NBP Narodowy Bank Polski

Monetary Policy Council

November 2020

Inflation Report

The Inflation Report presents the Monetary Policy Council's assessment of macroeconomic developments influencing inflation. The projection of inflation and GDP presented in Chapter 4 has been prepared at the Economic Analysis Department of Narodowy Bank Polski (NBP). In terms of the contents, works on the projection have been supervised by Piotr Szpunar, Director of the Economic Analysis Department. The projection has been prepared with the use of the NECMOD macroeconomic model. The NBP Management Board has 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, while its periodisation (breakdown into sub-periods) is conditioned by the development of particular variables. The cut-off date for the data in this *Report* was 26 October 2020, but the *Report* includes also the flash estimate of the consumer price index in October 2020 published by Statistics Poland (GUS) on 30 October 2020 and the data on the global epidemic situation available up until 5 November 2020.

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

Contents

Summary

The COVID-19 pandemic caused sharp falls in economic activity in many countries in the first half of 2020. Global GDP declined by approx. 10% in this period. Economic policy measures, including a large-scale easing of fiscal and monetary policy, mitigated the impact of the slump in production on unemployment and the number of firm bankruptcies, limiting the risk of persistent global economic slowdown. Along with the gradual easing of sanitary restrictions, global economic activity has been recovering since May. However, as available data indicate, activity in Q3 did not return to the pre-pandemic level, and the scale of the economic recovery varied across countries and sectors of the economy. Since September, in many countries, especially in Europe, COVID-19 infections have risen once again and sanitary restrictions have been tightened. As a result, uncertainty regarding the outlook of the global economic activity has increased.

Amid weaker economic activity than before the onset of the pandemic, in recent months consumer price growth in the global economy has stabilised at a low level. To a large extent, this has resulted from the stabilisation of global oil prices at well below the 2019 levels (although somewhat higher than during the initial phase of the pandemic), which has translated into negative growth in fuel prices. In the euro area, deflation has persisted in recent months, while in the United States inflation is significantly lower than at the beginning of the year, although – following a sharp fall to almost zero in the initial phase of the pandemic – it has risen in recent months.

Following a very significant easing of monetary policy in the first half of 2020, most of the world's central banks have maintained a highly expansionary monetary policy stance in recent months. This has been motivated by low inflation, an only partial recovery of economic activity, persistently high uncertainty and a surge in the epidemic in many countries. Many banks have maintained historically low interest rates and continued asset purchases. At the same time, the leading developed-country central banks have declared their readiness to ease monetary conditions further. Under these circumstances, financial market participants expect the policy interest rates of the major central banks to be running at current or lower levels in the upcoming years.

After the turmoil in the global financial markets in the first half of 2020 following the outbreak of the COVID-19 pandemic, in recent months market volatility has been markedly lower than in March 2020, but significantly higher than before the pandemic. Among others, highly expansionary monetary policy and an announcement of fiscal stimulus programmes in many economies have contributed to the improvement in financial market sentiment. However, the escalation of the pandemic in September and October 2020 and persistent uncertainty about the outlook for global economic growth have had a negative impact on the sentiment. Amid highly expansionary monetary policy worldwide, government bond yields have reached record lows in many countries, staying negative in many advanced economies. At the same time, equity prices have been significantly higher than at the initial stage of the pandemic and close to the levels noted at the beginning of the year.

In recent months, annual consumer price growth in Poland has hovered around 3.0% (against 4.5% in 2020 Q1). Higher fuel price growth and also, but to a lesser extent, somewhat higher growth in prices of non-food goods, including clothing and footwear, have had a positive impact on inflation in recent months. On the other hand, inflation has been reduced by a significant fall in food price growth amid relatively low global agricultural commodity prices.

In 2020 Q2, economic activity in Poland plummeted due to the COVID-19 pandemic. GDP contracted by 8.4% y/y. A decline in consumption had the largest contribution to this fall. Consumption of both goods and services dropped, which resulted primarily from epidemic restrictions. Consumption was also reduced by high uncertainty and a marked deterioration in consumer sentiment due to the pandemic. Investment also plummeted. This was mainly observed in the enterprise sector, which considerably reduced investment outlays due to flagging demand, frozen economic activity in some sectors, a surge in uncertainty and lower expectations about future economic activity. By contrast, net exports and government spending on goods and services contributed positively to GDP growth. The available data for 2020 Q3 indicate a marked rebound in economic activity in this period, which was aided by the lifting of the majority of nationwide epidemic restrictions (mainly in May and June), improved business and household sentiment and support from fiscal and monetary policy, both at home and abroad. However, in October, as the epidemic surged and sanitary restrictions were once again tightened, economic activity seems to have weakened in the sectors that were most vulnerable to the effects of the epidemic and restrictions.

The collapse of economic activity in 2020 Q2 due to the COVID-19 epidemic led to a deterioration in the labour market, including a reduction in the number of employed people and employment, an increase in economically inactive population, as well as slower wage growth. The impact of the first wave of the pandemic on the labour market was mitigated by the government anti-crisis measures, which, among others, was reflected in the limited increase in unemployment. Data available for 2020 Q3 indicate a certain stabilisation of the labour market conditions in this period. In particular, registered unemployment stabilised in 2020 Q3 at 6.3% (after seasonal adjustment).

After a significant easing of NBP monetary policy in 2020 Q2, the basic parameters of monetary policy have been kept unchanged in recent months. In particular, the NBP reference rate has been kept at 0.1%. At the same time, NBP has continued to purchase government securities and government-guaranteed debt securities on the secondary market. Financial market participants expect that NBP interest rates will remain close to zero in the coming years.

Against this background, yields on Polish government bonds have reached a record low, similar to many other countries around the world. In turn, the zloty exchange rate against the major currencies has been subject to temporary fluctuations, mainly as a result of global factors. In October 2020, the zloty exchange rate was slightly weaker than in June 2020 against the euro, and slightly stronger against the US dollar.

In recent months, annual M3 growth has stabilised at a relatively high level after a marked increase early in the year, which mainly resulted from higher growth of corporate deposits and cash in circulation. The growth rate of household loans declined modestly due to, among others, persistent uncertainty and worse consumer sentiment than before the pandemic outbreak. At the same time, corporate loans fell, which was largely driven by reduced loan demand; the financial support provided to enterprises under the government anti-crisis measures contributed to this reduction. Lower demand for bank financing was accompanied by a certain tightening of the bank lending policy after the COVID-19 pandemic outbreak.

In 2020 Q2, the current account balance (four-quarter rolling sum) increased. The significantly higher than a year ago balance of trade in goods had the biggest impact on this change, followed by the improvement in the primary income balance. Other external imbalance indicators evidence a further improvement in the balance of the Polish economy in 2020 Q2. The negative net international investment position of Poland and the level of foreign debt in relation to GDP improved in this period.

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 between July and September 2020, together with the *Information from the meeting of the Monetary Policy Council* in October and November 2020. Chapter 5 presents the Monetary Policy Council voting records from the meetings held between May and August 2020. Furthermore, the *Report* includes two boxes: *The COVID-19 global epidemic situation* and *Revision of the US Federal Reserve's monetary policy strategy*.

Chapter 4 of the *Report* presents the projection for inflation and GDP based on the NECMOD model, which is one of the inputs into the Council's decision-making process on the NBP interest rates. In line with the November projection – prepared under the assumption of unchanged NBP interest rates and taking into account data available until 4 November 2020 – there is a 50-percent probability that the annual price growth will be in the range of 3.4–3.5% in 2020 (against 2.9–3.6% in the July 2020 projection), 1.8–3.2% in 2021 (compared to 0.3–2.2%) and 1.6–3.6% in 2022 (compared to 0.6–2.9%). At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of -4.1 – -3.0% in 2020 (against -7.2 – -4.2% in the July 2020 projection), 0.8–4.5% in 2021 (compared to 2.1–6.6%) and 3.8–7.8% in 2022 (compared to 1.9–6.0%).

1. External developments

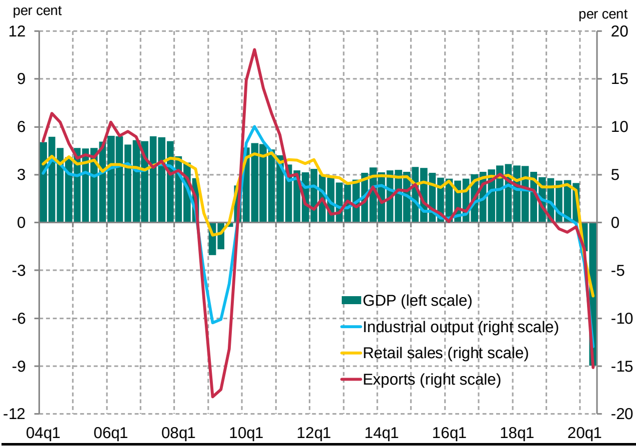
1.1 Economic activity abroad

The COVID-19 pandemic caused sharp falls in economic activity in many countries in the first half of 2020 (Figure 1.1). Global GDP declined by approx. 10%, and the value of global exports by more than 15%, in this period.[1,2] Economic policy measures, including a large-scale easing of fiscal and monetary policy, mitigated the impact of the slump in production on unemployment and the number of firm bankruptcies in many countries.

Along with the gradual easing of sanitary restrictions, global economic activity has been recovering since May; however, as available data indicate, activity in Q3 did not return to the pre-pandemic level, and the scale of the economic recovery varied across countries and sectors of the economy. Since September, in many countries, especially in Europe, COVID-19 infections have risen once again and sanitary restrictions have been tightened (See Box 1: *The COVID-19 global epidemic situation*). As a result, uncertainty regarding the outlook of the global economic activity has increased.

GDP in the euro area declined by 14.8% y/y in 2020 Q2 (after a fall of 3.3% y/y in 2020 Q1; Figure 1.2), with the pandemic's impact on economic activity varying greatly across individual member states.[3] Investment and exports were over 20% lower than a year before. Household consumption shrank by

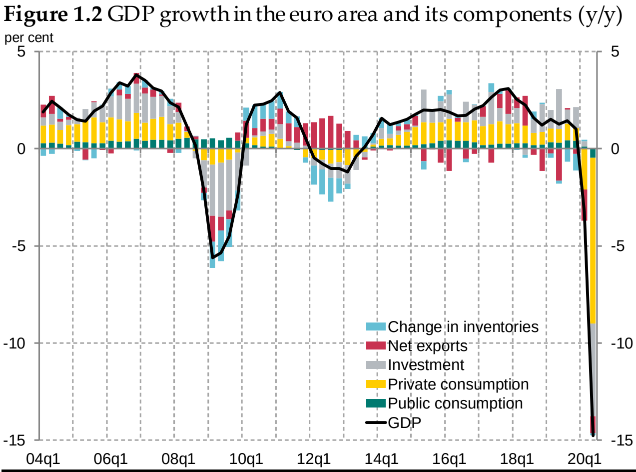
Figure 1.1 Global GDP growth and economic activity indicators (y/y)



Source: Bloomberg, Centraal Planbureau, Eurostat and IMF data, NBP calculations.

GDP, industrial output and retail sales – average annual growth in economies comprising 80% of global GDP in 2017, weighted by GDP. Exports – growth in global exports of goods estimated by Centraal Planbureau. Note: due to limited availablility of data from some countries during the pandemic, the economies used for calculating each time series differ slightly.

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



Source: Eurostat data, NBP calculations.

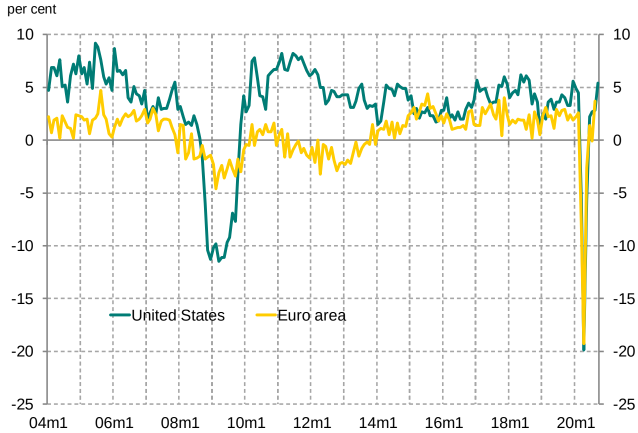
[1] Available data indicate that in subsequent months trade partially recovered, but the value of exports of most economies apart from China was still significantly below the pre-pandemic level in August.
[2] The fall of global GDP and exports covers the period from 2019 Q4 to 2020 Q2, after seasonal adjustment.
[3] GDP growth in 2020 Q2 ranged from -3.7% y/y in Ireland to -21.5% y/y in Spain.

16% y/y.[4] Thanks to the widespread use of employment support programmes, the fall in the number of employed persons in 2020 Q2 was moderate. After sanitary restrictions were eased starting in May, economic activity began to recover. Retail sales returned to the previous year's levels relatively quickly (Figure 1.3). In contrast, activity in industry (Figure 1.4) and services that are most vulnerable to the negative effects of the pandemic, despite a significant recovery, in August remained at lower levels than a year before. The rise in COVID-19 infections in recent months caused a renewed tightening of the sanitary regime in euro area countries and led to a renewed fall in the services sector sentiment, not having yet negatively affected sentiment in the industrial sector.

In Germany GDP fell by 11.3% y/y in 2020 Q2 (against a decline of 2.2% y/y in 2020 Q1). The scale of the drop in German exports was similar to that of other euro area countries. At the same time, the fall in investment and household consumption was smaller than in most of the other euro area countries. After an earlier increase, unemployment rate has stabilised in September, while a high percentage of employees has still been covered by the short-time work scheme. At the same time, industrial production, despite having somewhat rebounded after the first wave of the pandemic, in August 2020 remained considerably lower than a year ago (industrial production growth stood at -11.2% y/y).

