that interest rates should remain unchanged. In the opinion of these Council members, current information and projection results indicated a relatively favourable outlook for economic conditions in Poland, although a gradual slowing in GDP growth was expected in the years ahead. In line with the projection, inflation in 2019 will probably exceed 2.5%, boosted, among others, by a rise in energy prices remaining beyond the impact of monetary policy, but will remain within a band for deviations from the target. In the medium term, however, the expected slowdown in economic growth will have a dampening effect on inflation. As a result, in the monetary policy transmission horizon inflation will remain close to the target. Hence, the majority of the Council members judged that the current level of interest rates was conducive to keeping the Polish economy on a sustainable growth path and maintaining macroeconomic stability.

The majority of the Council members expressed the opinion that, taking into account current information, interest rates were also likely to remain stable in the coming quarters. These Council members pointed out that this assessment was supported by the limited risk of inflation permanently exceeding the target, along with a likely weakening of economic conditions globally and in Poland. Moreover, certain Council members underlined that lending growth to the non-financial sector continued to be moderate and did not create excessive inflationary pressure, while measures to limit it could additionally weaken economic activity growth.

In the opinion of some Council members, should incoming data indicate a significant increase in inflation in 2019, and successive projections suggest inflation remaining above the target even after the fading of supply shocks, it might be justified to consider an increase in the NBP interest rates in the coming quarters. In the opinion of these Council members, an assessment of the rationale for raising interest rates should, in particular, include the scale and persistence of the transmission of higher energy prices on the growth of other prices and inflation expectations, as well as economic situation and labour market conditions in the quarters ahead.

An argument was raised that the upward revision of the inflation forecast for the coming year, increasing the risk of inflation running above 2.5% in the longer term, spoke in favour of a rise in interest rates at the current meeting.

A view was also expressed that in the hypothetical event of a slump in economic activity 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 or an introduction of unconventional monetary policy instruments.

Some Council members underlined that the next projection, which will have a longer time horizon and should take into account information on the actual energy price changes at the beginning of 2019, would be important for the assessment of the medium-term outlook for inflation and economic growth.

At the meeting a motion to raise the NBP interest rates by 0.25 percentage points was submitted. The motion was rejected. 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 5 December 2018

During the meeting, the Council noted that global economic conditions remain favourable, although incoming data suggest a weakening in some economies. It was pointed out that in 2018 Q3 GDP growth in the euro area had softened more than expected. The slowdown in activity was particularly pronounced in the German economy, which is Poland's main trading partner. It was emphasised that economic indicators and the available forecasts suggest a further gradual slowdown in Germany as well as the whole of the euro area, while uncertainty remained about the scale of the slowing. In the United States, GDP data for 2018 Q3 confirmed that economic conditions in this country were still very strong. It was highlighted that a possible further weakening of activity in the global economy could lead to a slowdown in GDP growth in this country.

While analysing the situation in the international financial markets, it was observed that heightened uncertainty about the global economic outlook persisted and continued to have an adverse effect on the prices of some assets. Fears about a global economic slowdown also lowered the prices of some commodities. Attention was drawn to the sharp falls in oil prices in the recent period, which, apart from the deterioration in the global economic outlook, was also a result of geopolitical factors and increased oil production in the United States.

When discussing inflation developments abroad, it was pointed out that in many countries inflation was still elevated due to the earlier increase in energy prices. Alongside that, core inflation in the external environment of the Polish economy, including the euro area, remained moderate.

Referring to monetary policy in the external environment of the Polish economy, it was noted that the ECB was keeping interest rates close to zero, including the deposit rate below zero. Concurrently, the ECB continued to purchase financial assets, although it has announced the end of the purchases by the end of the year. Some Council members judged that on account of the deterioration in the current economic conditions and the growth outlook in the euro area, interest rates there would be maintained at a very low level for an extended period of time. In the United States, the Federal Reserve kept interest rates unchanged in November, after another interest rate increase in September. Some Council members emphasised that in this economy too – due to the risk of a slowdown in growth as a result of a deterioration in the global economic conditions – the scale of further interest rate hikes could be smaller than earlier expected.

Discussing the developments in Poland's economy, it was underlined that preliminary GDP data for 2018 Q3 are indicative of economic conditions remaining strong. It was noted that activity growth continued to be driven by rising consumption, albeit at a slightly lower rate than in previous quarters, fuelled by increasing employment and wages, together with very strong consumer sentiment. It was underlined that in 2018 Q3 this was accompanied by a marked rise in investment resulting from both the relatively high growth in public investment – particularly on the part of local governments – and faster growth in gross fixed capital formation in large enterprises than in the first half of the year. At the same time, the marked slowdown in exports due to a deterioration in the economic conditions in the immediate environment of the Polish economy was a factor curbing the GDP growth rate. Owing to lower export growth and relatively stable growth in imports supported by strong domestic demand, the contribution of net exports to GDP growth was negative in 2018 Q3. It was noted that the adverse impact of the economic situation in the euro area on economic conditions in Poland was also confirmed by data on the financial results of Polish enterprises: in 2018 Q3 foreign sales of large companies declined. This was accompanied by an increase in sales costs of enterprises, resulting from rising wages and higher prices of some commodities than a year earlier. However, some Council members underlined that despite these negative conditions total sales of large enterprises was significantly higher than a year earlier, and their financial performance remained sound.

With regard to the outlook for economic growth, it was pointed out that according to available forecasts, the rate of economic growth would gradually decline. It was indicated that the main factor adversely affecting the GDP growth rate would be the expected slowdown in the immediate environment of the Polish economy. Some Council members highlighted that growth in economic activity could additionally be curbed by an increase in production costs of enterprises, in particular, a rise in energy costs. Other Council members underlined that in the case of some enterprises, the rise in energy costs would not impact their financial situation provided the compensation announced by the government was introduced. Some Council members expressed the opinion that GDP growth in 2019 could be higher than currently forecast.

While analysing current developments in the labour market, it was pointed out that unemployment remained low and the number of employed further increased. Yet some Council members judged that incoming data signalled a slowdown in growth in demand for labour. It was stressed that this was accompanied by faster wage growth than in the previous year, which however have recently been stable. Some Council members judged that wage growth would probably also continue at its current pace in the coming quarters. However, other Council members were of the opinion that wage rises for successive groups of public sector workers could be a risk factor for faster wage growth and potentially also for inflation. These Council members also judged that the likely decline in the inflow of employees from abroad would also boost wage rises the following year.

Discussing inflation developments in Poland, it was observed that despite the relatively fast GDP growth and higher wage growth than last year, the annual consumer price growth remained moderate, and core inflation low. It was emphasised that according to the GUS flash estimate, inflation in November decreased more sharply than forecast. It was pointed out that the stronger than expected fall in CPI inflation was the result of not only the slowdown in food price growth, but also, probably, a fall in core inflation.

Turning to the near-term outlook for inflation, it was noted that significant uncertainty existed about developments in the CPI index in 2019. This uncertainty was mainly related to energy price developments for households. At the same time, it was remarked that in 2019 inflation would probably be limited by lower oil prices than earlier forecast. Consequently, it was judged that the risk of a sharp rise in inflation in 2019 declined. Yet certain Council members expressed the opinion that the fall in global oil prices might not fully translate into a fall in domestic oil prices due to the structure of the fuel market in Poland. Some Council members also judged that inflation next year might be elevated by the rise in some administered prices, including those in public transport, as well as price rises of goods with a high share of electricity in their production costs.

With reference to the medium-term outlook for inflation, the majority of the Council members judged that in the monetary policy transmission horizon inflation would remain close to the target. These Council members noted that the expected slowdown in GDP growth in the coming years would have a curbing effect on price growth. Certain Council members emphasised that the factors lowering inflation in 2019 would probably not affect price growth in the longer projection horizon.

Analysing the situation in the credit market, it was pointed out that loan growth in the non-financial sector remained lower than nominal GDP growth. However, certain Council members drew attention to fast growth in household debt from consumer loans.

While discussing NBP monetary policy, the Council decided that interest rates should remain unchanged. In the Council's assessment, current information indicates a relatively favourable outlook for economic conditions in Poland, although a gradual slowing in GDP growth is expected in the years ahead. In 2019, inflation might be increased by rising energy prices, i.e. a factor beyond the control of monetary policy. The scale of the energy price growth in 2019 will probably be limited by the fall in oil prices seen in recent months. In the medium term, in turn, the expected slowdown in economic growth will have a dampening effect on price growth. As a result, in the monetary policy transmission horizon inflation will remain close to the target. Thus, the Council judged that the current level of interest rates was conducive to keeping the Polish economy on a sustainable growth path and maintaining macroeconomic stability.

The majority of the Council members expressed the opinion that, taking into account current information, interest rates were also likely to remain stable in the coming quarters. These Council members pointed out that this assessment was supported by the limited risk of inflation permanently exceeding the target, along with a likely weakening of economic conditions globally and in Poland.

Some Council members emphasised that currently significant uncertainty existed about developments in the CPI index in 2019. However, these Council members pointed out that should incoming data indicate a significant increase in inflation in 2019, and successive projections suggest inflation remaining above the target in the monetary policy transmission horizon, it might be justified to consider an increase in the NBP interest rates in the coming quarters.

A view was also expressed that in the hypothetical event of a slump in economic activity 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 or the introduction of unconventional monetary policy instruments.

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 9 January 2019

During the meeting, the Council noted that global economic conditions have remained favourable so far, although incoming data suggest their weakening in some economies, and higher uncertainty about the scale of the expected global slowdown. It was pointed out that in the euro area, following a decline in GDP growth in 2018 Q3, some survey indicators continued to deteriorate. In particular, a marked weakening was visible in the activity and survey indicators for Germany, which is Poland's main trading partner. It was emphasised that in the United States, economic conditions were still very strong in 2018 Q4, yet 2019 forecasts point to slower growth also in this economy. It was observed that in China activity growth has been gradually slowing down as well.

It was pointed out that heightened uncertainty about the scale of weakening of the global outlook continued to have an adverse effect on some asset prices. In the last months of 2018, fears about the global economic slowdown contributed also to a decline in the prices of commodities, including oil. At the same time, it was observed that lower oil production in OPEC member states boosted oil prices somewhat at the beginning of 2019.

When analysing inflation developments abroad, it was pointed out that the marked decline in oil prices between the beginning of October and the end of December translated into lower inflation in many countries. Alongside that, core inflation in the external environment of the Polish economy, including the euro area, remained moderate.

Referring to monetary policy in the external environment of the Polish economy, it was noted that the ECB was keeping interest rates close to zero, including the deposit rate below zero. Although in 2018 the ECB terminated the net purchase of financial assets, it will continue to reinvest the funds from the maturing securities. At that point, some Council members presented the opinion that given the deteriorating economic conditions in the euro area and a downward revision of the core inflation path anticipated for the euro area, the period in which the ECB will continue to keep its policy rates very low will probably be extended. Other Council members additionally assessed that the termination of the net asset purchase programme by the ECB is an uncertainty factor for this economy. In turn, the Federal Reserve of the United States raised interest rates in December 2018. Some Council members reaffirmed their opinion that in this economy too, due to the risk of a sharper than previously expected slowdown, interest rates might not be raised further, as indicated by the softer rhetoric of the Federal Reserve representatives in this regard.

Discussing the developments in Poland's real economy, it was underlined that incoming data are indicative of economic conditions remaining strong so far. It was noted that activity growth continued to be driven by rising consumption, albeit at a slightly slower pace than in previous quarters, fuelled by increasing employment and wages, together with very strong consumer sentiment. It was pointed out that this was accompanied by rising investment.

With regard to the outlook for domestic economic activity, it was emphasised that despite the anticipated deceleration in GDP growth, it remained relatively favourable, and the expected slowdown abroad would be the key factor adversely affecting GDP growth. At the same time, some Council members drew attention to a decline in the PMI index related to lower indicators of output and new orders, including export orders. Those Council members judged this to be a sign of higher uncertainty about future GDP growth in Poland. Some Council members pointed out that the smaller inflow of foreign employees, related, among others, to changes in Germany's immigration policy, could in the longer term have a hampering effect on Poland's output growth. Certain Council members reiterated their opinion that GDP growth in 2019 might be higher than currently forecast.