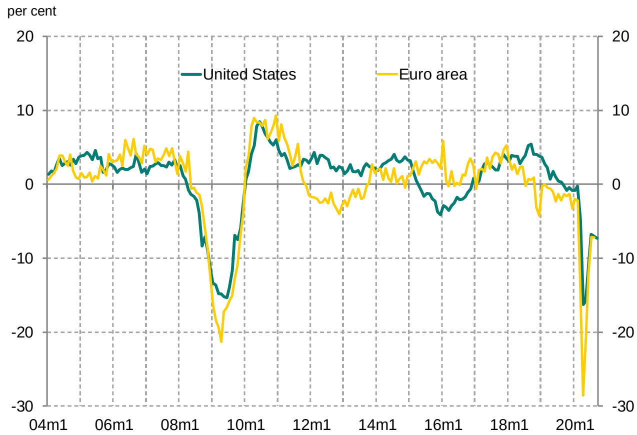
The COVID-19 pandemic caused a sharp fall in GDP also in the Central and Eastern European countries. In most of these countries the drop exceeded 10% y/y in 2020 Q2 (Figure 1.5). Its scale was reduced by public investment, which continued to grow at a relatively high level due to i.a. the use of EU structural funds, as well as a lower than in 2020 Q2 scale of COVID-19 infections and sanitary restrictions compared to countries that

Figure 1.3 Retail sales in selected advanced economies (y/y)



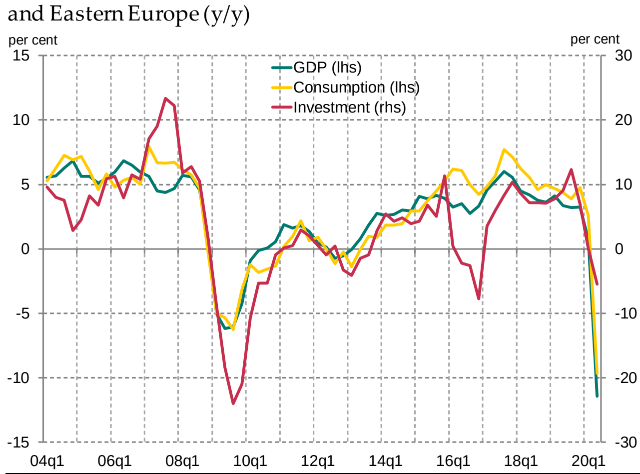
Source: Bloomberg data.

Figure 1.4 Industrial production in selected advanced economies (y/y)



Source: Bloomberg data.

Figure 1.5 Economic growth and its selected components in Central and Eastern Europe (y/y)



Source: Eurostat data, NBP calculations.

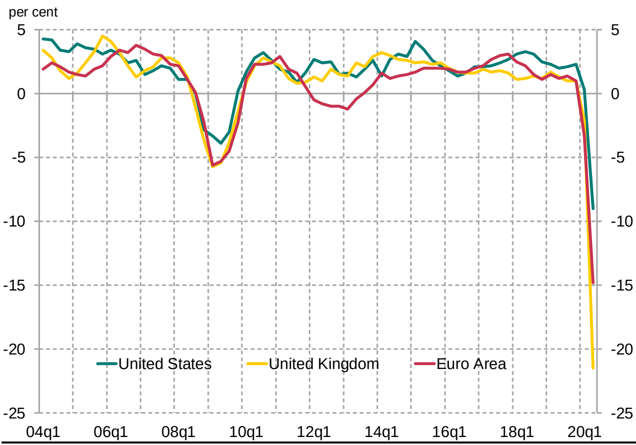
GDP-weighted annual growth rate of the total GDP, private consumption and gross fixed capital formation in non-euro area Central and Eastern European EU member states (excluding Poland): Bulgaria, Czech Republic, Croatia, Hungary and Romania.

[4] From the supply side, the sharpest fall (of almost 20%) was recorded in manufacturing, while gross value added in construction fell by 14.9% y/y and in services by 13.9% y/y.

were most affected by the epidemic. Thanks to an easing of the sanitary restrictions after the first wave of the pandemic and the resumption of production in regional networks (among others in the automotive industry), since May there has been a significant, although incomplete, recovery in activity. In July and August in the major economies of the region retail sales returned to the level of a year ago, but industrial output remained lower than before the pandemic. The unemployment rate in the CEE region rose to a limited extent. However, the sharp rise in COVID-19 infections recorded since September and the tightening of the epidemic restrictions in these countries risk derailing the recovery.

GDP in the United States fell by 9.0% y/y in 2020 Q2 compared to a rise of 0.3% y/y in 2020 Q1 (Figure 1.6). The collapse of economic activity in 2020 Q2 was caused primarily by a sharp fall in household consumer spending, particularly on services. Amid the easing of sanitary restrictions in some states, economic indicators improved in 2020 Q3, in particular retail sales grew in y/y terms. However, the still large scale of the COVID-19 pandemic hampered economic activity. Annual growth in industrial production has remained negative and in September it fell compared to the previous month. Similarly, labour market conditions remained significantly worse than before the pandemic.[5]

Figure 1.6 Economic growth in selected advanced economies (y/y)



Source: Bloomberg data.

The scale of the collapse in the United Kingdom's GDP in 2020 Q2 was among the largest in the advanced economies (a fall of 21.5% y/y compared to a fall of 2.1% y/y in 2020 Q1) as sanitary restrictions were kept in place for a relatively long time in Q2. Since May 2020 economic activity has grown steadily, but in August 2020 it was still over 9% lower than the a year before. The outlook for further improvement in economic conditions is undermined by the renewed deterioration in the

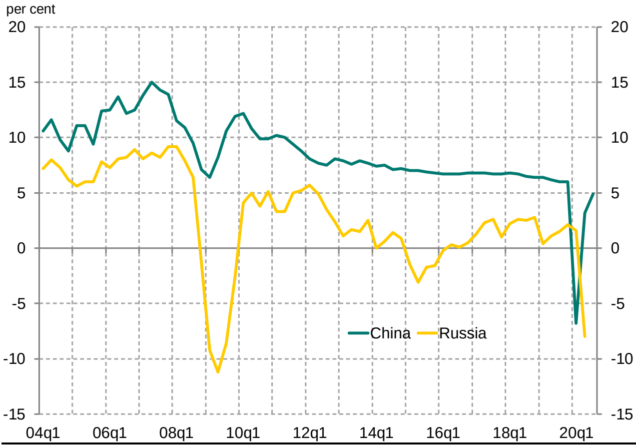
[5] In September 2020 the unemployment rate decreased to 7.9% compared to 14.7% in April 2020 and 3.5% in February 2020. At the same time, the increase in non-farm payrolls from May to September 2020 constituted only 52% of the jobs lost during March-April 2020.

epidemic situation and the tightening of the sanitary regime in September and October 2020.

In China, where according to available data the spread of the epidemic was halted and most sanitary restrictions had already been lifted by the end of 2020 Q1, GDP grew by 4.9% y/y in 2020 Q3 after a rise of 3.2% y/y in 2020 Q2 and a fall of 6.8% y/y in 2020 Q1 (Figure 1.7). The recovery of economic activity was supported by rising investment, mainly state and real estate investment, as well as a recovery in exports. In August and September, annual retail sales growth picked up and for the first time since the onset of the epidemic it has been positive.

In the remaining major emerging market economies, the number of infections grew rapidly in 2020 Q2, which was reflected in a significant fall in GDP (from -8.0% y/y in Russia to -23.9% y/y in India). Some economic indicators in these countries improved in 2020 Q3, supported by the recovery of demand in China and major advanced economies and the easing of sanitary restrictions, but the durability of the recovery was threatened by difficult epidemic situation (the persistence of a high number of infections, among others, in India and Brazil, and a significant rise in infections in Russia).

Figure 1.7 Economic growth in selected emerging market economies (y/y)



Source: Bloomberg data.

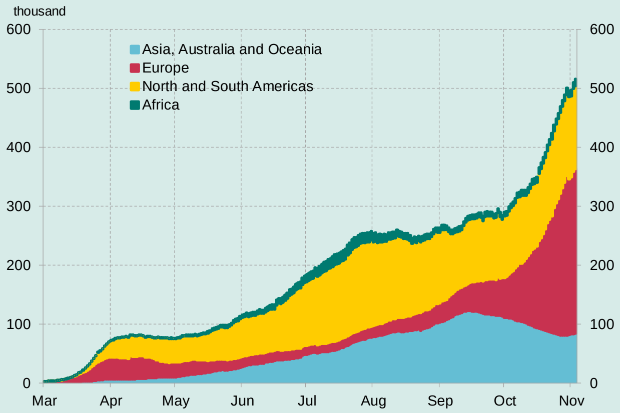
Box 1: The COVID-19 global epidemic situation[6]

Since September, the daily figures for new infections with the SARS-CoV-2 virus across the world have been rising, markedly exceeding 500 thousand in early November, a figure almost seven times as high as in April 2020 (Figure B.1.1).[7] In particular, there has been a new surge in the epidemic in Europe, where the daily number of diagnosed infections reached almost 300 thousand in early November. Large increases in new infections have been observed in many countries of both Western and Central and Eastern Europe (CEE); in the latter region the scale of the epidemic was relatively smaller in March and April 2020. At the same time, the number of infections relative to the size of the population has varied markedly across countries (Figure B.1.2).

[6] This Box presents a description of the epidemic situation according to the data available up until 5 November 2020.

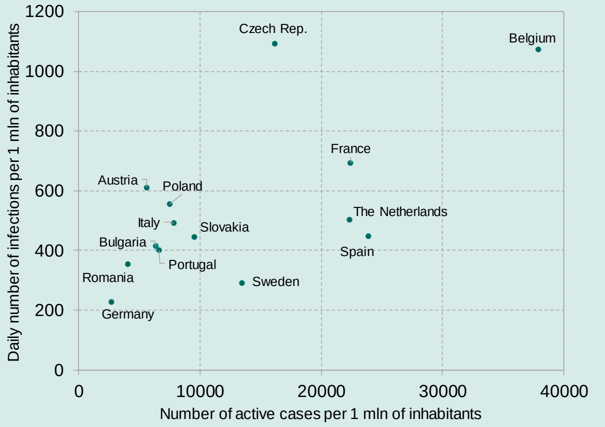
[7] So far over 49 million cases of the SARS-CoV-2 infection have been diagnosed across the world. More than 1.2 million people diagnosed with the virus have died. The numbers of infections and related deaths are changing rapidly, and the statistics on the number of infections are also influenced by an increase in testing.

Figure B.1.1 Daily number of diagnosed SARS-CoV-2 infections worldwide in 2020 (7-day average)



Source: Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) data, NBP calculations.

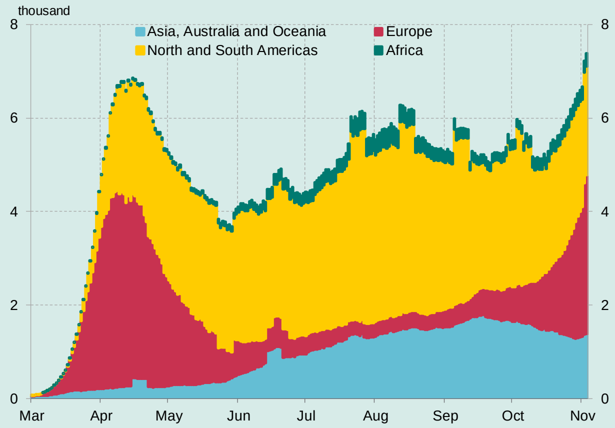
Figure B.1.2 Number of active cases and daily number of SARS-CoV-2 infections in selected EU countries (as at 5 November 2020, 7-day average)



Source: Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) data, NBP calculations.

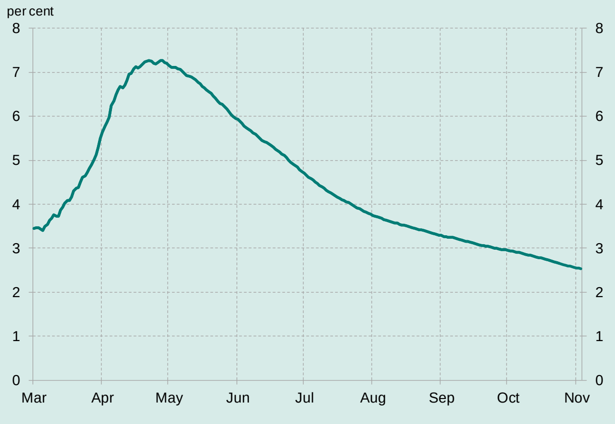
The faster daily growth in new infections has been accompanied by an accelerating increase in the number of deaths of those found infected. In early November, the daily number of deaths in the world exceeded levels recorded at the first stage of the pandemic. In recent weeks, the daily number of deaths has increased particularly rapidly in Europe (Figure B.1.3). Nevertheless, the total number of COVID-19 deaths relative to the total number of diagnosed infections was below 3% in early November, i.e. lower than at the initial stage of the pandemic (at the turn of April it exceeded 7%; Figure B.1.4).[8]

Figure B.1.3 Daily number of COVID-19 deaths worldwide in 2020 (7-day average)



Source: Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) data, NBP calculations.

Figure B.1.4 Daily number of COVID-19 deaths worldwide in 2020 relative to the total number of the diagnosed infections (per cent)



Source: Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) data, NBP calculations.

At the beginning of the year (especially in February, March and April 2020) many countries worldwide imposed sanitary restrictions on social and economic activities with the aim of containing the spread of the epidemic. In the following months, most countries, particularly in Europe, were gradually reducing the scale of these restrictions.

[8] The decline in the global death rate could have stemmed from both statistical factors (such as, among others, the rising share of countries with younger demographic structures in total infections, or the increase in the number of carried out tests and diagnoses of asymptomatic infections), and medical factors (such as, among others, probably better preparation and higher capacity of the health care system or potentially more effective treatment methods).

In response to the surge in infections observed since September, many European countries have tightened epidemic restrictions once again.

1.2 Inflation developments abroad

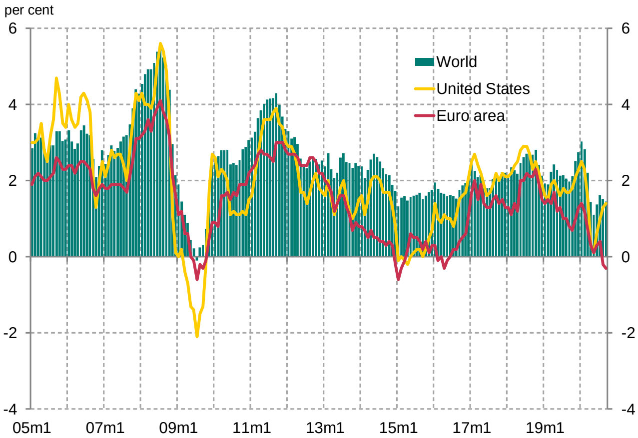
Amid weaker economic activity than before the onset of the pandemic, in recent months consumer price growth in the global economy has stabilised at a low level (Figure 1.8). To a large extent, this has resulted from the stabilisation of global oil prices at well below the 2019 levels (although somewhat higher than during the initial phase of the pandemic; see Chapter 1.3 *Global commodity markets*), which has translated into negative growth in fuel prices. In the euro area, deflation has persisted in recent months, while in the United States inflation is significantly lower than at the beginning of the year, although – following a sharp fall to almost zero in the initial phase of the pandemic – it has risen in recent months.

In the euro area, the annual HICP index amounted to -0.3% y/y in September 2020. Core inflation also declined significantly (to 0.4% y/y; Figure 1.9). A fall in prices of transport and tourism services, slower food price growth and temporary reductions in VAT rates in Germany have contributed to the decline in consumer price growth in recent months.

Inflation in the non-euro area Central and Eastern European countries has stabilised in recent months at a lower level than at the beginning of the year (Figure 1.10). Slower food price growth has reduced inflation, while core inflation rose slightly in some countries of the region.

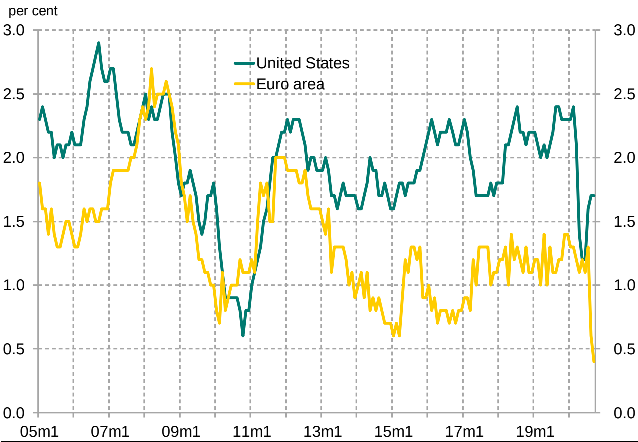
Following a sharp decline in the initial phase of the pandemic, mainly as a result of the fall in energy prices, CPI inflation in the United States remains significantly lower than at the beginning of the year, despite a moderate rise in recent months (to 1.4% in September 2020 compared to 0.1% y/y in May 2020 and 2.5% y/y in January 2020). Although annual energy price growth has remained negative,

Figure 1.8 CPI inflation globally and in selected economies (y/y)



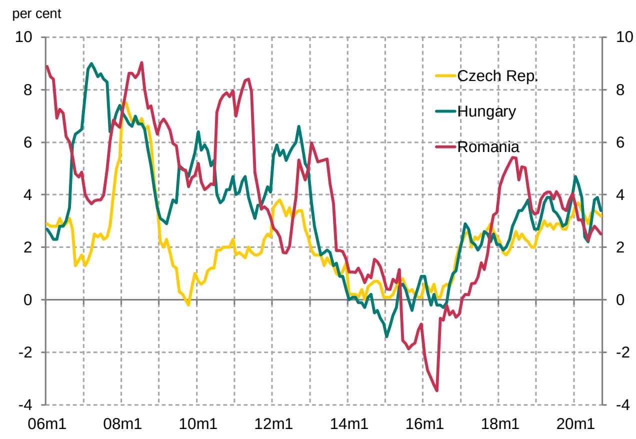
Source: Bloomberg and IMF data, NBP calculations.
World – average consumer price inflation in economies comprising over 80% of global GDP, weighted by 2017 GDP. The United States – annual CPI inflation. Euro area – annual HICP inflation.

Figure 1.9 Core inflation in the United States and the euro area (y/y)



Source: Bloomberg and Eurostat data.
The United States – annual CPI inflation less food and energy. Euro area – HICP inflation excluding energy and unprocessed food.

Figure 1.10 CPI inflation in the Czech Republic, Romania and Hungary (y/y)



Source: Bloomberg data.

it has been gradually rising in recent months, thus boosting CPI inflation. The increase in inflation was also driven by a partial rebound in prices of goods and services that were most affected by the fall in demand at the early stage of the pandemic (among others, new and used vehicles), although in many of these categories prices were still lower in September than a year ago (e.g. apparel, transportation services).

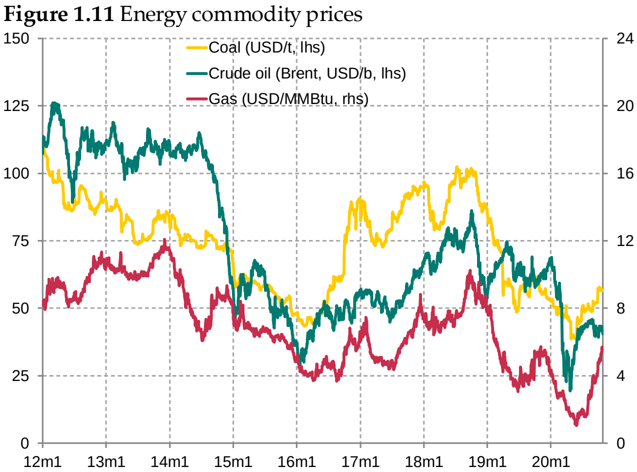
1.3 Global commodity markets

Since the publication of the previous *Report*, oil and agricultural commodity prices have stabilised at a low level. This has primarily been caused by the global fall in demand for commodities due to weaker global economic activity related to the COVID-19 pandemic.

Since June 2020 crude oil prices have stabilised at a level approx. 30% lower than a year before, but higher than at the initial phase of the pandemic (Figure 1.11). Besides the lower demand resulting from weaker global economic activity, oil prices have also been held down by high uncertainty about the further spread of the pandemic and the outlook for global economic growth. At the same time, prices have been supported by the maintenance of oil production limits by OPEC+ countries and cuts in production by firms in other oil-producing countries.

In turn, global gas prices and – to a lesser extent – coal prices have risen recently after an earlier significant fall. As a result, at the end of October, they stayed close to the previous year's levels, but remained significantly below the long-term average. In addition to seasonal factors, the recovery of demand in Asia, mainly due to the improvement in economic conditions in China (see Chapter 1.1 *Economic Activity Abroad*), contributed to the rise in gas prices. At the same time, relatively low demand for energy in other regions, resulting from weaker economic activity, put downward pressure on the prices of both gas and coal.

Figure 1.11 Energy commodity prices

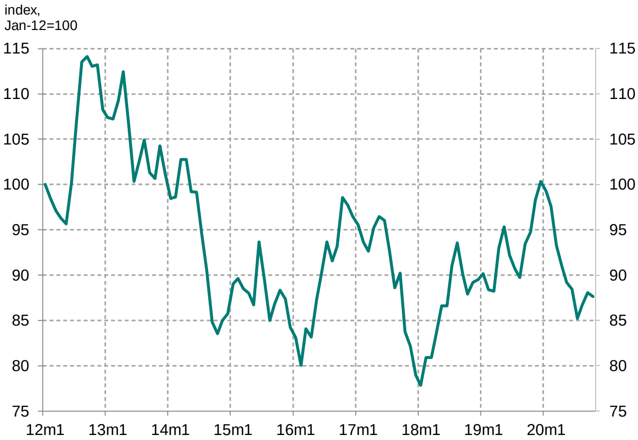


Source: Bloomberg data, NBP calculations.

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 per million 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).

Since the publication of the previous *Report*, agricultural commodity prices have been running relatively low (Figure 1.12). This has been the result of reduced private consumption in many economies, a significant fall in the demand of the accommodation and food service sector (due to the COVID-19 pandemic), and the persistently high output and stocks of agricultural products. From the beginning of September 2020, the decline in European pork prices has also put downward pressure on agricultural commodity prices. The decrease resulted from the introduction of a ban on imports of German pork to China and other Asian countries, following the discovery of the first cases of African swine fever (ASF) among wild boars in this country.

Figure 1.12 Index of agricultural commodity prices



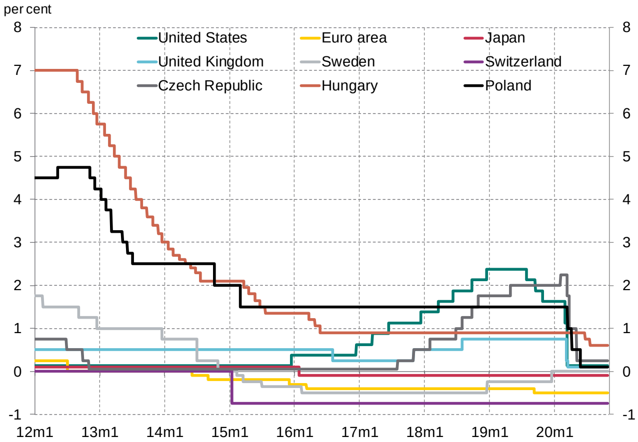
Source: Bloomberg data, NBP calculations.

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.

1.4 Monetary policy abroad

Following a very significant easing of monetary policy in the first half of 2020, most of the world's central banks have maintained a highly expansionary monetary policy stance in recent months. This has been motivated by low inflation, an only partial recovery of economic activity, persistently high uncertainty and a surge in the epidemic in many countries. Many banks have maintained historically low interest rates and continued asset purchases (Figure 1.13, Figure 1.14, Figure 1.15). At the same time, the leading developed-country central banks have declared their readiness to ease monetary conditions further. Under these circumstances, prices of derivatives suggest that financial market participants expect the policy interest rates of the major central banks to be running at current or lower levels in the upcoming years (Figure 1.16).

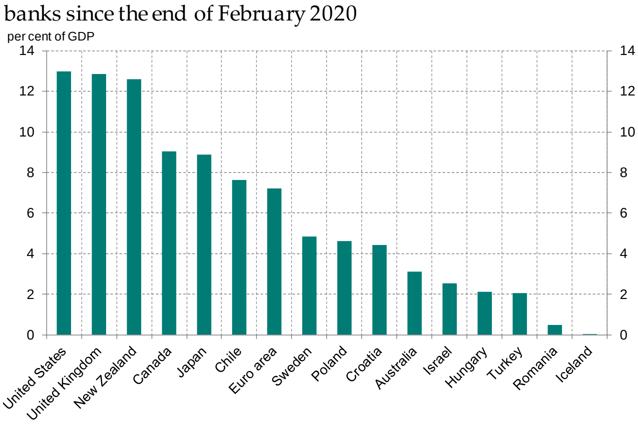
Figure 1.13 Interest rates of selected central banks



Source: Bloomberg data.

Central bank interest rate: for the United States – the midpoint of the *fed funds* range; for the euro area – the *deposit facility*; for the United Kingdom – the *Bank Rate*; for Japan – the *Complementary Deposit Facility*; for Sweden – the 1W repo rate; for Switzerland – the *policy rate*; for the Czech Republic – the 2W repo rate; for Hungary – the *base rate*; for Poland – the NBP reference rate.

Figure 1.14 Hitherto scale of asset purchases of selected central banks since the end of February 2020



Source: central bank and OECD data.

For Romania, New Zealand, Chile, Israel and Iceland data as of September, for the remaining countries as of October. GDP as of 2019.

In recent months, the European Central Bank (ECB) has kept its deposit rate at -0.50%. At the same time, the ECB has continued the pandemic emergency purchase programme (PEPP) in the declared amount of EUR 1,350 billion until June 2021 and the asset purchase programme (APP) to the tune of

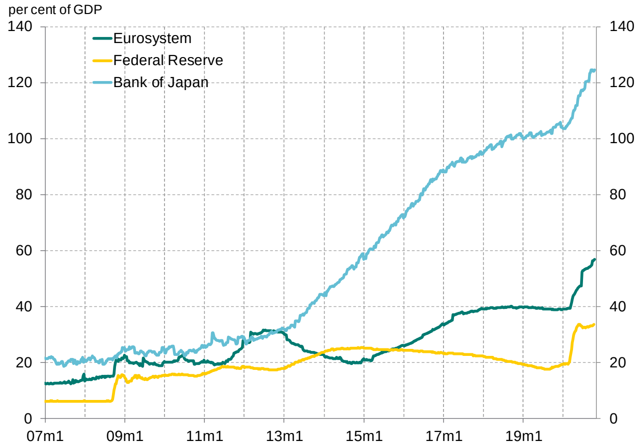
EUR 20 billion per month,[9] with an additional EUR 120 billion until the end of 2020. Simultaneously, the ECB has continued to conduct operations providing liquidity to the euro area banking sector, and offer access to liquidity-providing swap and repo operations in euro to selected banks outside the euro area. Furthermore, in its recent communication it emphasised the significance of the exchange rate for monetary policy in the euro area, pointing out that appreciation of the euro was having a downward effect on inflation.

The US Federal Reserve (Fed) has maintained the target fed funds range at 0.00%-0.25%. At the same time, the Fed has continued the activities initiated in the first half of the year aimed at easing financial conditions, including financial asset purchases.[10] Furthermore, the Fed has recently hinted that it expects the current level of interest rates to be maintained until the labour market conditions have become consistent with the state of maximum employment and inflation has reached 2% and is on track to moderately exceed this level for some time. This message is in line with the revision of monetary policy strategy announced by the Fed in August of this year (see also Box: *Revision of the US Federal Reserve's monetary policy strategy*).

The remaining major advanced-economy central banks have also continued to pursue a very accommodative monetary policy in recent months, keeping their interest rates close to zero and carrying on with asset purchases. Simultaneously, many of them (including the central banks in Japan, the United Kingdom, Sweden and Australia) have indicated that they are ready to ease monetary policy further.

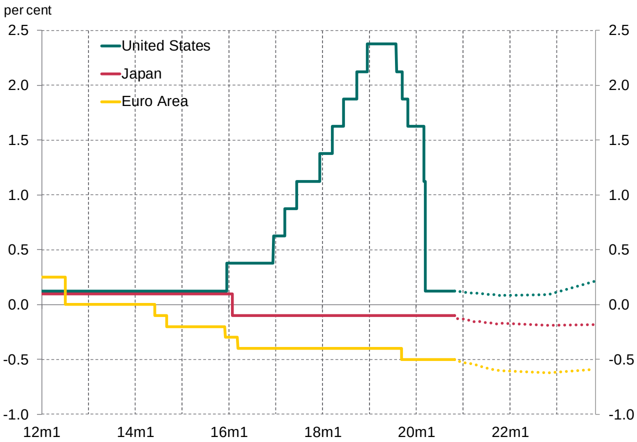
The central banks of major emerging economies have also continued to pursue an expansionary

Figure 1.15 Total assets of major central banks as a per cent of GDP



Source: Bloomberg and OECD data, NBP calculations.
GDP data quarterly, annualised and seasonally adjusted. Calculation for 2020 based on 2019 annual GDP.

Figure 1.16 Historical and expected interest rates in the United States, euro area and Japan



Source: Bloomberg data.
Central bank interest rate: for the United States – the midpoint of the *fed funds* range; for the euro area – the *deposit facility*; for Japan – the *Complementary Deposit Facility*. Market expectatations based on fed funds futures and forward contracts for the United States and OIS and forward contracts for the euro area and Japan.