While analysing developments in the labour market, it was pointed out that the unemployment rate remained low, which at the end of 2018 was accompanied by accelerated wage growth both in the whole economy and the corporate sector. It was noted that this probably resulted from a pick-up in wage growth in the public sector, but also from the shifts in payments of bonuses in the mining sector. Certain Council members stressed that most firms covered by NBP surveys report wage growth exceeding labour productivity growth. These Council members also remarked that pay rises for the successive groups of employees in the public sector may pose a risk of faster wage growth and thus higher inflation. At the same time, some Council members assessed that higher wage growth, amid the potential weakening of external demand, may have a stabilising effect on economic conditions and support inflation at levels close to the target.

Discussing inflation developments in Poland, it was underlined that despite the relatively fast GDP growth and higher wage growth than in the previous year, the annual consumer price growth, including core inflation, was markedly lower than forecast. It was noted that in December, inflation was running below the lower limit for deviations from the inflation target. Similarly, producer price growth proved lower than forecast.

Turning to the near-term outlook for inflation, it was highlighted that this changed significantly due to the adoption at the end of 2018 of a law reducing the excise duty and transitional fee related to energy, as well as introducing compensation payments for electricity providers designed to keep electricity prices charged to end-consumers in 2019 at the level of mid-2018. It was pointed out that as a result, the rise in wholesale energy prices observed in 2018 should not feed through, either directly or indirectly, to the 2019 inflation. It was remarked that in 2019 inflation would be additionally limited by lower oil prices than earlier forecast. Yet certain Council members pointed out that the fall in global oil prices may not fully translate into a fall in domestic fuel prices due to the structure of the fuel market in Poland. Certain Council members also indicated higher than in previous quarters coal prices as a factor which might boost households' maintenance costs in 2019. However, taking into account all new information received since the previous meeting of the Council, it was assessed that inflation in 2019 might be markedly lower than could earlier be expected.

With reference to the anticipated path of price developments in the medium term, the majority of the Council members were in agreement that within the monetary policy transmission horizon inflation would remain close to the target. These Council members noted that the expected slowdown in GDP growth in the coming years, coupled with high competition in retail trade, would have a curbing effect on price growth. Other Council members pointed to the expected increase in core inflation, including service price growth, in the quarters to come, and to the risk of a substantial rise in energy prices in the future. Moreover, certain Council members indicated the recent rise in firms' and households' inflation expectations, which – should it prove lasting – may be a factor boosting inflation in the following years. Other Council members judged that inflation expectations at the end of 2018 were probably heavily influenced by debates about levels of energy prices, and so their rise could prove temporary.

Summing up the conclusions following from the analysis of the macroeconomic developments in 2018, the Council members highlighted that economic growth in Poland remained high, and inflation declined slightly compared to 2017. It was pointed out that lending to the private sector had been rising at a moderate pace, external trade had continued to post a surplus and the public sector debt to GDP ratio had probably diminished. Some Council members underlined that the declining ratio of public debt to GDP was supported not only by fiscal policies, but also by good economic conditions and a stable interest rates. Long-term inflation expectations remained anchored at the inflation target, while the annual average exchange rate of the zloty against the euro did not change in relation to 2017, despite periodic turmoil in the global financial markets. In the opinion of the Council, the data for 2018 confirm very good economic conditions in the Polish economy, accompanied by price stability and the absence of macroeconomic imbalances.

When discussing NBP monetary policy, the Council decided that interest rates should remain unchanged. In the Council's assessment, current information indicates a relatively favourable outlook for economic conditions in Poland, although a gradual slowing in GDP growth is expected in the years ahead. At the same time, it was pointed out that according to current forecasts, the annual price growth will probably increase in the coming months, however – due to the decline in oil prices and the freeze on electricity prices – the scale of this increase will be significantly smaller than that expected in the November projection. In the medium term, the expected slowdown in economic growth will have a dampening effect on inflation. As a result, in the monetary policy transmission horizon inflation will remain close to the target. Thus, the Council judged that the current level of interest rates was conducive to keeping the Polish economy on a sustainable growth path and maintaining macroeconomic stability.

The majority of the Council members expressed the opinion that, taking into account current information, interest rates were also likely to remain stable in the coming quarters. These Council members pointed out that this assessment was supported by the limited risk of inflation permanently exceeding the target, along with a likely weakening of economic conditions globally and in Poland.

Certain Council members emphasised that currently significant uncertainty existed about developments in the CPI index in the medium term. These Council members pointed out that should incoming data indicate a significant and lasting increase in inflation expectations and wage demands translating into price pressure, which would make successive projections suggest that inflation will remain above the target in the monetary policy transmission horizon, it might be justified to consider an increase in the NBP interest rates in the coming quarters. However, these Council members pointed out that the likelihood of such a scenario had declined in recent months.

A view was also expressed that in the hypothetical event of a slump in economic activity 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 or the introduction of unconventional monetary policy instruments.

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 February 2019

During the meeting, the Council noted that incoming data pointed to weaker economic conditions in some of the largest economies. At the same time, uncertainty had increased about the outlook for global activity in the coming quarters. It was noted that GDP growth in the euro area in 2019 Q4 remained low, and economic prospects for the region had slightly deteriorated. The recent weakening was particularly marked in the Germany, Poland's most important trading partner. Attention was also drawn to the continued gradual decline in activity growth in China. With regard to the United States, it was indicated that despite slower GDP growth in 2018 Q4, economic conditions in that economy remained strong.

It was pointed out that, following a sharp decline in the final quarter of 2018, oil prices had rebounded slightly since the beginning of the year. The rise in oil prices was supported by restrictions on oil production in OPEC countries, along with the continued sanctions on oil imports from Iran and Venezuela. Meanwhile, the scale of the rise in oil prices was limited by both lower current demand and the deteriorating outlook for demand for oil related to weaker global economic conditions and tensions between the United States and China.

When analysing inflation developments abroad, it was indicated that the decline in oil prices on their 2018 Q3 levels was having a downward effect on inflation in many countries. At the same time, core inflation in the environment of the Polish economy, including the euro area, was currently low.

Referring to monetary policy in the external environment of the Polish economy, it was noted that the ECB was keeping interest rates close to zero, including the deposit rate below zero for

4.5 years. At the same time, the ECB was reinvesting funds from the maturing securities. It was pointed out that amid weaker economic conditions in the euro area and higher uncertainty about their prospects, the ECB had softened its rhetoric at its last meeting, making further decisions contingent on incoming data. Some Council members judged that the likelihood of interest rate increases in the euro area had diminished substantially. It was indicated that after raising interest rates in December 2018, the Federal Reserve of the United States was keeping them unchanged and, at the last meeting, had eased its stance regarding monetary policy prospects as well. Some Council members expressed the opinion that this economy also might not see further interest rate increases, and it was even possible that the process of balance sheet reduction by the Federal Reserve could be halted.

Discussing the developments in Poland's real economy, it was underlined that preliminary data on 2018 GDP confirmed very good performance of the Polish economy last year. The consistently high private consumption growth was highlighted, resulting in substantial increase in the level of consumption over the past two years. It was pointed out that robust economic growth last year did not entail the build-up of macroeconomic imbalances. It was noted that 2018 had seen a continuous surplus in foreign trade, with growth in lending to the non-financial sector, though higher than in 2017, remaining moderate, and annual inflation standing at 1.6%.

With regard to economic growth in 2018 Q4, it was pointed out that preliminary annual national accounts data suggested further relatively high GDP growth in that period, although slightly weaker than in the previous quarters. It was noted that activity growth in 2018 Q4 had continued to be driven by consumption, which had been rising further – albeit at a slightly slower pace than in previous quarters – fuelled by increasing employment and wages as well as very strong consumer sentiment. It was emphasised that in 2018 Q4 investment growth had also continued, although it was being hampered by the likely decline in investment outlays by local government units. It was underlined that national accounts data pointed to a positive contribution of net exports to GDP growth in 2018 Q4, despite weaker economic conditions abroad.

While discussing the outlook for economic growth, it was stressed that the recently received data pointed to a probable slowdown in 2019 Q1. The Council reiterated its assessment that – despite some weakening of the outlook for growth in the immediate environment of the Polish economy – GDP growth in Poland in the coming quarters would probably decrease only gradually, and domestic economic conditions would remain relatively favourable, although uncertainty about future GDP growth had increased in the recent period.

When analysing labour market performance, attention was drawn to a gradual decline in employment growth. In the assessment of some Council members, this could have reflected not only supply constraints, but also weaker growth in demand for labour. It was pointed out that in December wage growth in the enterprise sector had slowed, which – in the opinion of some Council members – might suggest that temporary factors had driven its prior rise. These Council members also assessed that despite the mounting wage pressure declared by enterprises, wage growth in the corporate sector should remain stable in the coming quarters, owing to firms' probably lower propensity to raise wages amid weaker external demand. The opinion was expressed that despite that, higher wage growth in the entire economy could not be ruled out, particularly if wage growth in the public sector picked up. Some Council members emphasised at that point that a potential increase in wage growth across the economy, given the expected slowdown in GDP growth, might have a stabilising effect on economic conditions.

Discussing the long-term determinants of the developments in the Polish labour market, some Council members highlighted the persistently stronger growth of labour productivity than that of real median and mode wage in the past. Certain Council members judged that such a discrepancy had resulted from the increasing participation of Polish firms in global value chains and technological progress. Other Council members observed that labour productivity growth was currently slower than real wage growth, and the occurrence of the reverse relationship in the past did not have to affect firms' current pricing policies.

Turning to inflation developments in Poland, it was pointed out that – notwithstanding relatively high economic growth and wages rising faster than in previous years – annual consumer price growth had declined in recent months and remained moderate. It was noted that lower global oil prices than in 2018 Q3 were dragging on price growth, although, as certain Council members believed, their impact on fuel prices was constrained by the structure of the fuel market in Poland. It was also indicated that inflation net of food and energy prices remained low. Certain Council members were of the opinion that the persistently low core inflation in the environment of higher wage growth than in previous years resulted from the likely slower growth of the median wage, which might have a significant impact on inflation developments.

While discussing the near-term outlook for inflation, it was underlined that according to current forecasts, annual price growth would pick up in the coming months, yet the scale of this increase would be small and markedly lower than expected in the November projection. It was noted that in line with these forecasts, average inflation this year would be lower than 2.5%. Certain Council members remarked that in the coming months, rising food prices would probably have a boosting effect on inflation, with the scale of the increase remaining an uncertainty factor for price developments. Some Council members were of the opinion that price growth might be weaker than currently forecast due to – as they expected – the absence of a marked pick-up in core inflation amid weakening economic growth. Certain Council members, however, expressed the view that rising production costs might contribute to higher inflation as the relatively low, in their opinion, profitability in some branches could incline firms to raise prices. Other Council members, in turn, pointed out that profitability in the corporate sector remained close to that observed in previous years, and the propensity of firms to raise prices would be mitigated by strong competition.

With reference to the anticipated path of price developments in the medium term, it was indicated that in the monetary policy transmission horizon inflation would remain close to the target. It was pointed out that the expected slowdown in GDP growth in the coming years would have a dampening effect on inflation. It was also indicated that after a temporary rise in December, household inflation expectations had declined again. Some Council members assessed that the increase in inflation expectations of enterprises at the end of 2018 might also be temporary. Yet other Council members expressed the opinion that possible persistence of inflation expectations of enterprises at a heightened level could be a factor contributing to higher inflation in the years to come. They also pointed to the risk of energy price growth in the future. Certain Council members assessed that in the coming years the impact of factors that had so far curbed price growth, such as the increase in the number of discount stores and change in the structure of consumption, might weaken.

The Council decided that interest rates should remain unchanged. In the Council's assessment, current information indicates a relatively favourable outlook for economic conditions in Poland, although a gradual slowing in GDP growth is expected in the years ahead. At the same time, it was pointed out that according to current forecasts, the annual price growth would increase in the coming months, however – due to the lower oil prices than in 2018 Q3 and the freeze on electricity prices – the scale of this increase would be significantly smaller than that expected in the November projection. In the medium term, the expected slowdown in economic growth will have a dampening effect on inflation. As a result, in the monetary policy transmission horizon inflation will remain close to the target. Thus, the Council judged that the current level of interest rates was conducive to keeping the Polish economy on a sustainable growth path and maintaining macroeconomic stability.