[9] The ECB does not specify the time horizon for the APP, simply declaring that "*We continue to expect monthly net asset purchases under the APP to run for as long as necessary to reinforce the accommodative impact of our policy rates, and to end shortly before we start raising the key ECB interest rates.*"
[10] Between 3 and 30 September, the sum of Fed balance sheet items accounting for the programmes of purchases of various types of financial assets increased by USD 92.7 billion, i.e. on a similar scale as in July and August 2020, yet markedly smaller than at the early stage of the pandemic.

monetary policy. Some of them, including the central banks of Russia, Brazil, Mexico and South Africa, have made further interest rate cuts since the publication of the previous *Report*.

Box 2: Revision of the US Federal Reserve's monetary policy strategy

On 27 August 2020, during the Jackson Hole symposium, the chairman of the US Federal Reserve (Fed), Jerome Powell, delivered a speech entitled *New Economic Challenges and the Fed's Monetary Policy Review*, which concluded an over one-and-a-half-year-long review of the strategy, tools and communication of the US central bank.[11] On the same day, the Fed released a new version of the *Statement on Longer-Run Goals and Monetary Policy Strategy,*[12] presenting its monetary policy framework. The key strategy changes announced by the Fed were to relate its price stability objective to the average inflation level and to put an emphasis on the shortfall of employment from its maximum level, instead of – as had been the case up to that point – on deviations, whether upwards or downwards, from the estimated level of maximum employment.

Outline of the Fed's previous strategy

The Fed's monetary policy mandate is set out in the Federal Reserve Act and comprises the goals of maximum employment and price stability.[13,14] Since 2012 – when the Fed announced a numerical longer-run inflation goal, setting it at 2% in terms of the annual price index for personal consumption expenditures (PCE) – it has sought to fulfil its mandate by pursuing a monetary policy based on, *de facto*, inflation targeting strategy. The publication of a numerical longer-run inflation goal was aimed at anchoring inflation expectations at around 2%, which was considered consistent with the notion of long-run price stability. When disclosing the longer-run inflation goal, the Fed also stressed that, owing to the considerable role of structural factors in labour market developments, specifying a fixed goal for employment was not appropriate. Thus, the Fed's approach was in principle consistent with the flexible inflation targeting framework, even though, until recently, this term was not explicitly used to describe the Fed's strategy.

Rationale for the review of the Fed's monetary policy strategy

The strategy review, launched in 2019, was motivated by the changes that occurred, among others, in the US economy following the 2008 global financial crisis. In particular, consumer price inflation in the United States – including inflation measured with PCE – has persisted below 2% throughout most of the past decade (Figure B.2.1). Inflationary pressure has remained subdued even in the face of a considerable drop in the unemployment rate, which in 2019 reached the lowest level in 50 years (Figure B.2.2), pointing to a weaker inverse link between the unemployment rate and inflation, referred to in the literature as the Philips curve.

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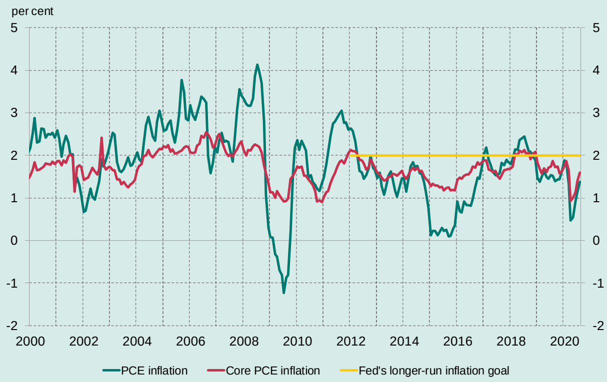
[11] Since the beginning of 2020, the European Central Bank (ECB) has also been performing a review of its strategy.
[12] https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications-statement-on-longer-run-goals-monetary-policy-strategy.htm
[13] Section 2A of the Federal Reserve Act (12 USC 225a): *The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.*
[14] In addition to the two above-mentioned goals, *the Federal Reserve Act* also mentions moderate long-term interest rates. Yet the Fed does not usually refer to the long-term interest rates objective, pointing out that it is met as long as price stability is maintained (see also https://www.federalreserve.gov/faqs/what-economic-goals-does-federal-reserve-seek-to-achieve-through-monetary-policy.htm).

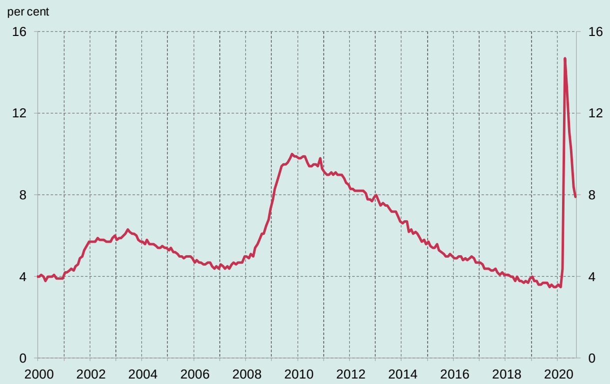
Figure B.2.1 Inflation in the United States against the Fed's longer-run inflation goal (y/y)



Source: FRED data.

Core PCE inflation – PCE inflation less food and energy.

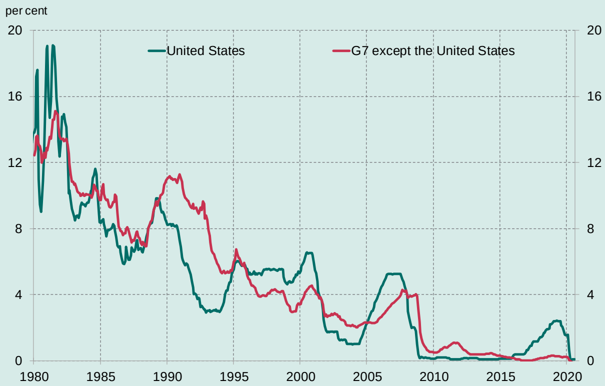
Figure B.2.2 Unemployment rate in the United States



Source: FRED data.

The unemployment rate is computed by the US Department of Labor on the basis of the Current Population Survey.

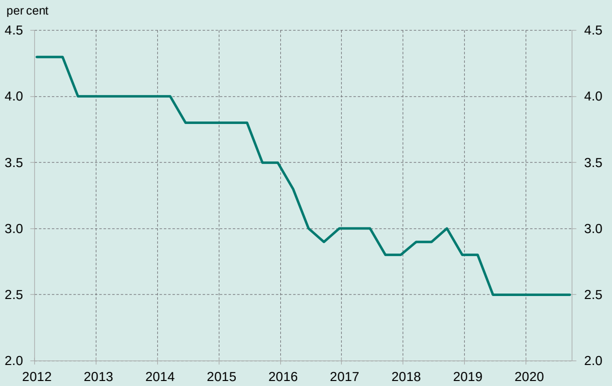
Figure B.2.3 Short-term interest rates in the United States and other major advanced economies



Source: FRED and OECD data.

United States – effective fed funds rate.
G7 except the United States – arithmetic mean of short-term interbank market rates in Canada, France, Germany, Italy, Japan, and the United Kingdom.

Figure B.2.4 Median of FOMC members' estimates of fed funds rate in the longer run



Source: FRED data.

Like in many other economies, interest rates in the United States have also been trending markedly downward in the past few decades (Figure B.2.3). In particular, following the onset of the global financial crisis in 2008, the Fed lowered the fed funds target range to the near-zero level of 0.00-0.25%, and kept it there for the subsequent 8 years. Afterwards, amid a sustained improvement in economic conditions, the Fed raised the fed funds rate range to 2.25-2.50% between 2015 and 2018, i.e. a level substantially lower than the highest levels recorded during previous expansions (Figure B.2.3).[15] In parallel, the Federal Open Market Committee (FOMC) members' estimates of the longer-run fed funds rate, published since 2012, have been steadily declining (Figure B.2.4).[16] The fall in the longer-run interest rates increased the risk of hitting the so-called effective lower bound (ELB), thus restricting the space for interest rate cuts in case of a recession.[17] The challenges arising from the COVID-19

[15] For comparison, in the past few expansion periods (according to NBER) the maximum level of the fed funds rate was approximately as follows: 5.3% in 2007, 6.5% in 2000, 11.6% in 1984 and 19.1% in 1981.
[16] The following studies, among others, also point to the decline in the longer-run interest rate in the United States: Lubik and Matthes, 2015; Holston et al., 2017; Gerali and Neri, 2018; Johannsen and Mertens, 2018; Brand and Mazelis, 2019.
[17] One of the methods to underpin effective monetary transmission in the ELB environment is to use unconventional monetary policy instruments, including asset purchases.

pandemic, including a substantial decline in economic activity and employment as well as a fall in inflation, confirmed the relevance of the challenges originally motivating the launch of the strategy review.[18]

Key changes to the Fed's strategy

The review resulted in a revised Fed strategy, described in the latest *Statement on Longer-Run Goals and Monetary Policy Strategy*. The Statement reiterated the reference to the Fed's mandate of aiming for maximum employment and price stability. The 2% longer-run inflation goal, pertaining to the annual PCE index, was also preserved, as was the absence of a quantitative definition of maximum employment. Besides that, two major modifications were introduced (Clarida, 2020; Powell, 2020).

Firstly, the Fed related the longer-run inflation goal to the average inflation level, while indicating that the goal would be pursued flexibly (flexible average inflation targeting) and not specifying the horizon to which the average was to relate.[19] In accordance with this approach, the Fed emphasised that following the periods of inflation running persistently below 2%, it would aim to achieve inflation moderately above 2% for some time.

Secondly, the Fed declared that in its decision-making it would take into account employment shortfalls from its maximum level, instead of – as was the case up to that point – its deviations from that level (i.e. both upward and downward differences relative to the estimated maximum employment level).

The statement also stresses that the long-run level of interest rates has declined, owing to which monetary policy may be constrained by the ELB more often than in the past. In the assessment of the FOMC, the risk of excessively low employment and inflation has risen under these circumstances.

Amid the challenges related to the low interest rate environment and the persistently subdued inflation level, the raising of the inflation goal is a way to mitigate the problem of the effective lower bound. Considering that in the past decade, notably in the past year, inflation has been running below 2%, the updates to Fed's strategy may be interpreted as a *de facto* increase in the inflation goal in the coming years to moderately above 2%. At the same time, the new interpretation of the objective relating to maximum employment reflects the view that the Phillips curve has flattened, which, together with the fact that high employment is conducive to social inclusion, means that a low unemployment rate *per se* should not incline the Fed to tighten monetary policy, unless it is accompanied by excessive inflationary pressure. Both of these inferences seem to be in line with the FOMC press release following the first decision-making meeting after the strategy revision. The release pointed out that as inflation had been persistently below the longer-run inflation goal, the FOMC will aim to achieve inflation moderately above 2% for some time. It was also indicated that the Committee expected to maintain the current level of interest rates (0.00-0.25%) until labour market conditions have reached levels consistent with the state of maximum employment and inflation has risen to 2% and is on track to moderately exceed 2% for some time.[20]

[18] The ECB also highlights similar challenges in its strategy review, which is currently in progress. In her speech of 30 September 2020, the president of the ECB, Ch. Lagarde pointed to the fact that the euro area was also struggling with challenges to monetary policy arising from low inflation, the decoupling between the real economy and inflation (including the Phillips curve flattening) as well as the natural interest rate decline. Among the key issues addressed by the review, the ECB president mentioned the definition of the inflation aim, monetary policy toolkit in the low inflation environment and the interaction between monetary and fiscal policy. https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200930~169abb1202.en.html

[19] The adoption of the average inflation targeting strategy also emphasises the symmetry of the 2-percent longer-run inflation goal, which was first explicitly stated by the Fed in 2016.

[20] Fragments of the release following the FOMC meeting on 16 September, 2020: *With inflation running persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent. (…)*

The Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time.

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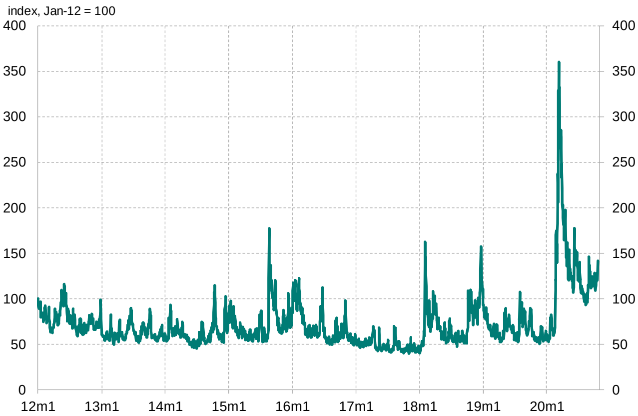
1.5 International financial markets

After the turmoil in the global financial markets in the first half of 2020 following the outbreak of the COVID-19 pandemic, in recent months market volatility has been markedly lower than in March 2020, but significantly higher than before the pandemic (Figure 1.17). Among others, highly expansionary monetary policy and an announcement of fiscal stimulus programmes in many economies have contributed to the improvement in financial market sentiment. However, the escalation of the pandemic in September and October 2020 (See Box 1: *The COVID-19 global epidemic situation*) and persistent uncertainty about the outlook for global economic growth have had a negative impact on the sentiment. Amid highly expansionary monetary policy worldwide, government bond yields have reached record lows in many countries, staying negative in many advanced economies. At the same time, equity prices have been significantly higher than at the initial stage of the pandemic and close to the levels noted at the beginning of the year.

Figure 1.17 Volatility index VIX



Source: Bloomberg data.

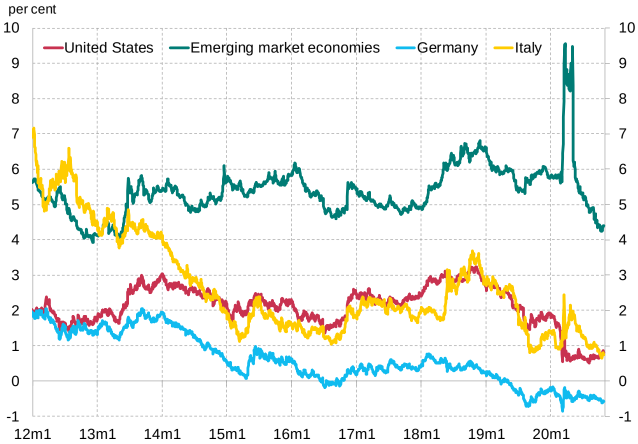
In recent months, yields on US Treasury bonds have stabilised at an all-time low (Figure 1.18).[21] Bond prices have been supported by a highly expansionary monetary policy of the Fed, which has been signalled to continue in the coming years (see Chapter 1.4 *Monetary policy abroad*). In the euro area, long-term government bond yields have also remained at a record low and have been negative in most countries,[22] which has been related to the ECB's accommodative monetary policy. At the same time, concerns of market participants about the macroeconomic stability of euro area countries with lower creditworthiness have subsided due to, among others, the preliminary agreement by EU member states on a new instrument to support the recovery of the European economies (*Next Generation EU*). This instrument is to be financed, among others, via debt issuance by the European Commission on behalf of the EU. As a result, bond yields of the countries with lower creditworthiness have declined. 10-year Italian bond yields have fallen particularly sharply.

At the same time, in recent months the average yield on government bonds of the emerging market economies has fallen substantially, reaching record lows in many countries.

In July and August, equity prices in the advanced and emerging market economies continued to rise relative to the levels seen at the initial phase of the pandemic, temporarily reaching their record high in the United States. However, in September and October the increases in stock indices halted due to, among others, the deterioration in the epidemic situation around the world. As a result, equity prices were close to the levels seen at the beginning of the year (Figure 1.19).

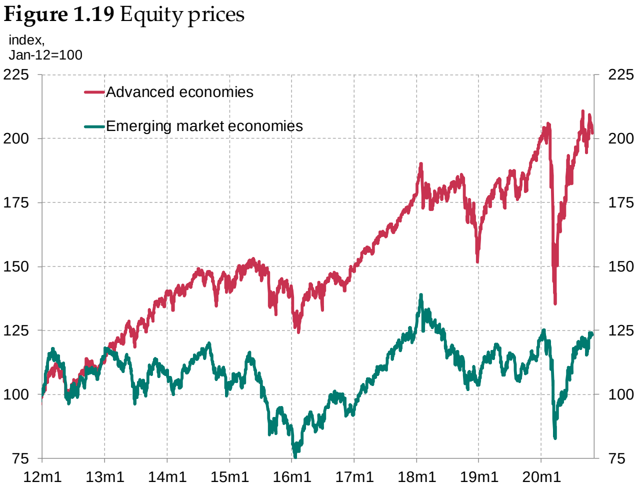
Since the publication of the previous *Report*, the US dollar has weakened both against the euro and

Figure 1.18 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.

Figure 1.19 Equity prices

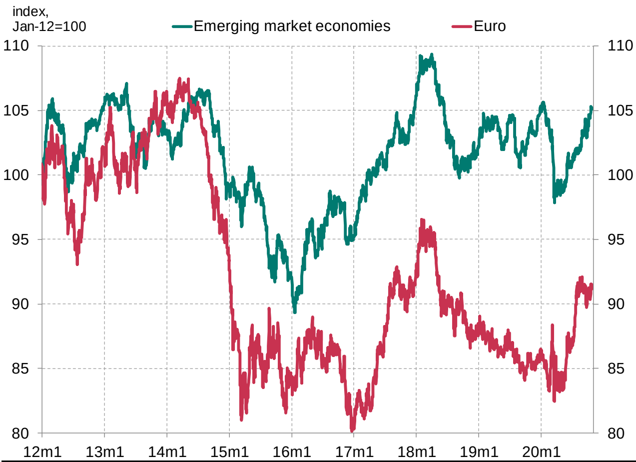


Source: Bloomberg data.
Advanced economies – MSCI World Equity Index; emerging market economies – MSCI Emerging Markets Equity Index.

[21] In 2020 Q3, yields on 10-year US Treasury bonds hit a record low (approx. 0.5%), and in October 2020 their average yield was 0.8%, staying close to the June 2020 levels.
[22] Among the euro area countries, in October the average yields on 10-year Treasury bonds were negative in Germany (where they stood at approx. -0.6%), France, the Netherlands, Belgium, Austria, Finland, Ireland, Luxembourg, Slovenia, Slovakia and Latvia.

emerging market currencies (Figure 1.20). This has taken place amid a highly expansionary monetary policy in the United States, which was signalled to continue in the coming years with the Fed announcing that it would aim to maintain inflation moderately above 2% for some time (see Box 2: *Revision of the US Federal Reserve's monetary policy strategy*).

Figure 1.20 Exchange rates against the US dollar (rise indicates appreciation)



Source: Bloomberg data, NBP calculations.
Emerging market economies – MSCI Emerging Market Currency Index.

2. Domestic economy

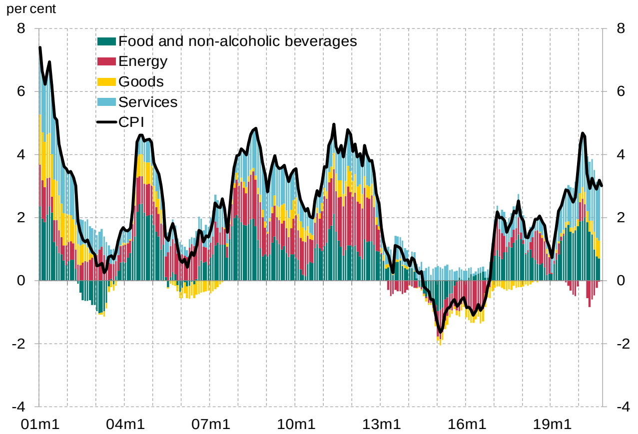
2.1 Inflation developments

In recent months annual consumer price growth in Poland has hovered around 3.0% (against 4.5% in 2020 Q1; Figure 2.1).[23] Higher fuel price growth and also, but to a lesser extent, somewhat higher growth in prices of non-food goods, including clothing and footwear, have had a positive impact on inflation in recent months. On the other hand, inflation has been reduced by a significant fall in food price growth amid relatively low global agricultural commodity prices (see Chapter 1.3 *Global commodity markets*).

Since the publication of the previous *Report*, annual growth of energy prices has risen, although it has remained negative and amounted to -0.3% y/y in September 2020 (against -5.3% y/y in May 2020; Figure 2.2). The fall in energy prices was reduced primarily by a slower decline in fuel prices in annual terms.[24] This stemmed from a stabilisation of global oil prices at a level higher than in the initial phase of the pandemic, although still significantly lower than in 2019. On the other hand, annual energy price growth was decreased by the fall in natural gas prices related to the introduction of lower sale tariffs in July 2020.

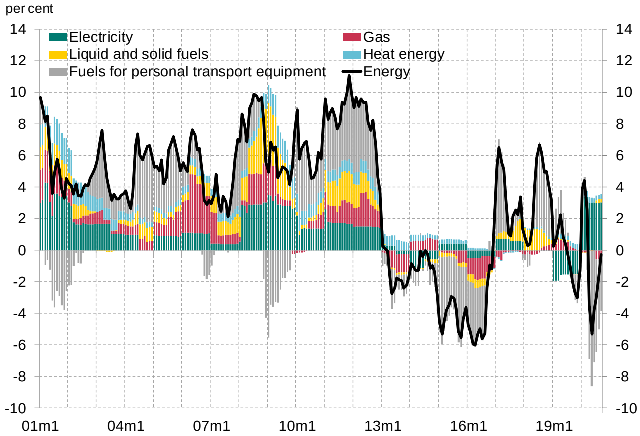
Inflation of food and non-alcoholic beverage prices in Poland declined sharply (to 2.8% y/y in September 2020 from 6.2% y/y in May 2020). This was mainly due to slower growth of unprocessed food prices (2.7% y/y in September against 8.6% y/y

Figure 2.1 Composition of CPI inflation (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.2 Energy price growth and its components (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.

[23] CPI inflation in August stood at 2.9% y/y, in September at 3.2% y/y and – according to Statistics Poland (GUS) flash estimate – in October it stood at 3.0% y/y.

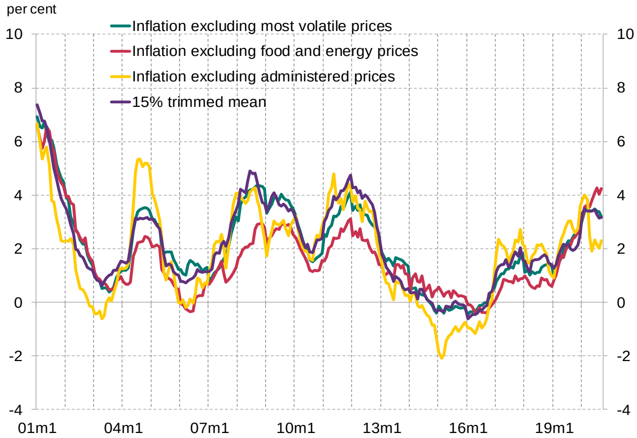
[24] In September and October (according to Statistics Poland (GUS) flash estimate), growth in the prices of fuel for personal transport equipment stood at -9.2% y/y against -23.4% y/y in May 2020.

in May 2020). The decline in price growth in annual terms stemmed primarily from a fall in the prices of vegetables (due to lower demand in the food service sector) and a slowdown in the growth of meat prices (mainly cured meat and pork – see Chapter 1.3 *Global commodity markets*) and fruit prices (as a result of an increased supply in the current season and statistical base effects). At the same time, growth in the prices of processed food declined to a slightly lesser extent (to 2.8% y/y in September 2020 from 4.1% y/y in May 2020), mainly as a consequence of the weaker price growth of bread and cereal products.

Inflation excluding food and energy prices increased by 0.5 percentage points in September compared to May and stood at 4.3% y/y (Figure 2.3). This measure of core inflation was boosted by an increase in the growth of non-food goods prices (to 1.7% y/y in September against 1.0% y/y in May 2020), mainly of clothing and footwear[25], as well as of products related to recreation and culture. At the same time, in September growth in the prices of services (7.2% y/y) was close to the growth observed in May 2020 (7.1% y/y). In this period, services prices were boosted primarily by an increase in the prices of communications services,[26] as well as of recreation and culture. On the other hand, the slower growth in the prices of transport services, particularly of air transport, as well as the prices of insurance and services provided by restaurants and hotels curbed services price growth. The increases in waste disposal charges and excise goods prices observed at the beginning of 2020 continued to have the greatest contribution to inflation excluding food and energy prices in annual terms (approx. 0.9 and 0.5 percentage points, respectively).

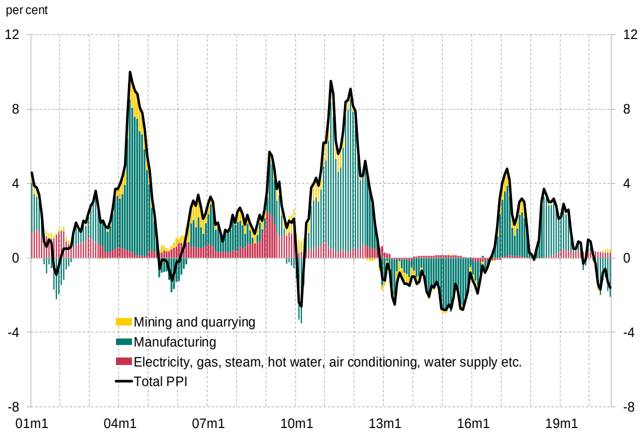
At the same time, inflation excluding administered prices, i.e. excluding among others the changes in

Figure 2.3 Core inflation indices (y/y)



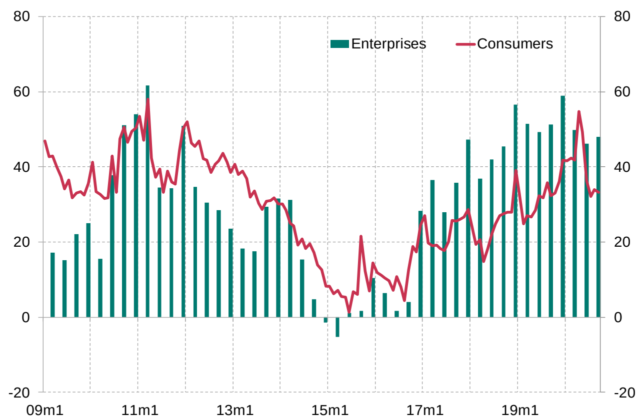
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.4 Composition of PPI inflation (y/y)



Source: Statistics Poland (GUS) and Eurostat data.

Figure 2.5 Balance statistics of consumer and enterprise inflation expectations



Source: Statistics Poland (GUS) and NBP data, NBP calculations.
Balance statistics is defined as a difference between a fraction of respondents expecting rise in prices and a 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.

[25] Price growth in the clothing and footwear category rose to -2.0% y/y in September from -4.2% y/y in May 2020.
[26] The growth in the prices of communications services was the result of a significant increase in the price of a services package of one of the operators.

waste disposal charges and electricity prices, stood at 2.3% y/y in September.

Producer price decline has continued in Poland since March 2020 (Figure 2.4). In September 2020 producer price growth stood at -1.6% y/y (against -1.7% y/y in May 2020). The lower-than-the-previous-year global oil prices are the main driver of the negative producer price growth.

Since the publication of the previous *Report* the inflation expectations of market analysts over a four-quarter horizon have declined slightly (according to the Refinitiv survey; Table 2.1). At the same time, the median forecast of the NBP Survey of Professional Forecasters[27] in the horizon of both four and eight quarters is slightly below 2.5%. The opinions of surveyed consumers have not changed significantly in the recent period, while the expectations of enterprises have shifted slightly towards higher inflation (Figure 2.5).

2.2 Demand and output

In 2020 Q2, economic activity plummeted due to the COVID-19 pandemic. GDP contracted by 8.4% y/y; a 10.8% y/y decline in consumption had the largest contribution to this fall (Figure 2.6; Table 2.2). Investment also dropped sharply (by 10.7% y/y).

Consumption of both goods and services fell, which resulted primarily from epidemic restrictions. Consumption was also reduced by high uncertainty and a marked deterioration in consumer sentiment due to the pandemic. The drop in investment, in turn, was mainly observed in the enterprise sector, which considerably reduced investment outlays due to flagging demand, frozen economic activity in some sectors, a surge in uncertainty and lower expectations about future economic activity.

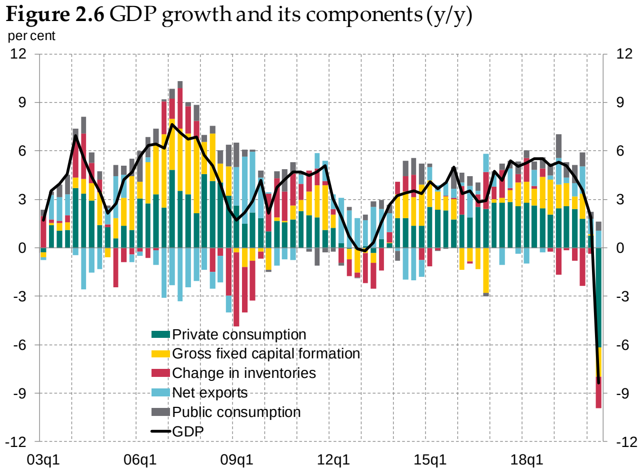
Table 2.1 Inflation expectations of financial sector analysts and participants to the NBP Survey of Professional Forecasters (per cent)

	Survey conducted in:				
	19q3	19q4	20q1	20q2	20q3
Refinitiv Survey, inflation expected in 4 quarters	2.8	2.8	1.8	1.9	1.8
NBP Survey, inflation expected in 4 quarters	2.8 (2.3-3.2)	3.1 (2.7-3.5)	2.2 (1.4-2.9)	2.3 (1.3-3.3)	2.3 (1.6-2.8)
NBP Survey, inflation expected in 8 quarters	2.6 (1.9-3.3)	2.8 (2.0-3.2)	2.5 (1.5-3.4)	2.6 (1.6-3.3)	2.4 (1.7-3.2)

Source: NBP and Refinitiv data.