The majority of the Council members expressed the opinion that, taking into account current information, interest rates were also likely to remain stable in the coming quarters. These Council members pointed out that this assessment was supported, in particular, by a marked decline in the risk of inflation permanently exceeding the target, along with a rise in uncertainty about the scale and duration of the slowdown in the global economy, as well as its feed-through to domestic economic conditions.

Certain Council members emphasised that significant uncertainty remained about developments in the CPI index in the medium term. These Council members pointed out that should incoming data indicate a significant and lasting increase in inflation expectations and wage demands which would boost inflation to a level that would jeopardise meeting the inflation target, it might be justified to consider an increase in the NBP interest rates in the coming quarters. These Council members pointed out that the likelihood of such a scenario had declined significantly in recent months.

A view was also expressed that in the hypothetical event of a slump in economic activity 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 or the introduction of unconventional monetary policy instruments.

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 5-6 March 2019

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

Incoming data suggest a weakening in some of the largest economies, amid heightened uncertainty about the outlook for global economic activity in the coming quarters. In the euro area, GDP growth in 2018 Q4 was lower than in the first half of 2018, while available forecasts suggest a further weakening in 2019. In the United States, economic conditions remain good, although a slight slowdown in GDP growth is expected there. In China activity growth continues to gradually decline.

Despite an increase in global oil prices at the beginning of 2019, their level is still lower than in 2018 Q3. This is leading to a decline in inflation in many countries. Alongside that, core inflation in the environment of the Polish economy, including the euro area, remains low.

The European Central Bank keeps interest rates close to zero, including the deposit rate below zero. At the same time, the ECB continues to reinvest the funds from the maturing securities. The US Federal Reserve is keeping interest rates unchanged.

In Poland, GDP growth in 2018 Q4 remained relatively high. GDP growth is driven by rising consumption – albeit at a slightly lower rate than in previous quarters – that is fuelled by increasing employment and wages as well as very high consumer sentiment. This was accompanied by a rise in investment.

Notwithstanding relatively high economic growth and wages rising faster than in the previous years, annual consumer price growth has declined in recent months and is running at a low level. Inflation net of food and energy prices continues to be low, despite possible increase in January.

The Council became acquainted with the results of the March projection of inflation and GDP, prepared under the assumption of unchanged NBP interest rates. The March projection takes into account data and information published up to 15 February 2019 – including information on statutory freeze on electricity prices – as well as preliminary information on changes in fiscal policy announced on 23 February 2019. In line with the March projection based on the NECMOD model, there is a 50-percent probability that the annual price growth will be in the range of 1.2-2.2% in 2019 (against 2.6-3.9% in the November 2018 projection), 1.7-3.6% in 2020 (compared to 1.9-3.9%) and 1.3-3.5% in 2021. At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of 3.3-4.7% in 2019 (against 2.7-4.4% in the November 2018 projection), 2.7-4.6% in 2020 (compared to 2.3-4.2%) and 2.4-4.3% in 2021.

In the Council's assessment, the outlook for economic conditions in Poland remains favourable. However, in the quarters to come, there will probably be a gradual slowdown in GDP growth. At the same time, inflation will remain at a moderate level and, in the monetary policy transmission horizon, will stay close to the target. Such an assessment is supported by the results of the March projection of inflation and GDP.

The Council judges that the current level of interest rates is conducive to keeping the Polish economy on a sustainable growth path and maintaining macroeconomic stability.

The Council adopted the *Inflation Report – March 2019*.

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, 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 March projection based on the NECMOD model covers the period from 2019 Q1 to 2021 Q4. The starting point for the projection is 2018 Q4.

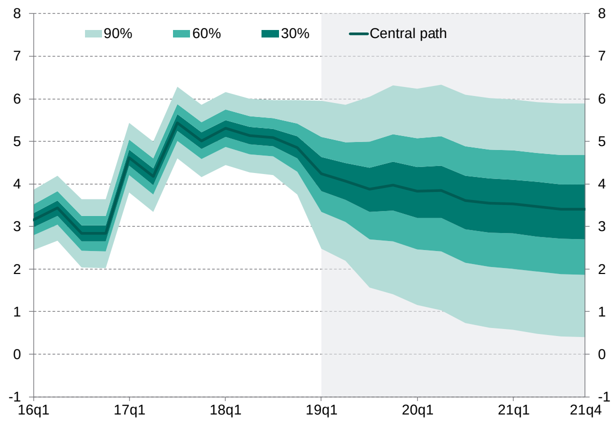
The cut-off date for the data used in this projection is 15 February 2019. The projection takes into account the effects of the fiscal package planned by the government, announced on 23 February 2019, given its impact on both GDP and inflation and high probability of its materialisation.

4.1 Summary

The Polish economy continued to develop at a fast pace in 2018 Q4, accompanied by robust growth in private and public consumption and relatively high growth of gross fixed capital formation. However, in this period there was already a slight weakening of economic activity in Poland, which was due to the marked slowdown in GDP growth in the euro area, which particularly affected the German economy. At the same time, growing demand for labour resulted in a further rise in employment and wages, while inflationary pressure continued to remain low.

In the years 2019-2021 domestic GDP growth will gradually decline, while the scale of the slowdown will be mitigated by the fiscal stimulus announced by the government. Private consumption will continue to be a key driver of growth, due to the favourable labour market conditions, from the standpoint of employees, resulting in the continued high wage growth. Household disposable income will be boosted by additional social benefits, including the extension of the 500+ programme, the one-off thirteenth-month pension payment and a reduction in tax burdens. The low level of interest rates and the resulting low cost of credit will have a favourable impact on domestic demand. The deterioration in business conditions in Poland's main trading partners, in particular in the euro area, will, however, weaken domestic economic growth. At the same time, after last year's rapid increase the growth rate of the absorption of EU funds, which financed gross fixed capital formation, will slow down in the coming years covering the final phase of the EU financial framework 2014-2020. These determinants will have a negative effect on investment growth, which according to the baseline scenario will not reach the peak of previous business cycles in the current cycle.

Figure 4.1 GDP (y/y, %)



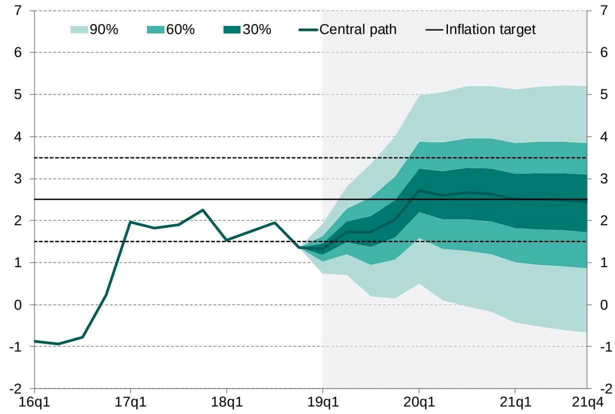
Source: GUS data, NBP calculations.

Fan charts depict the probability distribution of possible outcomes of GDP growth (Figure 4.1) and inflation rate (Figure 4.2). The part of the chart in the grey background illustrates forecast uncertainty of these variables over the projection horizon; additionally, for GDP growth there exists the uncertainty of past values due to possible data revisions by GUS. It was assumed that the probability distribution of the possible outcomes of a variable at each forecast horizon belongs to the family of two-piece normal (TPN) distributions. This distribution is determined by three parameters: mode, variance and a measure of skewness. The mode of the distribution is the central path of the projection, while the variance is determined based on historical forecast errors for each of the horizons adjusted for the impact of the current uncertainty of exogenous variables. The skewness of the distribution is obtained on the basis of an analysis of several alternative scenarios together with the assigned probabilities of their realisation. On the chart, the distribution of the realisation of a given variable is illustrated by 30%, 60% and 90% probability intervals around the central projection path, which were constructed in such a way as to minimize the width of the bands (for more information see: Pońsko P., Rybaczyk B., 2016, Fan Chart – A Tool for NBP's Monetary Policy Making, Narodowy Bank Polski Working Paper, No 241.).

Under the assumption of unchanged NBP interest rates, consumer price inflation will rise in 2020 to 2.7% and then will decrease to around 2.5% towards the end of the projection horizon. Higher CPI inflation, in particular core inflation, will be the result of growing labour costs and the continued relatively strong demand pressure in the Polish economy, although in recent years the relationship between the level of domestic economic activity and price growth has weakened. The scale of the pick-up in inflation will be moderate due to low price growth abroad. The significant number of immigrants, especially Ukrainian citizens, on the domestic labour market, will have a dampening effect on inflation. Their presence increases the productive potential of the Polish economy and lowers labour costs. In 2019, CPI inflation will be additionally curbed by the lower growth in energy prices. In the longer projection horizon the expected slowdown in domestic economic activity will dampen growth, and then lead to a decline in CPI inflation.

However, whether the projection scenario will materialise or not largely depends on future activity in the global economy. The risk factors for economic growth and inflation include the possible escalation of trade disputes and protectionist measures restricting world trade. Developments in global oil and other energy commodities prices and their pass-through to energy prices in Poland will also be an important risk factor. Significant domestic source of risk will also be the size of the net inflow of immigrants onto the domestic labour market, in particular from Ukraine. The balance of risks for GDP growth as well as to a lesser extent for CPI inflation suggests they are more likely to run below the central scenario, which is reflected in the fan charts for these variables (Figure 4.1, Figure 4.2).

Figure 4.2 CPI inflation (y/y, %)



Source: GUS data, NBP calculations

The methodology of construction of fan charts is discussed in the note under Figure 4.1

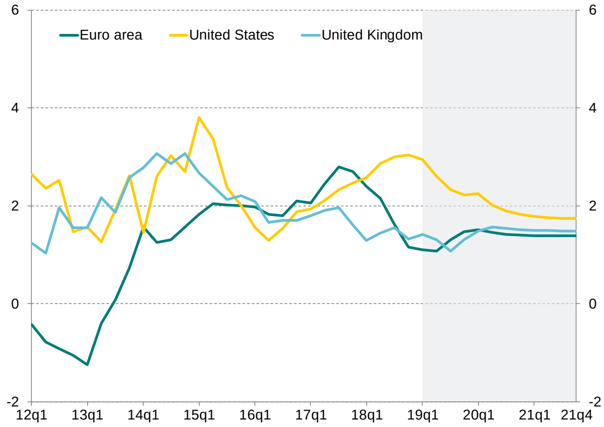
4.2 External environment

Economic activity

In the second half of 2018 there was a marked weakening of economic activity in the euro area related to the slowdown in world trade, growth in energy prices, as well as the deterioration in corporate sentiment, and also to a slightly lesser extent, consumer sentiment. One-off factors, including problems faced by the German automotive sector, additionally added to the slowdown in economic growth. As a result, the GDP growth rate in the euro area ran at a lower level in 2018 than assumed in the November projection (Table 4.1). In the second half of 2019, after the impact of one-off factors has subsided, real GDP growth in this economy will pick up slightly, and in the longer projection horizon it will stabilise at a level close to 1.4% y/y, i.e. significantly lower than in the years 2015-2017 (Figure 4.3). Therefore, it was assumed that in the whole of the projection horizon the economy of the euro area will grow at a slower rate than assumed in the November projection, while economic activity in 2019 will be significantly weaker than in the previous forecasting round. Growth in domestic demand in the euro area in the coming quarters will be supported by the relatively favourable situation on the labour market – from the standpoint of households, the growth in wages and the expansionary fiscal policy of certain euro area countries. On the other hand, uncertainty about global economic policy, the deteriorating economic situation in the emerging economies and unresolved structural problems in certain member states will curb GDP growth in the euro area in the projection horizon. Unfavourable demographic changes and low productivity growth will also restrain economic growth.

Economic activity in the United States will develop more favourably than in the euro area in the years 2019-2021. Growth will be driven by private consumption, supported by rising employment

Figure 4.3 GDP abroad (y/y, %)



Source: Bloomberg, Eurostat data, NBP calculations.

Table 4.1 GDP abroad - March projection versus November projection

	2018	2019	2020
GDP in Euro Area (y/y, %)			
March 2019	1.8	1.2	1.5
November 2018	2.1	1.8	1.6
GDP in United States (y/y, %)			
March 2019	2.9	2.5	2.0
November 2018	2.9	2.6	2.0
GDP in United Kingdom (y/y, %)			
March 2019	1.4	1.3	1.5
November 2018	1.3	1.6	1.5

Source: NBP calculations.

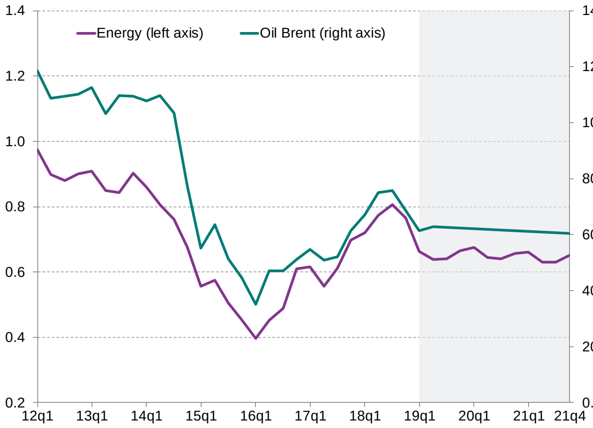
and wages and the high net value of household assets. However, from 2019 the favourable economic impact of the tax reforms introduced by the US administration will gradually fade. Along with the delayed effects of the current tightening of monetary policy of the Federal Reserve, this will result in a gradual decline in the GDP growth rate in the projection horizon. The path of GDP growth in the United States assumed in the March projection is therefore close to the assumptions of the previous forecasting round. However, the baseline scenario is subject to higher uncertainty than in the November projection, above all, due to a possible further escalation of trade disputes and the growing sensitivity of financial markets to disruptions in the real economy and the financial sector.

In the coming years, economic activity in the United Kingdom will continue to develop at a relatively low level as a result of the uncertainty about the conditions of the UK leaving the European Union. In the March projection, like in the November forecasting round, it was assumed that in the projection horizon economic relations between the UE and the United Kingdom will remain largely unchanged. Such a scenario would be consistent either with reaching an agreement on Brexit and the implementation of temporary solutions by the end of 2020, or with the extension of negotiations between the British government and the EU. Should the United Kingdom and the EU fail to reach an agreement on the Brexit conditons (a no-deal Brexit), this could result in lower growth in the projection horizon, both in the United Kingdom and – to a lesser extent – in the euro area, which would be a significant factor risk for the projection.

Inflation and interest rates

Due to the sharp fall in the price of oil, coal and natural gas, the energy commodities price index in 2018 Q4 ran at a significantly lower level than in the previous forecasting round (Figure 4.4). In 2019 Q1 commodity prices rose slightly, remaining,

Figure 4.4 Energy commodities price index (in USD, 2011=1) in global markets and Brent oil prices (USD/b)



Source: Bloomberg data, NBP calculations.

The index of the prices of energy commodities includes the prices of crude oil, coal and natural gas, taking account of the consumption structure of these commodities in Poland.

however, significantly below expectations from the previous forecasting round. In the current projection the prices of these commodities are expected to stabilise, hence over the whole projection horizon they will run below the level of the November projection.

In 2018 Q4, there was a significant fall in the prices of this commodity, driven by the signs of excessive oil supply. Altered expectations concerning the oil market equilibrium were the result of rising oil production and at the same time, falling demand for fuel, due to high prices and slower global economic growth. Despite the continuing logistical problems with the transport of the commodity, in the second half of 2018 there was an increase in the production of unconventional oil in the United States. In 2018 the US economy achieved the highest oil production level in its history, becoming, at the same time, the largest oil producer in the world. In the second half of 2018 oil production in the OPEC+ countries also increased, due to expectations of a fall in oil production in Iran as a result of the United States' withdrawal from the nuclear agreement with this country. Consequently, despite the sanctions imposed on the Iranian economy and the further systematic decline of oil production in politically unstable Venezuela, global oil supplies rose.

In the March projection it was assumed that, in line with the prices of futures, oil prices will remain relatively stable until the end of 2021, running at a level close to that recorded in the cut-off date of the projection (Figure 4.4). Throughout the projection horizon oil prices will therefore be lower than assumed in the November projection. The path of natural gas prices will develop in a similar way, largely due to the strong interdependence of the prices of both commodities.

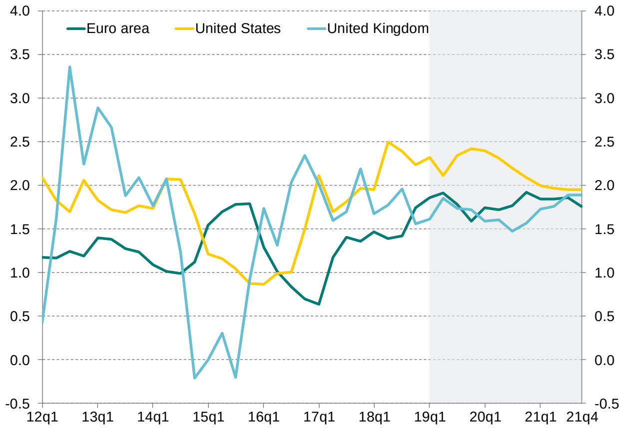
The fall in coal prices was driven by lower oil prices, as well as by the deteriorating economic outlook in emerging economies, in particular by the revision of expectations for GDP growth in China, which is the largest importer of this commodity. Over the projection horizon the price of coal will continue its downward trend as a result of the expected global slowdown and the climate policy of the developed countries, focusing on a reduction in the use of coal as a source of energy.

In the first three quarters of 2018 there was a significant increase in the agricultural commodities price index, caused by drought in the countries of Europe, in Russia and Australia, as well as by higher production costs. In 2018 Q4 the level of this index declined slightly, mainly under the impact of the fall in pork prices, driven by the restrictions imposed by certain Asian economies on pork imports from European countries affected by the ASF epidemic. In the current forecasting round it was assumed that in the projection horizon agricultural commodity prices will stabilise along with supply gradually matching demand in this market.

The March projection assumes that in the economic environment of Poland, particularly in the euro area, inflation (measured by the change in the value added deflator, see Figure 4.5) will remain at a moderate level. The projected weakening in economic activity, accompanied by lower energy commodity prices will keep inflation in the euro area below 2%. The inflation in the United States will run at a slightly higher level than in the euro area, as a result of the more favourable cyclical position of the US economy.

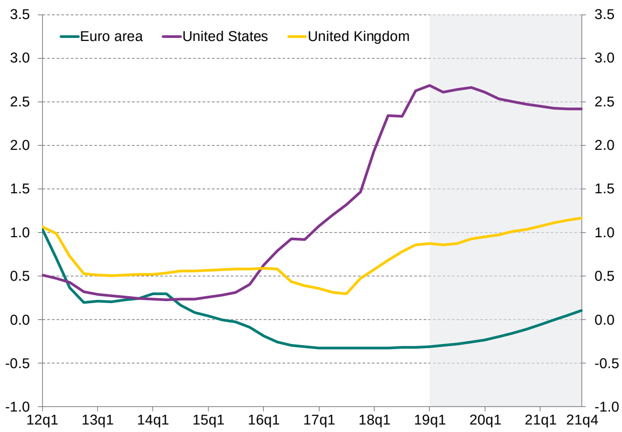
In the current forecasting round it was assumed, in line with the expectations implied by futures contracts, that the process of monetary policy tightening by the major central banks will be more moderate than assumed in the November projection (Figure 4.6). In view of the forecasts of only moderate inflation and lower economic activity in the euro area, it is expected that the ECB will begin raising the deposit rate no earlier than in 2020 Q2. As a result, short-term rates on the interbank market will remain negative throughout 2019 and 2020 (Figure 4.6). At the same time, heightened volatility in financial markets in recent

Figure 4.5 Inflation abroad (y/y, %)



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

Figure 4.6 Interest rates abroad (%)



Source: Bloomberg data, NBP calculations.

months, along with the deteriorating outlook for global economic growth and the continued limited inflationary pressure in the US economy, speak in favour of the assumed stabilisation[55] of Fed's interest rates in the years 2019-2021, after the earlier series of interest rate hikes.

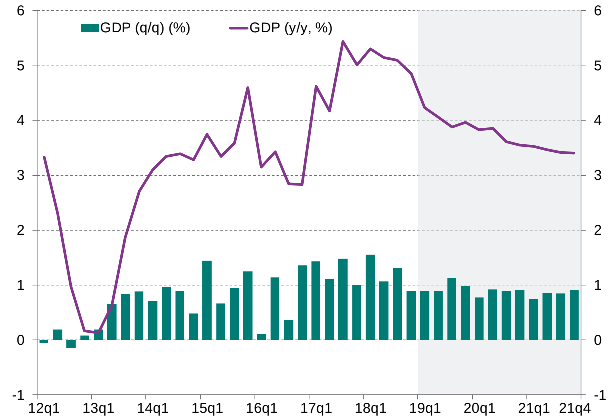
4.3 Polish economy in 2019-2021

Domestic demand

In 2018 the Polish economy remained in the expansion phase, and the growth rate accelerated to 5.1%. In the projection horizon GDP growth will decline in the wake of the weakening economic growth in the euro area and the slowdown in the growth rate of absorption of funds from the EU budget after their high level of utilisation in 2018 (Figure 4.7, Figure 4.8, Figure 4.11). At the same time, the scale of the economic slowdown will be mitigated by the introduction of a legislative package planned by the government, which through boosting disposable income will have the impact on private consumption in particular.

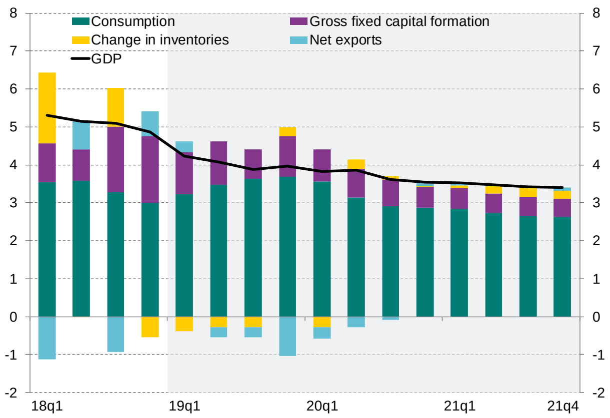
In the years 2019-2021, household consumption will continue to be the main driver of economic growth (Figure 4.8, Figure 4.9). The high consumption will be supported by the favourable development of the labour market situation, from the standpoint of employees, resulting in the continued high wage fund growth. The spread over time effect of the legislation package planned to be enacted in 2019, including, among others, payment of family benefits under the "Family 500 plus" programme for the first child with the removal of the income criterion, as well as the one-off thirteenth-month pension payment, will also boost private consumption. In February 2019, the government also announced the exemption of people aged under 26 from personal income tax and an increase in the tax-deductive costs.

Figure 4.7 Economic growth



Source: GUS data, NBP calculations.

Figure 4.8 GDP growth (y/y,%) – breakdown



Source: GUS data, NBP calculations.

[55] It was assumed that there will be a slight decline in short-term rates on the interbank market in the United States in 2020 (Figure 4.4), due to the higher likelihood of a decrease in interest rates rather than their increase in the successive years of the projection, which is implied in the prices of financial instruments.