Inflation expectations of the financial sector analysts are proxied by the median forecast of the analysts surveyed by Refinitiv (former Thomson Reuters) in the last month of a given quarter. 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. In the parentheses there are given 50% probability intervals (between the 1st and 3rd quartiles) of this distribution. In principle, the survey takes place within the last two weeks of a given quarter and overlaps with the first two working days of a following quarter.

Figure 2.6 GDP growth and its components (y/y)



Source: Statistics Poland (GUS) data.

Table 2.2 GDP growth and its contributions (y/y, per cent)

	2018				2019				2020	
	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
GDP	**5.3**	**5.5**	**5.5**	**5.1**	**5.3**	**5.1**	**4.4**	**3.6**	**1.9**	**-8.4**
Private consumption	2.8	2.6	2.4	2.1	2.5	2.6	2.4	1.8	0.7	-6.2
Public consumption	0.5	0.5	0.7	0.7	1.5	1.0	1.2	0.9	0.5	0.6
Gross fixed capital formation	1.3	1.0	1.9	2.2	1.5	1.4	0.8	1.6	0.1	-1.8
Change in inventories	1.5	0.2	0.6	-0.3	-1.7	-0.1	-0.8	-2.4	-0.3	-2.0
Net exports	-1.0	1.0	-0.3	0.2	1.6	0.3	0.8	1.7	0.9	1.1

Source: Statistics Poland (GUS) data.

[27] *NBP Survey of Professional Forecasters. Results of the NBP Macroeconomic Survey. September 2020*, NBP. No. 3/2020.

Owing to a rapid decline in economic activity among Poland's main trading partners (see also Chapter 1.1 *Economic activity abroad*), exports decreased by 14.3% y/y in 2020 Q2. Even though the drop in economic activity abroad was deeper than in Poland, export growth exceeded that of imports. Consequently, the contribution of net exports to GDP growth was positive.

Government spending on goods and services also had a positive contribution to GDP growth in 2020 Q2, driven by stable wage growth in the public sector and expenditure related to the COVID-19 pandemic.

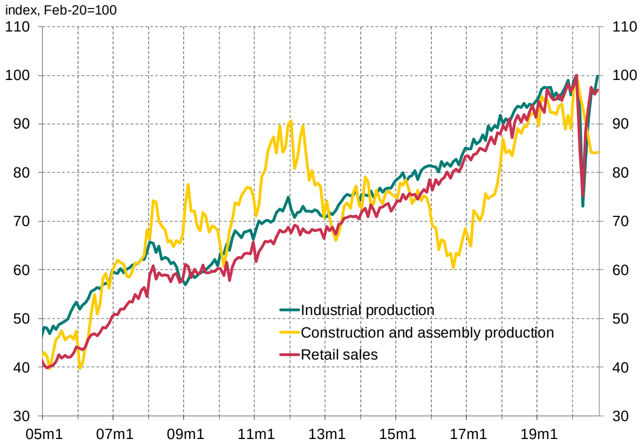
The available data for 2020 Q3 indicate a marked rebound in economic activity in this period (Figure 2.7), which was aided by the lifting of the majority of nationwide epidemic restrictions (mainly in May and June), improved business and household sentiment and support from fiscal and monetary policy, both at home and abroad.

Monthly data on retail sales and industrial output as well as high frequency economic data indicate that consumption and exports ran in 2020 Q3 slightly below their pre-pandemic levels. Recovery was hampered by slower wage bill growth and weaker economic activity abroad than before the pandemic, as well as persistently elevated uncertainty about economic outlook.

Investment probably remained relatively weak in 2020 Q3, as suggested by the data on construction and assembly output, production and imports of capital goods, and surveys of enterprises. Investment continued to be dragged down by high uncertainty and lower-than-before-the-pandemic expectations about the future level of economic activity.

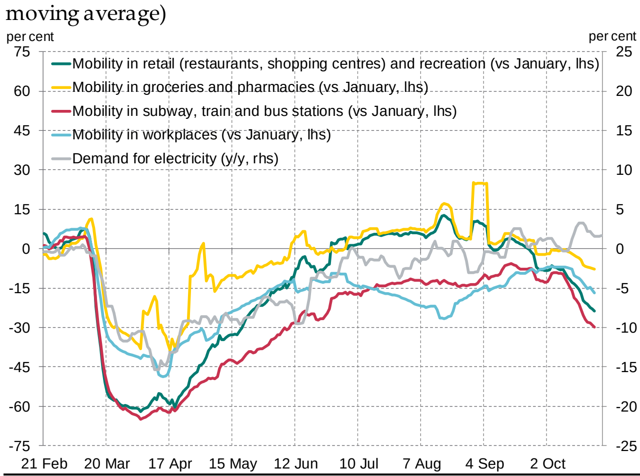
In October, as the epidemic surged and sanitary restrictions were once again tightened, economic activity seems to have weakened in the sectors that were most vulnerable to the effects of the epidemic and restrictions (Figure 2.8). However, the

Figure 2.7 Economic activity indicators (seasonally adjusted data, Feb-20=100)



Source: Statistics Poland (GUS) and Eurostat data, NBP calculations.

Figure 2.8 High frequency economic activity indicators (one-week moving average)



Source: PSE S.A., IMGW-PIB, meteomodel.pl and Google Covid-19 Community Mobility Report data, NBP calculations.

Population mobility excluding holidays. Demand for electricity from Monday to Friday, 8AM – 4PM, adjusted for holidays and temperature changes.

available data indicate that the scale of the decline in activity has so far been smaller than in March and April. At the same time, preliminary data on the demand for energy and heavy vehicle traffic do not suggest that activity in industry and freight transport decreased substantially in October.

2.2.1 Consumption

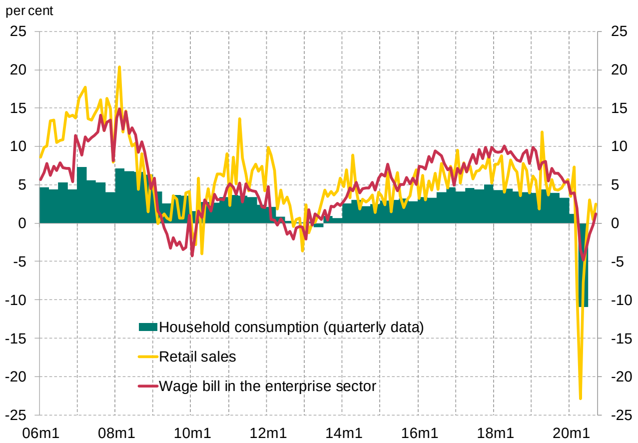
Household consumption fell by 10.8% y/y in 2020 Q2 (Figure 2.9). The sharp decline was driven by factors related to the COVID-19 pandemic, including the epidemic restrictions, an increase in uncertainty and a sharp deterioration in consumer confidence (Figure 2.10). Consumption may also have been reduced by a fall in the wage bill and a slowdown in consumer credit growth (see Chapter 2.6 *Money and credit*).

Consumption of services plunged in sectors that were most vulnerable to the negative effects of the pandemic and sanitary restrictions, such as accommodation, food service, transport, or entertainment, recreation and culture. Sales of goods, primarily of cars and clothing and footwear, also saw sharp falls.

Following a sharp decline in April, consumption rose in 2020 Q3, which was related to the easing of the nationwide epidemic restrictions (mainly in May and June), an improvement in sentiment and some increase in income. Available data indicate that in 2020 Q3 consumption of goods was slightly higher than a year ago and somewhat lower than before the pandemic, as sales rose in the categories that were most affected by the epidemic restrictions in 2020 Q2. At the same time, sales of durable goods (furniture, electronics and household appliances) grew strongly, boosted by deferred demand and an increased household demand for certain goods due to remote work and study.

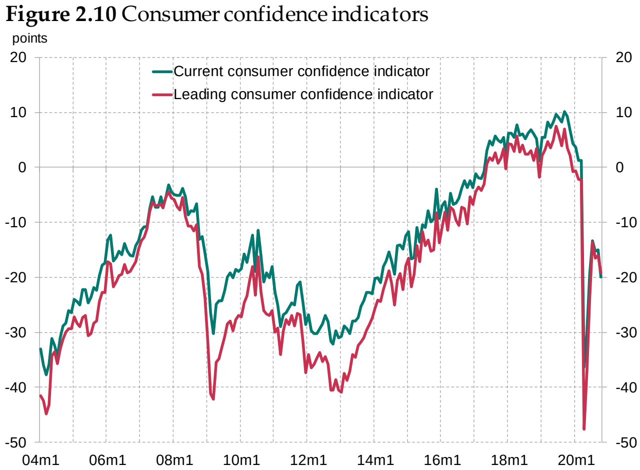
In October, along with a surge in the epidemic, consumer sentiment deteriorated and consumption of services that are most vulnerable

Figure 2.9 Real growth in consumption, retail sales and wage bill in the enterprise sector (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.10 Consumer confidence indicators



Source: Statistics Poland (GUS) data.

to the effects of the pandemic and restrictions decreased once again (see Figure 2.8).

2.2.2 Investment

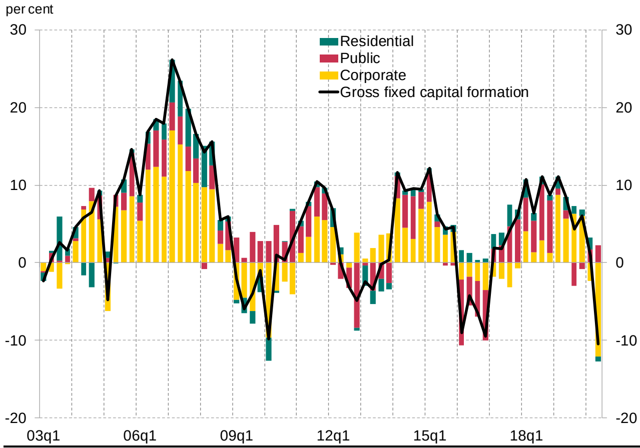
In 2020 Q2, gross fixed capital formation fell by 10.7% y/y. Above all, corporate investment decreased, as did residential housing investment, although only to a slight degree. At the same time, public investment rose slightly (Figure 2.11).

Enterprises significantly reduced investment outlays amid lower demand, frozen economic activity in some sectors, a surge in uncertainty and a deterioration in expectations about future economic activity. With the exception of construction and transport, all the major industries recorded significant falls in investment in 2020 Q2, with trade and services companies reducing outlays the most (Figure 2.12). Investment in means of transport saw the biggest fall, while more persistent outlays on buildings and structures recorded the smallest decline. At the same time, foreign companies reduced investment the most, while capital expenditure growth of public enterprises was close to zero.

According to NBP estimates, public investment increased slightly in 2020 Q2 as a rise in the National Road Fund expenditure outweighed a slight fall in local government investment. At the same time, residential housing investment declined slightly, which resulted from a partial suspension of transactions in the housing market in April 2020 (see Chapter 2.5.2 *Real estate market*).

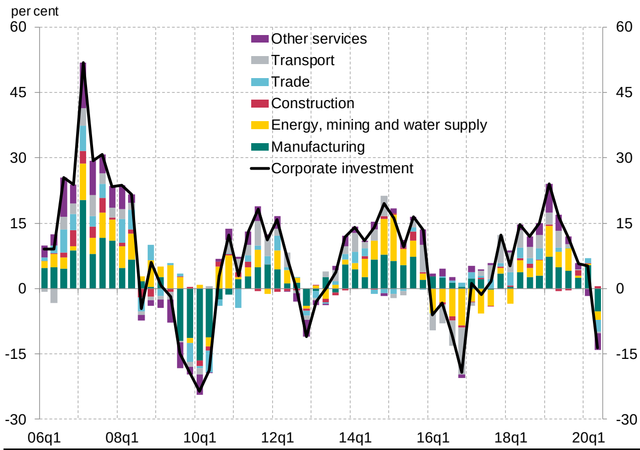
The data available for 2020 Q3 indicate that investment activity probably rose in quarterly terms, but continued to fall in annual terms. A rebound in production and imports of capital goods points to an improvement in investment activity. However, a deeper fall in construction and assembly output (Figure 2.13) and only a slight improvement in investor confidence according to surveys of enterprises (following a significant deterioration in 2020 Q2) paint less of a positive

Figure 2.11 Growth in investment and its main components (y/y)



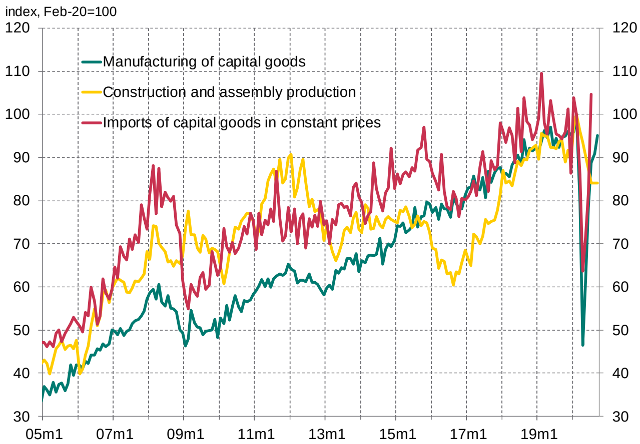
Source: Statistics Poland (GUS) data, NBP calculations.
NBP estimates.

Figure 2.12 Growth in investment of medium and large non-financial enterprises in current prices by sectors (y/y)



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

Figure 2.13 Monthly indicators of investment activity (seasonally adjusted, Feb-20=100)



Source: Statistics Poland (GUS) and Eurostat data.

picture (Figure 2.14). The investment activity of enterprises continued to be curtailed by high uncertainty, low capacity utilisation (Figure 2.15) and lower-than-before-the-pandemic expectations about the future level of economic activity.

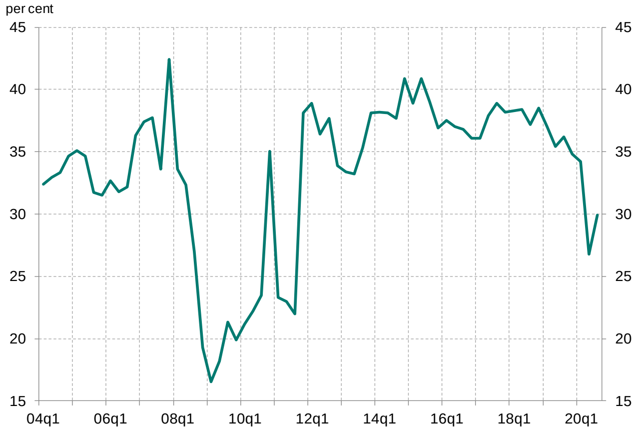
2.2.3 Public finance

In the first half of 2020 the general government deficit in ESA 2010 terms amounted to 4.4% of GDP, of which approx. 3.2% of GDP was due to anti-crisis measures taken by the government in response to the epidemic (Figure 2.16). The decrease in the general government balance resulted from a simultaneous increase in expenditure – mainly due to the anti-crisis support – and a fall in revenue, in particular in 2020 Q2, when tax revenue of the state budget fell by 15.4% y/y amid a marked reduction in economic activity.

The largest part of the anti-crisis support took the form of subsidies for enterprises and was disbursed mainly in 2020 Q2. As a result, in 2020 Q2 the expenditure under this category reached PLN 71.7 billion, compared to PLN 1.9 billion in the corresponding period of 2019 and PLN 12.3 billion in the whole of 2019. In particular, this expenditure covers exemptions from ZUS social insurance contributions, labour cost subsidies, loans of PLN 5,000 for micro-enterprises, and funds from the Financial Shield of the Polish Development Fund (PFR).[28]

After the easing of epidemic restrictions and along with a gradual recovery of economic activity, in 2020 Q3 tax receipts of the state budget began to rise once again (Figure 2.17). In 2020 Q3 they rose by a total of 6.8% y/y.[29] At the same time, the disbursement of assistance funds ended under the

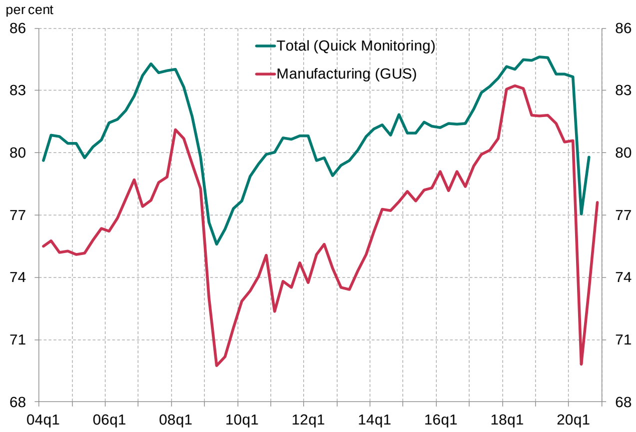
Figure 2.14 Overall assessment of investor's optimism (OPTIN)



Source: NBP survey data.

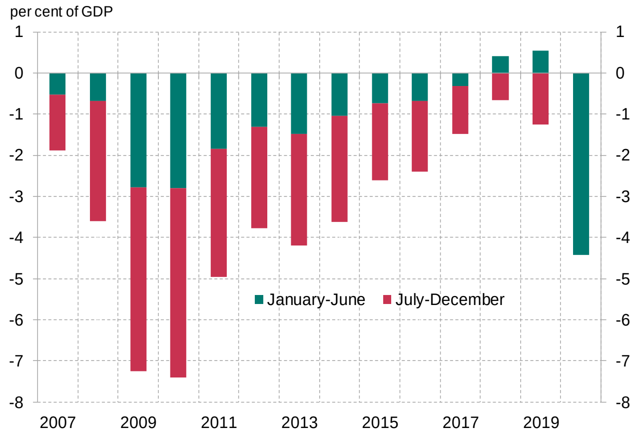
Overall assessment of investor's optimism is gauged by the share of enterprises which intend to launch new investment projects, increase spending or extend the scale of projects that are already underway.

Figure 2.15 Corporate capacity utilisation (seasonally adjusted data)



Source: NBP and Statistics Poland (GUS) survey data.

Figure 2.16 General government balance (ESA2010)



Source: Eurostat data, NBP calculations.

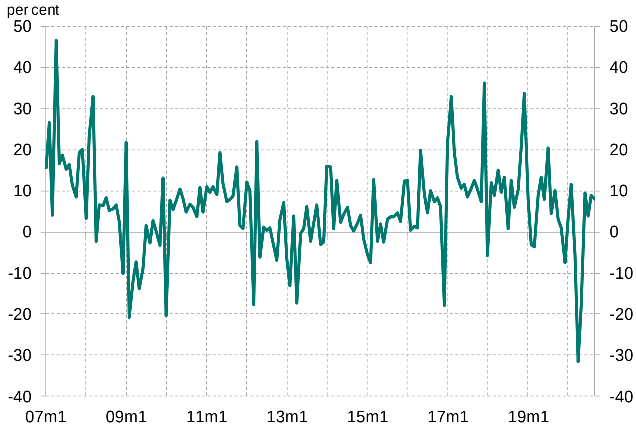
[28] The expenditure on subsidies for enterprises includes the expected non-refundable part of the subsidy granted by the PFR.
[29] It should be borne in mind that the growth rate of VAT revenue (14.2% y/y in 2020 Q3) was temporarily elevated by the fall in refunds of this tax. This was due to – on the one hand - the acceleration of the disbursement of refunds by the tax administration in 2020 Q2 in order to support liquidity of firms (thus the amount of refunds paid within the usual time frame in 2020 Q3 was correspondingly lower). The other reason was the fall in exports in many sectors of the economy in 2020 Q2 - as a result, in the subsequent months firms applied for lower refunds on foreign sales, which are subject to a zero VAT rate.

majority of the implemented anti-crisis instruments.

The anti-crisis measures taken by the government were associated with a large increase in borrowing needs in the first half of 2020. However, the state public debt, defined in the Act on Public Finance[30], grew to a lesser degree than the public debt in ESA 2010 terms. This is primarily due to the fact that in accordance with the provisions of the above-mentioned act, the PFR and the COVID-19 Response Fund are not included in the public sector. The state public debt increased from PLN 990.9 billion at the end of 2019 to PLN 1,097.3 billion at the end of June 2020, while the public debt in ESA 2010 terms grew from PLN 1,045.4 billion at the end of 2019 to PLN 1,256.0 billion at the end of June 2020.

In the second half of 2020, the growth of public debt might be limited as the disbursement of assistance funds under most of the anti-crisis instruments has ended, while the level of funds on the budgetary accounts is high (PLN 106.7 billion at the end of June 2020[31]). According to the draft *2021 Budget Act* forecasts, the general government debt in ESA 2010 terms will rise from 46.0% of GDP in 2019 to 61.9% of GDP in 2020. At the same time, the state public debt is to increase from 43.6% of GDP in 2019 to 50.4% of GDP.

Figure 2.17 Growth rates of state budget tax receipts (y/y)



Source: Ministry of Finance data, NBP calculations.

2.2.4 External trade[32]

Data for 2020 Q2 confirmed that the reduction in economic activity in Poland and abroad translated into a sharp fall in Poland's external trade. The value of exports decreased by 11.8% y/y in 2020 Q2, while imports dropped by 18.4% y/y, resulting in an increase of the trade in goods surplus (see Chapter 2.7 *Balance of payments*). At the same time, preliminary monthly data for 2020 Q3 indicate a

[30] *Act of 27 August 2009 on Public Finance* (Journal of Laws of 2019, item 869, consolidated text as amended).

[31] *State budget borrowing requirements' financing plan and its background, 2020 Q3, July 2020,* Ministry of Finance, Public Debt Department.

[32] In this chapter, the analysed data are primarily Statistics Poland (GUS) data on the nominal value of exports and imports of goods in PLN terms. Trends in the trade of services are not described, as no detailed data are available on their breakdown.

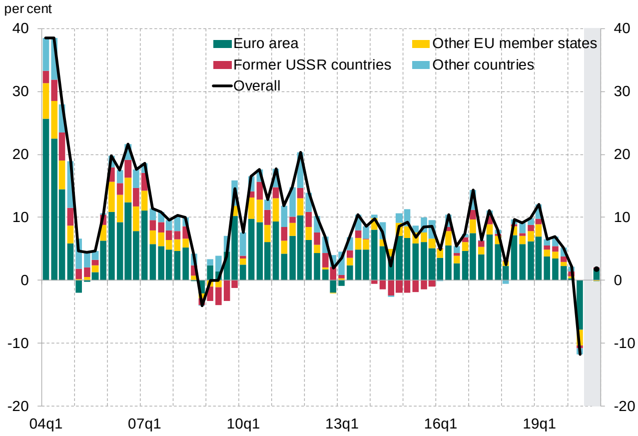
rise in exports and a further fall in imports in annual terms, although significantly smaller than the decrease in 2020 Q2.

The decline in exports in 2020 Q2 was registered in all the analysed groups of countries, with exports to the euro area and other EU member states recording the sharpest fall (Figure 2.18). At the same time, exports dropped in all the groups of goods with the exception of consumer goods, whose export growth in annual terms was slightly positive. In the period July-August, growth in the value of exports amounted to 1.8% y/y, with a particularly robust growth of exports to Germany (contributing 1.8 percentage points to total export growth) and in the consumer goods group.

Since the publication of the previous *Report*, both the nominal and real effective exchange rate of the zloty have appreciated and in September stood near the average level from the last few years (Figure 2.19).

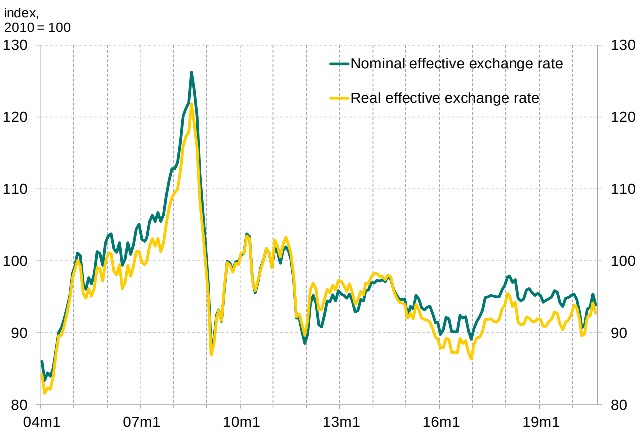
In 2020 Q2 a sharp fall in the value of imports was recorded in the group of intermediate goods (Figure 2.20), primarily supply goods for industry and fuels. The decrease in fuel imports resulted from the simultaneous drop in global energy commodity prices and the decline in the volume of Polish imports in this category. Amid a marked reduction in investment outlays by enterprises (see Chapter 2.2.3 *Investment*), imports of capital goods, in particular industrial means of transport, also plummeted; so did imports in the other goods category, above all of passenger cars. At the same time, imports of food and non-durable and semi-durable consumer goods increased; however, their contribution to total import growth remained small. In the period July-August, import growth remained negative and stood at -3.6% y/y, mainly due to the fall (in annual terms) of intermediate goods and passenger cars imports, amid an increase in imports of consumer and capital goods.

Figure 2.18 Contribution to export growth by destination (y/y)



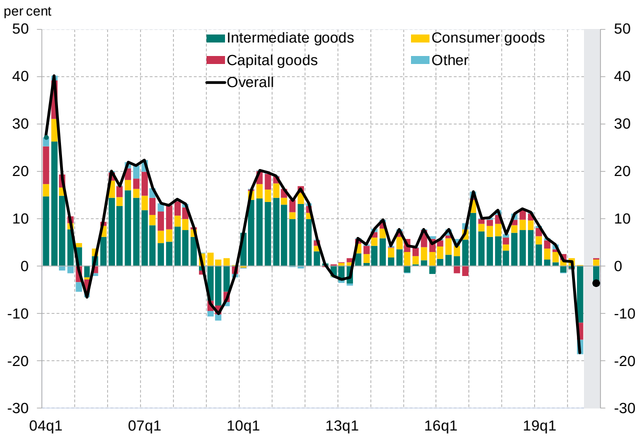
Source: Statistics Poland (GUS) data, NBP calculations.
Shaded area represents y/y export growth in the period July-August.

Figure 2.19 Nominal and real effective PLN exchange rate (rise indicates appreciation)



Source: BIS data.

Figure 2.20 Contribution to import growth by commodity (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.
Data based on Statistics Poland (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. Shaded area represents y/y import growth in the period July-August.

2.2.5 Output

Value added in industry and market services fell by over 10% y/y in 2020 Q2. At the same time, annual growth in value added decreased to around zero in construction, while in non-market services it remained positive (Figure 2.21). Available data for 2020 Q3 point to a recovery in industrial and market services activity to close to the previous year's levels and a fall in construction activity (Figure 2.7 and Figure 2.8).

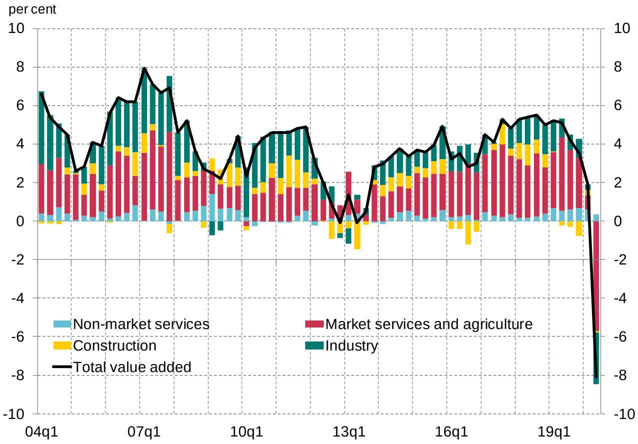
Industrial output dropped by 13.6% y/y in 2020 Q2, declining in almost all branches. Production of capital goods saw the biggest fall, suffering from production stoppages in the global value chains and big cuts in enterprises' investment outlays (see Chapter 2.2.2 *Investment*; Figure 2.22).

In 2020 Q3 output increased in all the main categories. The biggest increases in annual terms were seen in the production of durable goods (electronics, household appliances and furniture), which were boosted by an increased household demand for these goods, likely due to remote work and study. Consequently, in September 2020 industrial output returned to the pre-pandemic level. In October, business conditions in industry probably remained relatively robust, although firms' expectations about future economic conditions deteriorated.

Value added in market services dropped by 10.5% y/y in 2020 Q2 (Figure 2.23). The sectors most vulnerable to the negative effects of the pandemic and sanitary restrictions experienced the sharpest fall in activity – in accommodation and food service value added plunged by 78.4% y/y, while in arts, entertainment and recreation it plummeted by 45.5% y/y. Value added in trade, transport and financial and insurance activities also declined by approx. 10%. In the remaining sectors annual growth in value added was close to zero.