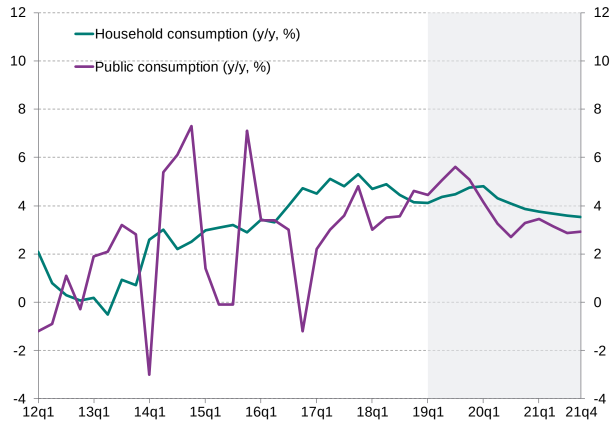
However, in the years 2020-2021, both wage and the number of employees growth will slowly decline, reducing the scale of disposable income growth. At the same time, the expected higher inflation than in 2019 will begin to have a stronger limiting effect on household purchasing power, which along with the fading impact on consumption in 2021 of the legislative changes announced in February 2019, will result in a gradual slowdown in consumption growth in the longer projection horizon.

In the years 2019-2021, there will also be a slowdown in gross fixed capital formation growth, due to a reduction in growth of general government investment, accompanied by a growing share of private investment (Figure 4.10).

The growth rate of gross fixed capital formation in the general government sector in 2019 will decline in relation to the high level in 2018, and in the years 2020-2021 it will be negative, reducing investment growth in the total economy. Such a development of public sector investment will be the result of the absorption of EU funds assumed in the projection (Figure 4.11), whose use in 2019 will already rise only slightly, and in the following years will begin to decline.

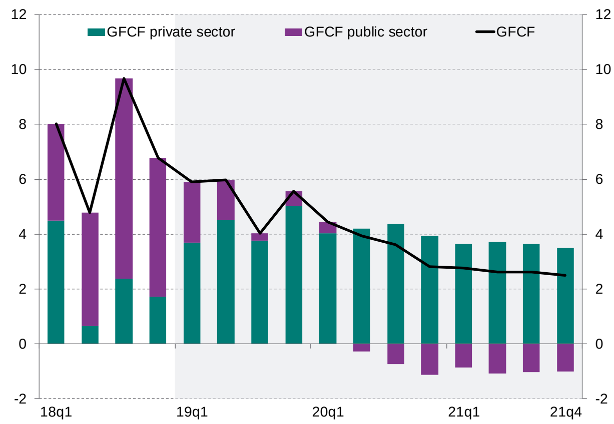
In 2019 the growth rate of gross fixed capital formation of the private sector will pick up; however, it will not reach the peak of the previous business cycles and in the years 2020-2021 it will decline slightly (Figure 4.10). In the coming quarters the recovery of corporate investment will be supported by the still favourable demand conditions[56], despite a certain weakening of the economic situation, amid very high capacity utilisation in the corporate sector.[57] However, in the longer projection horizon the positive impact of this determinant on investment will gradually

Figure 4.9 Household and public consumption



Source: GUS data, NBP calculations.

Figure 4.10 Gross fixed capital formation (y/y, %) – breakdown



Source: GUS data, NBP calculations.

Private sector investment is defined as gross fixed capital formation according to the national accounts except for the general government sector. It covers gross fixed capital formation of non-financial enterprises, financial and insurance companies, households (both housing and non-housing investment) and non-profit institutions serving households.

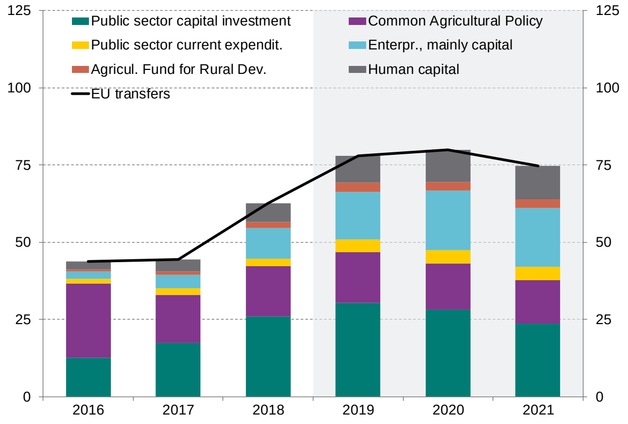
[56] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019. The percentage of firms reporting inadequate demand as a barrier to the development of their activity is the lowest in the history of the survey.

[57] The high level of capacity utilization in the corporate sector has also been corroborated by NBP surveys (*NBP Quick Monitoring Survey)*, as well as GUS surveys, while the data for 2018 Q4 in NBP's surveys are the highest in the history of the survey.

fade, along with the expected delayed transmission of the sharp decline in external demand in 2019 to the domestic economy. On the other hand, in the years 2019-2021, the stable housing investment growth, although lower than in 2018, will be supported by the continuing robust financial situation of households. The loan-financed purchase of fixed assets will be supported by the record low level of interest rates, although the main source of funding investment of both enterprises and households will continue to be own funds.[58] However, at the same time, in the years 2019-2021 the contribution of the inflow of EU funds to investment growth of the private sector will gradually decline (Figure 4.11). In the projection horizon, investment may also be limited by difficulties in finding employees reported by firms[59]. On the other hand, it cannot be ruled out that in the longer horizon labour cost growth may become a factor encouraging firms to increase capital expenditure and automation of production.

In 2019 public consumption growth will pick up, exceeding the growth rate of GDP. According to the *2019 Budget Act*, for the first time since 2010 the base salary in the public sector will rise (by 2.3%), which will determine the lower limit of wage rises in this sector. The relatively greater scale of wage rises will benefit, among others, school teachers, university lecturers, and uniformed services. In addition, the introduction of subsidies to local bus transport planned in 2019 will boost public consumption in the years 2019-2020. Due to the lack of other detailed information about the expected spending in the general government sector, in the years 2020-2021 a slight decline in public consumption growth is assumed, in

Figure 4.11 Expenditure financed by EU funds (in PLN billion) – breakdown



Source: NBP calculations.

[58] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector,* NBP, January 2019. According to the results of these surveys, over 50% of investors finance new investment with own funds.
Information on home prices and the situation in the housing and commercial real estate market in Poland in 2018 Q3, NBP, January 2019. This study shows that the estimated share of cash purchases of completed housing units in the primary market in the seven analysed cities (Gdańsk, Gdynia, Kraków, Łódź, Poznań, Warsaw, and Wrocław) exceeds 60%.
[59] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019. The percentage of firms reporting difficulties in finding adequately skilled employees is the highest since 2008.

accordance with the assumptions of neutral fiscal policy.

Current and capital account balance

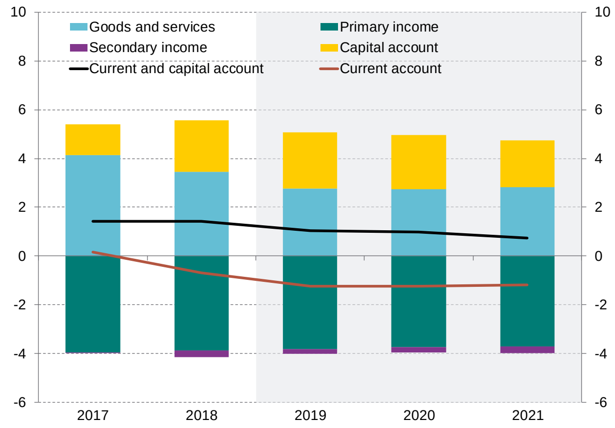
In 2018, the total balance of the current and capital account remained positive (1.4% of GDP, see Figure 4.12). In 2018, the surplus in trade in goods and services, driven by the still relatively high competitiveness of the Polish economy, remained at a high level. The balance of the capital account also remained positive, resulting from the inflow of EU investment funds under the current EU financial framework. On the other hand, the surplus on the current and capital account in 2018 was curbed by a persistent high primary income deficit, including in particular, income from foreign direct investment.

In the years 2019-2021 the total balance of the current and capital account is expected to decline; however, it will remain positive (Figure 4.21). The balance in the short-term projection horizon will deteriorate due to the declining surplus in trade of goods and services. This will be driven by the growth in domestic demand, which will continue to be relatively high in the coming quarters, including strong growth in consumption, amid a simultaneous deterioration in demand for Polish exports (Figure 4.13). In 2021 the currently large surplus on the capital account will also decrease. This fall is due to the slower inflow of EU investment funds in the final phase of the EU financial framework 2014-2020.

Potential output

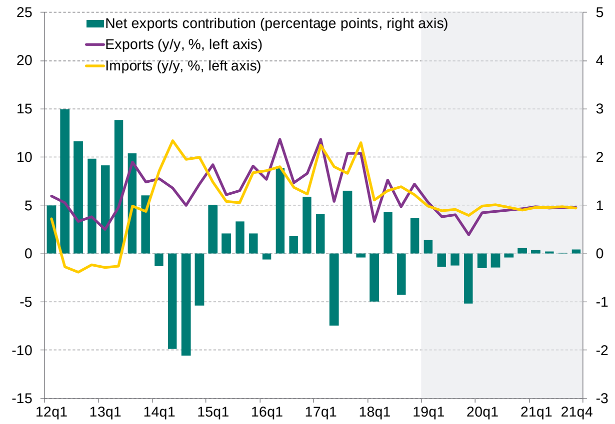
Potential output growth will remain close to 3.5% y/y over the projection horizon (Figure 4.15). On the one hand, along with a rise in the investment rate in the economy productive capital growth will pick up. On the other hand, the equilibrium unemployment rate (NAWRU) will decline at a slower rate than in previous years. However, the number of economically active people will have a neutral effect on potential output growth in the

Figure 4.12 Current and capital account balance (percent of GDP) - breakdown



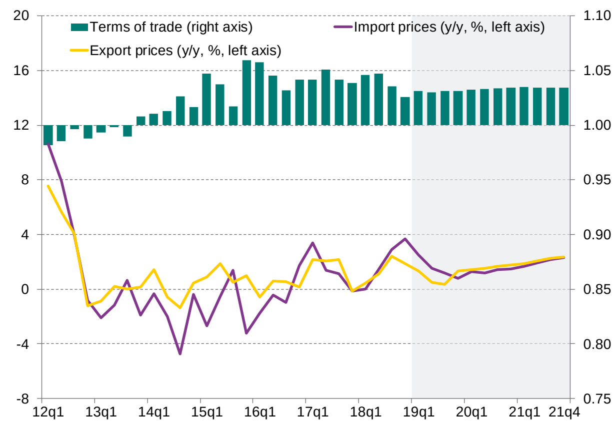
Source: GUS data, NBP calculations.

Figure 4.13 Foreign trade



Source: GUS data, NBP calculations.

Figure 4.14 Export and import prices



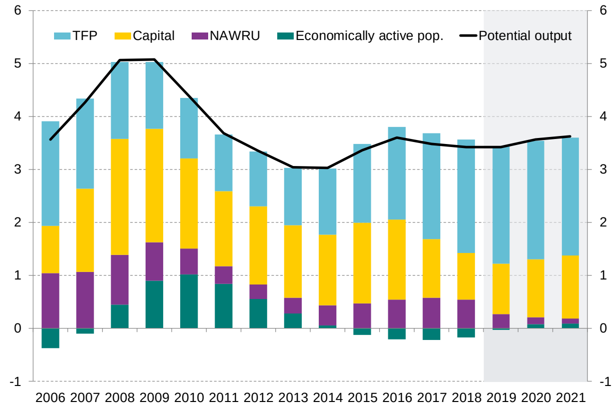
Source: GUS data, NBP calculations.

projection horizon, while the contribution of total factor productivity (TFP) will remain at the level of 2018.

The fall in the NAWRU unemployment rate in recent years was caused by the significant inflow of immigrants, especially Ukrainian citizens, on the domestic labour market[60]. Immigrants have lower wage expectations, which also lowers wage pressure of Polish employees. This means that the level of the unemployment rate, which does not boost wage expectations (NAWRU) is lower due to the inflow of immigrants. The significantly improved match between the demand and supplyof the Polish labour force, reflected, among others, by the sharp fall in long-term job-seekers (over 12 months), also lowered the equilibrium unemployment rate (Figure 4.16). In the coming years the impact of both these factors on lowering the equilibrium unemployment rate will fade. In particular, due to the planned opening of the German labour market to non-EU citizens, the number of immigrants working in Poland is likely to stop growing. At the same time, the long-term unemployment rate[61] is at a record low level and its further decline at the rate recorded in the previous years is currently unlikely.

Growth in the labour force participation rate in the previous years was a positive phenomenon affecting long-term economic development (Figure 4.19). This trend will continue over the projection horizon and labour force participation will continue to be supported by the favourable labour market conditions. In particular, this applies to pre-retirees (50-59/64 years old, see Figure 4.17) whose labour force participation is still significantly lower than in Western European countries. The fall in the labour force participation rate in the oldest age

Figure 4.15 Potential product (y/y, %) – breakdown



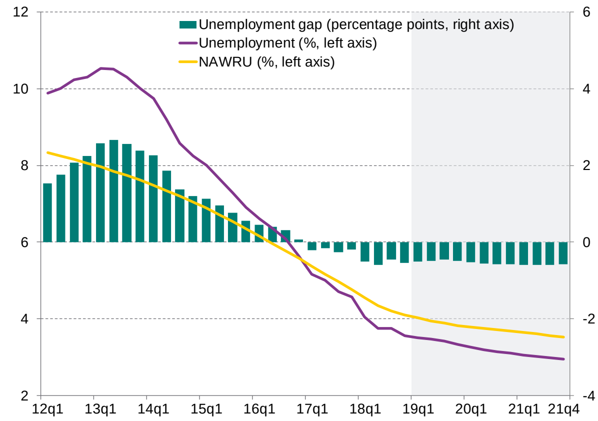
Source: NBP calculations.

Potential output growth is defined as the economic growth rate that does not cause the accumulation of inflationary pressure. It may originate from the growth of labour supply, productive capital or total factor productivity. In the NECMOD model it is estimated on the following Cobb-Douglas production function:

$PKB_t^{pot} = TFP_t^{trend} \cdot \left[LF_t^{trend} \cdot (1 - NAWRU_t)\right]^{0,67} \cdot K_t^{1-0,67}$,

where PKB_t^{pot} is the level of potential output, TFP_t^{trend} – total factor productivity, smoothed by the Hodrick-Prescott (HP) filter extended with an index of capacity utilisation, LF_t^{trend} – the number of economically active people smoothed by a HP filter, $NAWRU_t$ – non-accelerating wage rate of unemployment in the equilibrium, K_t – productive capital. The output elasticity with respect to labour was set at the level of 0.67.

Figure 4.16 Unemployment



Source: GUS data, NBP calculations.

$NAWRU_t$ – non-accelerating wage rate of unemployment in the equilibrium

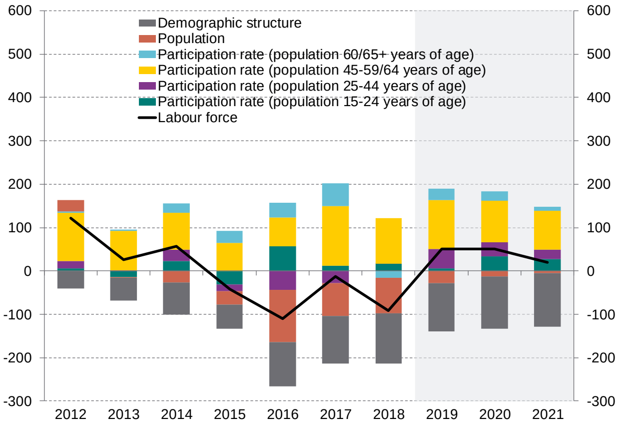
[60] Immigrants have a positive impact on the potential of the Polish economy, but due to the definition of Polish residents used in the LFS survey, they are included in the cohorts of the economically active and employed persons only to a limited extent according to this methodology. In the NECMOD model, immigrants not included in the LFS population do not, therefore, increase the labour supply, but they have an impact on the potential output through their positive impact on total factor productivity (TFP) as well as reducing the equilibrium unemployment rate (NAWRU).

[61] According to the LFS definition, the long-term unemployment rate is the share of the unemployed seeking work for over 12 months in the economically active population.

group (60/65+), caused by the lowering of the statutory retirement age in 2017, has the opposite effect, although to a lesser extent. Despite growth in the labour force participation rate, the total number of economically active persons in the labour market will remain relatively stable, which means a close to neutral impact on potential output growth over the projection horizon. This is a result of the continuation of negative demographic trends leading to a fall in the working age population.

Over the projection horizon total factor productivity (TFP) will remain stable, close to the 2018 level. Further improvement in the quality of human capital will have a positive impact on TFP growth, reflected in the growing percentage of people with higher education in the age group over 44 year olds and the growth in the productivity of immigrants, which is manifested, among others, in the increased share of these workers employed in sectors with higher productivity. The growing innovative capacity of the Polish economy and the improvement of its position in the global value chains, along with the process of real convergence, will also have a positive impact on total factor productivity growth.

Figure 4.17 Changes in the labour force (thous., y/y)



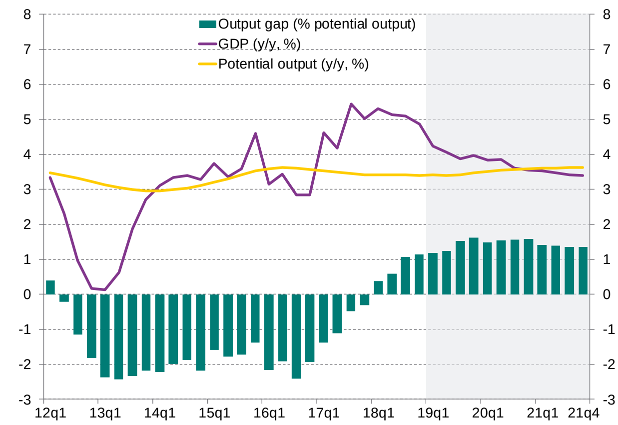
Source: GUS data, NBP calculations.

Changes in the labour force in the chart are decomposed into those resulting from changes in the labour force participation rate in individual age groups, changes in demographic structure and changes in the total population. The impact of demographic structure determines changes in the labour force arising only from changes in the age structure of the population with an unchanged total population and constant labour force participation rate in individual age groups.

Output gap

In 2019 real GDP growth will continue to exceed potential output growth. In the coming years, slowing economic growth will run first at a level close to, and then below potential output growth, thanks to which the output gap will temporarily stabilise, and will then start to gradually close towards the end of the projection horizon (Figure 4.18). Although in the coming quarters it will still boost price growth, such a path of the output gap – being a synthetic measure of demand pressure in the economy – will be a factor lowering domestic inflation slightly in the longer-term projection horizon.

Figure 4.18 Output gap



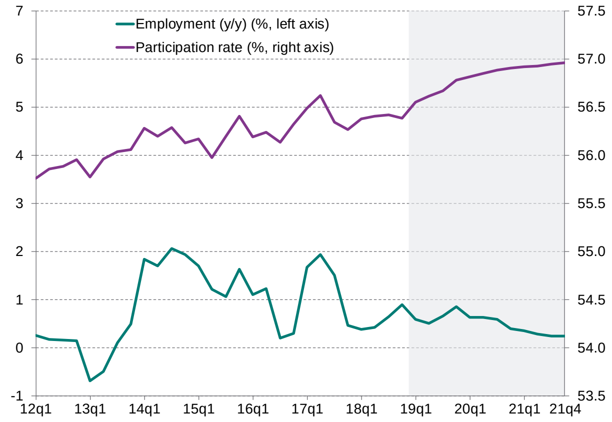
Source: GUS data, NBP calculations.

The output gap is a synthetic measure of demand pressure in the economy. It is expressed as a percentage of the deviation of the actual real level of GDP from the level of potential output.

Labour market

The expected slowdown in GDP growth in the coming years will be accompanied by a delayed gradual decline in growth of the number of employed persons (Figure 4.19). Besides slower growth in demand for labour, this may also be due to insufficient labour supply. The number of the unemployed who could undertake employment is currently small, which is reflected in the record low unemployment rate (Figure 4.16, Figure 4.20). In surveys of enterprises, the percentage of firms reporting staff shortages as a barrier to activity is at the highest level since 2008 [62], while the percentage of firms reporting job vacancies remains very high and in 2018 Q4 exceeded 40%[63].

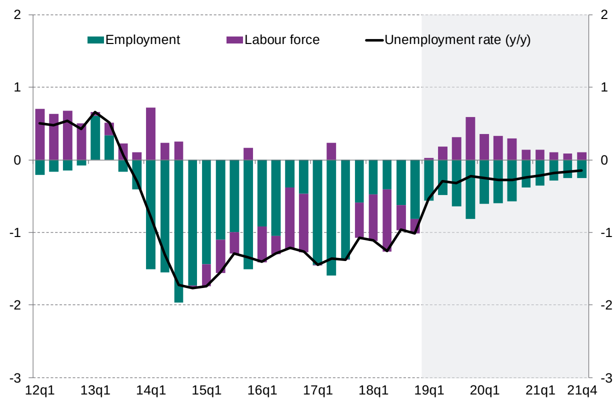
Figure 4.19 Employment and labour force participation



Source: GUS data, NBP calculations.

Despite a gradual slowdown, in the years 2019-2021 wage growth will still remain at an elevated level, which will translate into the growth rate of unit labour costs running at a level close to 3% y/y (Figure 4.21). Wage growth will be boosted by the record low unemployment rate and the gradual rise in consumer price inflation. NBP surveys suggest that the percentage of firms planning significant wage rises in 2019 and reporting wage pressure remains at a relatively high level. [64] Moreover, according to the *2019 Budget Act*, in 2019 wage growth will accelerate in the public sector, which accounts for almost one third of total employment in the national economy. However, over the projection horizon whole-economy wage growth will gradually decline as a result of slower growth in demand for labour in the corporate sector. At the same time, wage pressure will continue to be mitigated by the presence of immigrants, mainly from Ukraine. Their significance for the labour market increases along with the increase in the average length of stay in Poland and their growing presence in more and more sectors of the economy. On the other hand,

Figure 4.20 Change in unemployment rate - decomposition



Source: GUS data, NBP calculations.

[62] *Koniunktura w przetwórstwie przemysłowym, budownictwie, handlu i usługach 2000-2019,* GUS, January 2019.
[63] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019.
[64] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, January 2019. A comparison with the data of the previous editions is made difficult by the change in the survey question about wage rises in enterprises.

the scale of the impact of employees from Ukraine on the Polish labour market could be limited if some of the immigrants leave Poland with the opening of the labour market in Germany for non-EU citizens in 2020[65].

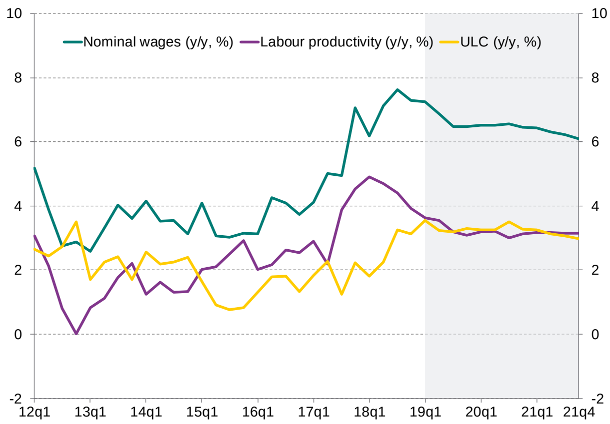
Exchange rate

In the recent period the złoty remained relatively stable against the currencies of Poland's main trading partners, continuing to run below the level resulting from fundamental factors. Therefore, over the projection horizon, the real effective exchange rate of the zloty is expected to strengthen and gradually approach the equilibrium exchange rate. The scale of the strengthening of the real effective exchange rate of the zloty in the last year of the projection will be curbed by the expected declining interest rate disparity. The declining interest rate disparity is a result of the unchanged NBP interest rates assumed in the projection amid an expected slight increase in the cost of money in the euro area.

CPI inflation

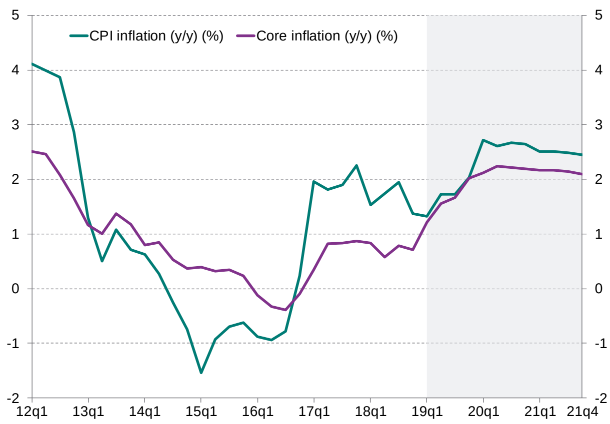
In 2019 CPI inflation will remain at a low level (1.7%), close to the level of 2018. In 2020 consumer price growth is expected to pick up to 2.7%, and then decline towards the end of the projection horizon to around 2.5% y/y (Figure 4.22). In the coming quarters rising labour costs and the still relatively strong demand pressure in the Polish economy will boost CPI inflation, particularly core inflation. In the longer-term projection horizon the impact of these factors will stabilise, and then weaken slightly. The scale of the pick-up in inflation will be curbed by the low price growth in Poland's main trading partners, and in 2019 also by the decline in energy price growth. Food prices will remain relatively stable over the whole of the projection horizon (Figure 4.23).

Figure 4.21 Unit labour costs



Source: GUS data, NBP calculations.
Unit labour costs are defined as the average cost of labour per unit of output produced. They are calculated by dividing the total remuneration in the economy by the total GDP. Alternatively, they can be expressed as the quotient of the average wage and labour productivity, in other words, the relation of GDP to the number of the employed persons

Figure 4.22 CPI and core inflation



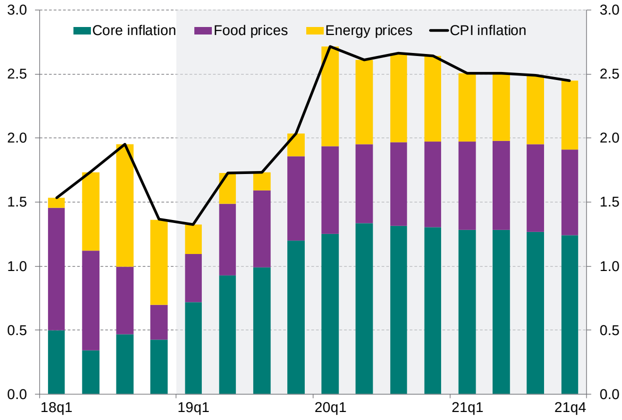
Source: GUS data, NBP calculations.

[65] In December 2018, the German government submitted a bill to the Bundestag giving easier access to the German labour market for skilled workers from outside the EU. This bill will probably enter into force in 2020.

Growing cost pressure on the part of the labour market in 2019 is reflected by the acceleration in unit labour costs. In the same period, intensification of demand pressure measured by the output gap is also expected (Figure 4.18). In the coming years both growth of unit labour costs and the level of the output gap will remain relatively stable, although they will decline towards the end of the projection horizon. Due to the lag between the changes in the real and nominal sphere of the economy, it can be expected that CPI inflation will not reach the maximum level until the beginning of 2020. The scale of the pick-up in price growth will be moderate, which will be the result of both the decline in recent years in the sensitivity of price growth to changes in the domestic economic conditions[66], and the low inflation in external environment of the Polish economy (Figure 4.5).

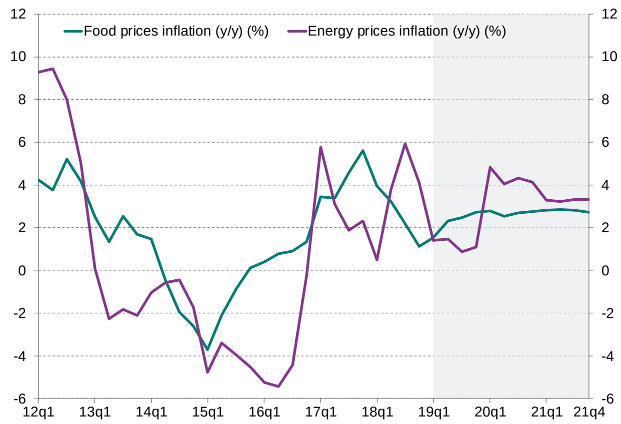
In 2019, the CPI inflation path will remain under the influence of the sharp decline in energy price growth following the fall in global energy commodity prices, mainly oil, in 2018 Q4. (Figure 4.24). At the same time, inflation will be dampened by the adoption of the "Act of 28 December 2018 amending the Act on excise duty and certain other Acts". This Act aims to freeze electricity prices for end-users (including households, local government units, and enterprises), despite the increase in wholesale electricity prices in the recent period. According to the provisions of the Act, the excise tax rate and transitional fee have been permanently reduced, and a compensation system for power companies has been introduced that comes into force in 2019. In the longer-term projection horizon, energy price growth will pick up, reflecting the delayed effect of higher electricity production costs, in accordance with model

Figure 4.23 CPI inflation (y/y, %) – breakdown



Source: GUS data, NBP calculations.

Figure 4.24 Food and energy price inflation



Source: GUS data, NBP calculations.

[66] The study carried out based on data on the Polish economy from the years 2002-2015 show that after 2011, in the period of low inflation and deflation, the response of CPI inflation to changes in the country's business conditions declined, which may partly be explained by structural changes in the labour market. At the same time, domestic price developments were largely shaped by the impact of external factors, reflecting the growing effect of globalisation, and changes in global commodity prices (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).

mechanisms and taking into account the reduced excise tax and transitional fee.

4.4 Current versus previous projection

Data released after the cut-off date of the November projection contributed to an upward revision of the GDP growth forecast amid a lower expected inflation path, particularly in 2019 (Table 4.2, Figure 4.25, Figure 4.27).

GDP

Despite a sharper slowdown of economic growth in the euro area, GDP growth in Poland in the second half of 2018 was higher than assumed in the November projection. This is particularly the result of the higher contribution of net exports to GDP growth in 2018 Q4.[67] Gross fixed capital formation growth was also more robust, along with the acceleration in the absorption of EU funds co-financing local government investment.

In 2019-2020 the GDP growth rate will run significantly above the path of the November projection (Figure 4.26). This will largely be the result of the introduction of the legislation package, planned by the government, significantly increasing expenditures on social benefits and reducing tax burden. The more expansionary fiscal policy will translate into higher disposable income of households, and as a result, also higher private consumption. The impact of higher consumption dynamics on GDP growth will only partially be limited by higher growth rate of imports. Lower energy prices for households and enterprises, as well as the greater scale of wage rises in the public sector, also increase the GDP growth forecast for 2019.

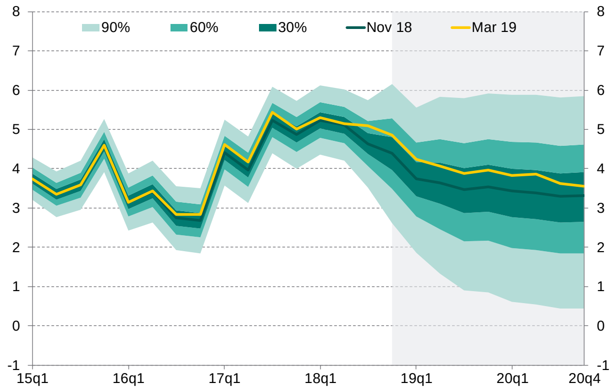
Positive impact of the above-mentioned factors will be partially curbed by lower GDP growth in the

Table 4.2 March projection versus November projection

	2018	2019	2020
GDP (y/y, %)			
March 2019	5.1	4.0	3.7
November 2018	4.8	3.6	3.4
CPI inflation (y/y, %)			
March 2019	1.6	1.7	2.7
November 2018	1.8	3.2	2.9

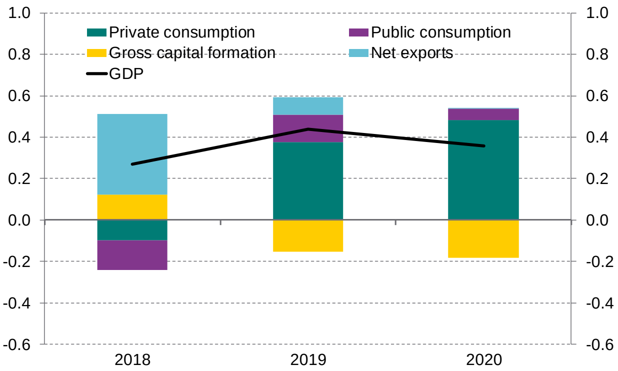
Source: NBP calculations.

Figure 4.25 March projection versus November projection: GDP growth (y/y, %)



Source: NBP calculations.

Figure 4.26 Decomposition of deviations between March and November 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.

[67] The net exports figures assumed in the projection were prepared based on data available until 15 February 2019. With the publication of full national accounts data for 2018 Q4 on 28 February 2019, GUS at the same time revised downwards its estimates of the contribution of net exports to growth in 2018.

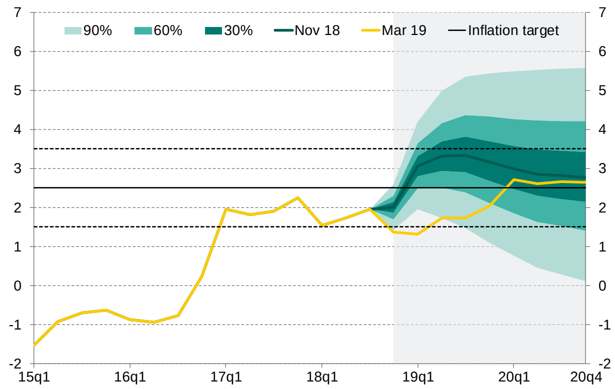
economies of Poland's main trading partners, reducing domestic economic growth.

Inflation

Despite higher than expected GDP growth, CPI inflation in 2018 Q4 turned out to be lower than forecasted in the November projection. This was largely the result of lower global oil prices. Lower inflation was also driven by the stronger impact of migration from Ukraine on the potential growth rate of the Polish economy as compared with previous estimates. These factors, along with the introduction of the "Act amending the Act on the Excise Duty and selected other acts" – that aims at keeping electricity prices in 2019 at the 2018 level – are all the conditions for a downward revision of the inflation forecast in the coming quarters of the projection. The revision concerns the energy price forecast and, to a lesser extent, core inflation (Figure 4.28). In addition, core inflation in 2018 Q4 was lowered by special offers in recreation and culture services.

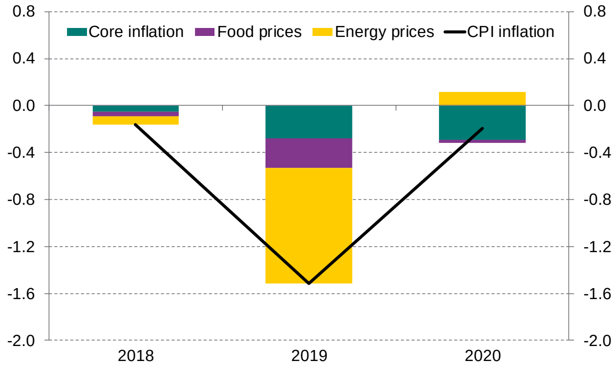
There are two elements responsible for the lower energy price growth forecast in 2019. First, a sharp fall in oil prices on global markets in 2018 Q4, reduced expected growth in prices of fuels for personal transport equipment. Second, as a result of the entrance into force of the "Act amending the Act on the Excise Duty and selected other acts" adopted on 28 December 2018, excise duty on electricity as well as the rates of interim fee – which are the parts of the electricity bill – were reduced. According to the provisions of the Act, in 2019 electricity prices for end-users are to remain unchanged, while information available at the stage of preparation of the November projection suggested that significant increase in tariffs for households was most likely. No policy change assumption adopted in every projection, means that after 2019 electricity prices for households and enterprises will not be frozen and will rise in accordance with the mechanisms of the forecasting

Figure 4.27 March projection versus November projection: CPI inflation (y/y, %)



Source: GUS data, NBP calculations.

Figure 4.28 Decomposition of deviations between March and November 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.

model (acknowledging lower excise duty and interim fee).

Despite the higher path of GDP growth, in 2019-2020 the forecast of core inflation is lower than in the November projection due to the impact of several factors. Cost pressure in the economy will be limited by lower growth of import prices, due to the downward revision of the path of oil, natural gas and coal prices. Cost of enterprises will also be curbed by electricity bills being frozen at the 2018 level, under the provisions of the Act of 28 December 2018. At the same time, in the current forecasting round it was assumed that the presence of migrants in the domestic labour market has a stronger impact on the productive potential and labour costs in the Polish economy, and thus it will be a factor mitigating inflationary pressure to a greater extent than previously assumed.

4.5 Forecast uncertainty sources

The central scenario of the projection, presenting the most likely macroeconomic developments in Poland, is subject to uncertainty reflected in the fan charts (Figure 4.1 and Figure 4.2). The most important source of risk for economic activity in Poland are currently the global economic conditions. In addition, the forecast economic growth rate is subject to uncertainty due to the size of the net inflow of immigrants from Ukraine into the domestic labour market. In turn, the main risks for domestic inflation, apart from the GDP growth rate abroad, refer to developments in the energy commodities market and regulations in the electricity market, as well as to their transmission into domestic energy prices. The balance of risks in the case of GDP growth, and to a lesser extent CPI inflation, suggests that the development of these categories below the central scenario is currently more likely (Table 4.3). With the assumption of no change in the NBP reference rate, the probability of CPI inflation running within the symmetrical band of deviations from the NBP inflation target (defined as 2.5% +/- 1 p.p. in the middle term)

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%)
19q1	0.68	1.00	1.00	0.49	0.32
19q2	0.35	0.88	1.00	0.49	0.65
19q3	0.39	0.78	0.96	0.49	0.57
19q4	0.31	0.64	0.89	0.49	0.57
20q1	0.18	0.43	0.71	0.50	0.53
20q2	0.24	0.48	0.73	0.51	0.49
20q3	0.25	0.47	0.72	0.52	0.47
20q4	0.26	0.49	0.72	0.52	0.46
21q1	0.30	0.53	0.75	0.53	0.45
21q2	0.31	0.53	0.75	0.53	0.43
21q3	0.32	0.53	0.75	0.53	0.43
21q4	0.33	0.54	0.75	0.53	0.42

Source: NBP calculations.

gradually declines to 42% approximately at the end of the projection horizon (Table 4.3).

Growth prospects in the global economy

The assumptions to the central projection path regarding the development of the economic situation in the external environment of Poland do not take into account the impact of events, both positive and negative, which may occur, but whose probability is assessed as low. In the current forecasting round it is judged that among these events, the majority are those that could slow down GDP growth abroad. The most important risk factors for the central path are related to the further escalation of trade disputes between the world's major economies and the decline in growth in the developed countries, including the negative consequences of a possible sharp fall in share prices in the United States.

2018 was marked by the first signs of the negative impact on economic growth of the protectionist measures taken so far by the United States and its main trading partners. In China a significant decline in the volume of trade was recorded, as well as a further slowdown in economic activity. At the end of 2018 China and the USA agreed to suspend the introduction of further protectionist measures and to begin negotiations in order to clarify controversial issues. If these talks do not bring the expected results, the US administration may decide to raise from 10 to 25% current tariffs on goods from China, including essentially intermediate goods and valued at USD 200 billion. The already announced duty on an additional USD 267 billion worth of imports from China, above all capital and consumer goods, may also be implemented. Moreover, there is still a risk that the US administration may impose tariffs on imported cars and car parts to a total value of over USD 200 billion. Such a move would affect not only China, but also other trading partners, including Europe. These steps will most likely be met with retaliatory measures. The widening of the trade dispute could result in disruptions in global supply chains, and thus a further reduction in global trade. The growing uncertainty about the conditions for economic activity in the future would restrict domestic investment in countries affected by the disputes and would also lead to the emergence of tensions in international financial markets.

An escalation of trade tensions would adversely impact all parties to the conflict. In the United States the risk of lower growth is related additionally to a weaker growth of consumer spending in the presence of currently low household saving rate and high fraction of financial assets in total household assets. In particular, such a scenario could materialise if another rise in energy commodity prices or a sharper fall in share prices took place in the US markets. The stock market slump observed at the end of 2018 has so far had little impact on consumption due to the still high level of share prices and high concentration of stock owners among households from the top of the income distribution. However, in the case of a deeper correction leading to a collapse of consumer and business sentiment a significant slowdown in economic growth in the region should be expected.

The United Kingdom's withdrawal from the European Union without prior agreement on the terms on which it is to take place (the so-called no-deal Brexit) consitutes a significant risk for economic activity in the environment of Poland. In this scenario, the immediate establishment of customs controls and a sudden change in the rules of doing business would lead to an increase in uncertainty and a slowdown in GDP growth, both in the United Kingdom and, to a lesser extent, in the countries of the European Union.

Over the projection horizon in the environment of the Polish economy there could also appear circumstances having a positive impact on the growth path, although it is judged that their occurence are considerably less likely than that of the negative events. In particular, the effects of the expansive fiscal policy in the euro area could be stronger than currently expected, or the ECB's monetary policy could prove to be more effective. There also exists the possibility of an easing of the trade disputes between the United States and its main trading partners, which could lead to an increase in the volume of foreign trade and improvement in sentiment on a global scale. Stronger than presently expected effects of the measures taken in China to stimulate economic activity would also be favourable from the point of view of the global GDP.

Labour supply in Poland

The future labour force in Poland constitutes one of the most important domestic sources of risk for the central projection. In this context, the number of working immigrants in Poland, above all from Ukraine, assumed over the projection horizon, is subject to particular uncertainty. The inflow of migrants will depend on both the situation in the domestic market and the changes in immigration policy in other European Union countries, in particular in Germany. In December 2018 the German government directed to the Bundestag a bill giving easier access to the German labour market for skilled workers from outside the EU. This bill will most likely enter into force no earlier than at the beginning of 2020. Its adoption might encourage Ukrainian employees staying on the territory of Poland to re-emigrate, which would lead to a reduction in the labour supply in Poland and to an increase in wage growth. At the same time it cannot be ruled out that the potential outflow of Ukrainian migrants to Germany would be compensated by a stronger inflow of migrants from other countries, including non-European countries.

Impact of determinants of the energy sector on inflation in Poland

Changes in global prices of oil and of other energy commodities, as well as the transmission of the conditions in the energy sector in Poland into tariffs for households and enterprises, continue to be a significant source of uncertainty for the inflation path of in the baseline scenario.

Supply-side factors continue to represent a risk for the future development of oil prices. The level of oil production of OPEC member countries is subject to uncertainty, as well as the supply of shale oil in the United States in the presence of limits of oil transportation infrastructure in this country. Geopolitical factors, such as a further deepening of the economic and political crisis in Venezuela, which has translated so far into a fall in the country’s oil production of over 1 million barrels per day compared to 2015, could rise oil prices compared to the assumptions of the baseline scenario. The development of demand for energy commodities, in particular on the part of developing countries, is also an important area of uncertainty in the current projection.

Another important source of risk for the future CPI inflation is the development of wholesale electricity prices and the scale as well as timing of the pass-through of their changes to the prices for final consumers. As a result of, among others, the increase in coal prices and the prices of allowances for CO2 emissions, electricity prices in the wholesale market in January 2019 were over 50% higher than a year earlier. On 28 December 2018, the Polish Sejm adopted an act lowering the excise tax rate on electricity and interim payments as well as freezing in 2019 the tariffs for electricity for end-users. This act also introduced a compensation system for enterprises from the energy sector. The projection takes into account the effects of a lack of change in electricity prices for households, firms and local government units in 2019. However, at the time of preparation of the projection there was still no regulation to the act, defining detailed issues of setting prices and compensation, and as a result the CPI inflation path in 2019 is subject to uncertainty. In addition, there is a risk that the European Commission will classify the compensation system as illegal state aid and will state that the ban on increasing electricity tariffs restricts the responsibilities of the regulator. Taking into account the reservations of the European Commission may lead to an amendment of the Act of 28 December 2018 resulting in different consumer price developments in 2019 than assumed in the projection.

The freezing of electricity prices in the Act of 28 December 2018 affects only the year 2019. Therefore, in the central path it is assumed that from 2020 the tariffs for households will develop according to the model mechanism, taking into account the maintenance of the lowered excise tax and interim payments. However, it cannot be ruled out that the system of compensation for the increases in prices of allowances for CO2 emissions will also be used in successive years, leading to the energy prices inferior to the projection.

Another risk factor lowering the path of energy prices in the current projection is the possible conclusion in 2019 of the negotiations which began almost 5 years earlier between PGNiG and Gazprom and concerns the contract prices of natural gas. The previous round of negotiations ended in 2012 with a significant reduction in these prices. Currently it is also expected that as a result of the arbitration settlement conducted before the Arbitration Tribunal in Stockholm ending the current round of negotiations, the prices of imported natural gas to Poland will decline over the projection horizon. However, due to the lack of a rigid time frame in which the arbitrage should be settled, it is hard to predict the time as well as the scale of any possible fall in prices.

Table 4.4 Central path of inflation and GDP projection

	2017	2018	2019	2020	2021
Consumer Price Index CPI (%, y/y)	2.0	1.6	1.7	2.7	2.5
Core inflation net of food and energy prices (%, y/y)	0.7	0.7	1.6	2.2	2.1
Food prices (%, y/y)	4.2	2.6	2.2	2.7	2.8
Energy prices (%, y/y)	3.2	3.6	1.2	4.3	3.3
GDP (%, y/y)	4.8	5.1	4.0	3.7	3.5
Domestic demand (%, y/y)	4.9	5.3	4.4	3.9	3.4
Household consumption (%, y/y)	4.9	4.5	4.4	4.3	3.6
Public consumption (%, y/y)	3.5	3.7	5.1	3.3	3.1
Gross fixed capital formation (%, y/y)	3.9	7.3	5.4	3.7	2.6
Contribution of net exports (percentage points, y/y)	0.1	0.0	-0.3	-0.1	0.1
Exports (%, y/y)	9.5	5.8	3.8	4.5	4.8
Imports (%, y/y)	10.0	6.3	4.5	4.8	4.8
Gross wages (%, y/y)	5.3	7.1	6.8	6.5	6.3
Total employment (%, y/y)	1.4	0.6	0.7	0.6	0.3
Unemployment rate (%)	4.9	3.8	3.4	3.2	3.0
NAWRU (%)	5.1	4.3	3.9	3.7	3.6
Labour force participation rate (%, y/y)	56.4	56.4	56.7	56.9	56.9
Labour productivity (%, y/y)	3.4	4.5	3.4	3.1	3.2
Unit labour cost (%, y/y)	1.9	2.6	3.3	3.3	3.1
Potential output (%, y/y)	3.5	3.4	3.4	3.6	3.6
Output gap (% potential GDP)	-0.8	0.8	1.4	1.5	1.4
Index of agricultural commodity prices (EUR; 2011=1.0)	0.90	0.86	0.89	0.86	0.86
Index of energy commodity prices (USD; 2011=1.0)	0.62	0.77	0.65	0.65	0.64
Inflation abroad (%, y/y)	1.3	1.7	1.9	1.9	1.9
GDP abroad (%, y/y)	2.4	1.8	1.3	1.5	1.4
Current and capital account balance (% GDP)	1.4	1.4	1.0	1.0	0.7
WIBOR 3M (%)	1.73	1.71	1.72	1.72	1.72

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 October 2018 – January 2019

■ Date: 7 November 2018

Subject matter of motion or resolution:
Motion to raise the NBP interest rates by 0.25 percentage points.

MPC decision:
Motion did not pass.

Voting of the MPC members:

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

■ Date: 4 December 2018

Subject matter of motion or resolution:
Resolution No. 6/2018 of the Monetary Policy Council of 4 December 2018 on approving the Financial Plan of the National Bank of Poland for 2019.

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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