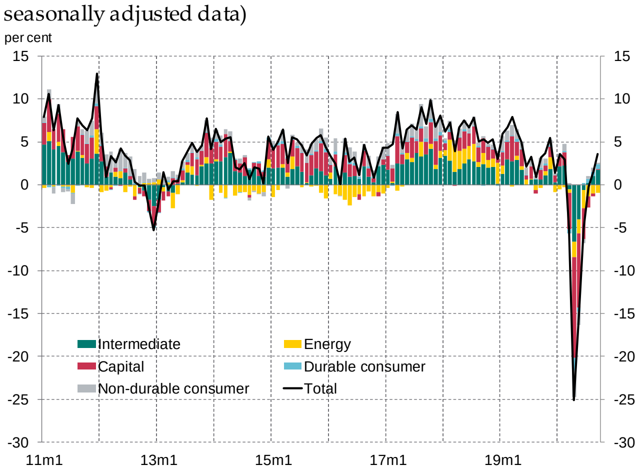
In 2020 Q3 business conditions in market services improved significantly. Data on retail sales and

Figure 2.21 Growth of gross value added by sectors (y/y)



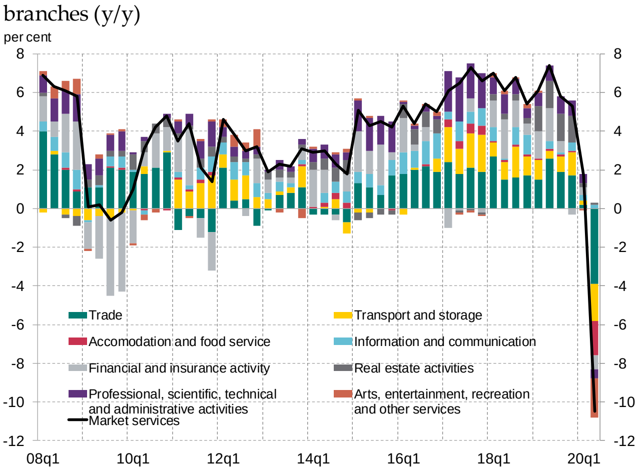
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.22 Industrial output growth by groups of goods (y/y, seasonally adjusted data)



Source: Statistics Poland (GUS) and Eurostat data, NBP calculations.

Figure 2.23 Growth of gross value added in market services by branches (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.

traffic volume indicate that activity in trade and freight transport was similar as a year before (see Figure 2.7). In the remaining service sectors, business climate has also improved markedly since April (Figure 2.24). However, in accommodation, arts, entertainment and tourism activity remained depressed due to, among others, a small inflow of tourists from abroad, a reduction in business trips and the maintenance of some of the sanitary restrictions in this period.

In October, along with a surge in the epidemic, activity in the services vulnerable to the effects of the epidemic and restrictions (among others, accommodation, food service, entertainment, arts and recreation) declined once again, while expectations about future demand deteriorated also in the remaining branches (see Figure 2.8, Figure 2.24).

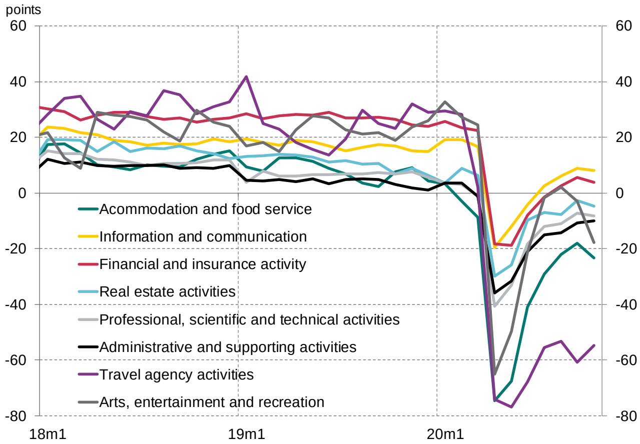
Construction and assembly output declined only slightly in 2020 Q2 (by 2.8% y/y) as epidemic restrictions had a relatively small impact on construction works. Above all, activity dropped in the construction of industrial, trade and service facilities as firms reduced investment outlays. At the same time, production growth slowed down in residential and infrastructure construction.

In contrast to the remaining sectors of the economy, business conditions in construction continued to deteriorate in 2020 Q3, with construction and assembly output falling by 10.9% y/y (Figure 2.25). Activity declined primarily in infrastructure construction, including that of roads and railways, and – to a lesser extent – in residential construction. At the same time, annual growth in the construction of industrial, trade and service facilities increased slightly, although it remained negative.

2.3 Financial situation of enterprises

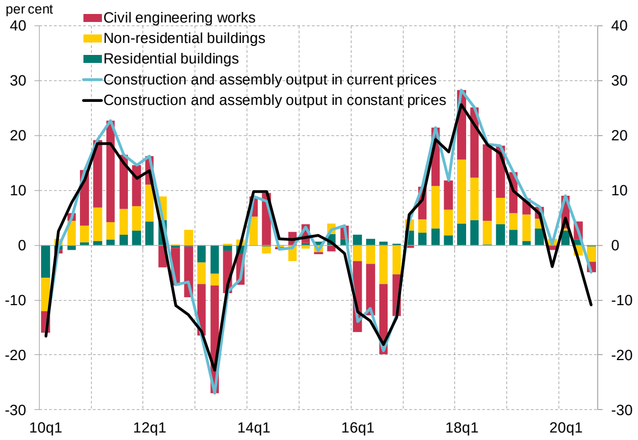
In 2020 Q2 the financial performance of enterprises was significantly worse than in 2019, although it improved somewhat compared to 2020 Q1. The

Figure 2.24 General business climate indicators in services (seasonally adjusted data)



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.25 Construction and assembly output growth by construction objects (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.
Decomposition of output growth by construction objects is in current prices.

result on sales shrank by 8.6% y/y, against a fall of 9.9% y/y in 2020 Q1, amid a sharp decline in both revenue and costs due to factors related to the COVID-19 pandemic (Figure 2.26; Figure 2.27). Survey data suggest a certain improvement in the economic condition of enterprises in 2020 Q3.

In 2020 Q2, revenue declined in most sectors, although to a varying degree, mainly due to a fall in sales revenue (by 13.9% y/y). The sharpest contraction in sales was recorded in sectors that are most vulnerable to the negative effects of the pandemic and sanitary restrictions, such as sports, air transport, accommodation and tourism. At the same time, sales revenue increased in few industries, including programming and broadcasting services, information services, and postal and courier services.

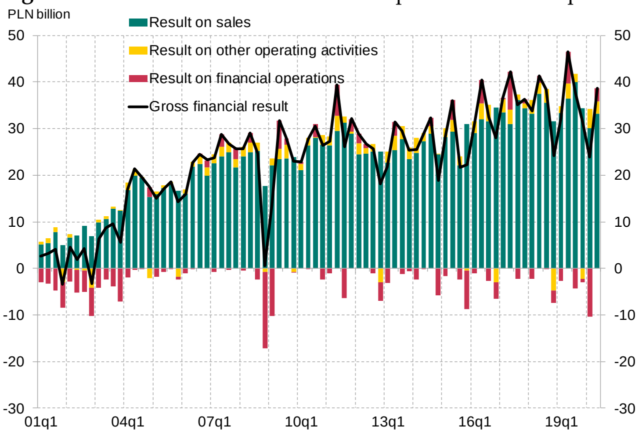
On the other hand, the decline in costs of sales (by 14.2% y/y) had a positive impact on financial results in 2020 Q2. This was mainly a result of the significantly lower commodity prices than a year ago (see Chapter 1.3 *Global commodity markets*), reduced supply needs, and the government anti-crisis measures that lowered labour costs.

In 2020 Q2 most profitability indicators remained lower than a year ago. The share of profitable enterprises also decreased. Sales profitability ratio was an exception as it rose slightly compared to 2019 Q2 (Table 2.3). At the same time, the share of bank credits and loans in the balance sheet total remained at 15.9% in 2020 Q2.

The liquidity ratio rose significantly in 2020 Q2, which resulted from, in particular, the government liquidity support measures for enterprises and the reduction of investment outlays by firms (see Chapter 2.2.2 *Investment*; Table 2.3).

NBP survey data indicate that the economic situation of enterprises improved in 2020 Q3 as epidemic restrictions were eased. The percentage of firms assessing their condition as good or very good rose to 74% from 68% in 2020 Q2, although it

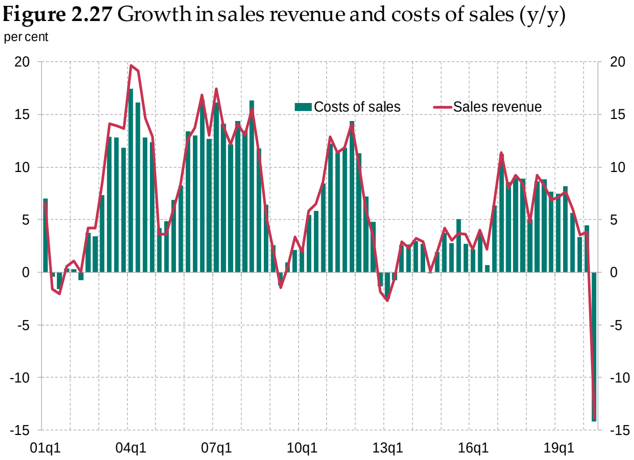
Figure 2.26 Gross financial result of enterprises and its components



Source: Statistics Poland (GUS) data, NBP calculations.

Data from the survey conducted by Statistics Poland (GUS) on revenues, costs, financial results and gross fixed capital formation (based on F-01/I-01 forms).

Figure 2.27 Growth in sales revenue and costs of sales (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.

Data from the survey conducted by Statistics Poland (GUS) on revenues, costs, financial results and gross fixed capital formation (based on F-01/I-01 forms).

Table 2.3 Selected financial efficiency ratios in the enterprise sector (per cent)

	Average 2004-2019	2019 q1	2019 q2	2019 q3	2019 q4	2020 q1	2020 q2
Sales profitability ratio	5.0	4.5	4.6	5.0	4.1	3.9	4.9
Net turnover profitability	4.1	3.4	4.8	3.8	2.9	2.4	4.5
Share of profitable enterprises	72.5	76.3	75.9	76.0	75.7	74.4	73.3
1st degree liquidity ratio	34.7	34.7	34.6	35.4	38.1	38.9	42.6
Return on Assets	1.3	1.0	1.5	1.1	0.9	0.7	1.1
Share of bank credits and loans in the balance sheet total	13.1*	15.2	15.3	15.6	15.5	15.9	15.9

Source: Statistics Poland (GUS) data, NBP calculations.

Data from the survey conducted by Statistics Poland on revenues, costs and financial results as well as gross fixed capital formation (based on F-01/I-01 forms).

Share of profitable enterprises – seasonally-adjusted data.

*In case of share of bank credits and loans in the balance sheet total average was calculated over 2013-2019.

remained lower than a year ago. The shares of companies declaring problems with liquidity or settling credit and trade obligations also decreased in 2020 Q3 compared to the previous quarter.

2.4 Labour market

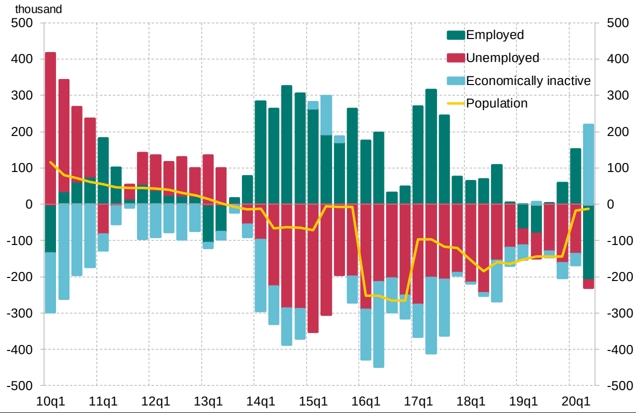
The collapse of economic activity in 2020 Q2 due to the COVID-19 epidemic led to a deterioration in the labour market, including a reduction in the number of employed people and employment as well as slower wage growth. The impact of the first wave of the pandemic on the labour market was mitigated by the government anti-crisis measures, which, among others, was reflected in the limited increase in unemployment. Data available for 2020 Q3 indicate a certain stabilisation of the labour market conditions in this period.

The number of employed persons according to LFS decreased in 2020 Q2 by 1.3% y/y (Figure 2.28), with the biggest fall recorded in services. Meanwhile, a relatively large number of employees were unable to perform their duties due to furlough or had their working hours reduced (in total approx. 1.2 million people, i.e. 7.4% of employed according to LFS).

Available data from the enterprise sector[33] indicate that in 2020 Q3 the fall in the number of employed persons came to a halt. At the same time, along with a gradual return of working hours to pre-pandemic levels and a drop in employee absenteeism related to additional care allowances, average employment in this sector – expressed in terms of full-time equivalent – is partially recovering (Figure 2.29).

The number of vacancies in labour offices, despite some increase in September 2020, remained lower than a year before and significantly lower than

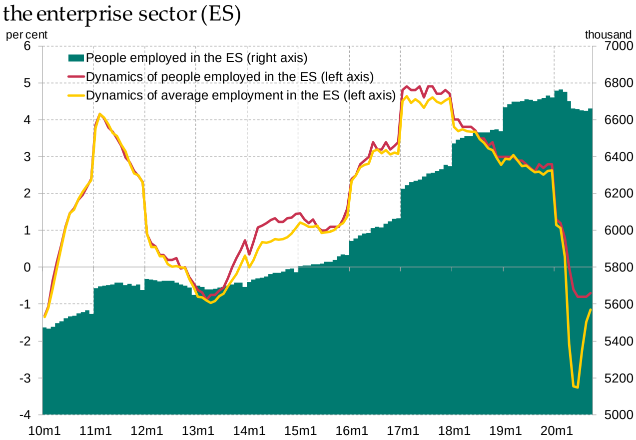
Figure 2.28 Annual changes in the size of basic population groups, distinguished by their labour market status



Source: Statistics Poland (GUS) data.

Population as defined by the LFS, i.e. Poland's population at the age of 15 years or over living in households.

Figure 2.29 Annual growth rates in the number of people employed and average employment, and the number of people employed in the enterprise sector (ES)



Source: Statistics Poland (GUS) data.

People employed in the ES as of the last day of the month, without recalculating part-time employment into full-time equivalent. These data have a wider coverage than average employment as they include owners and co-owners of enterprises and, among others, employees receiving sickness, care and maternity allowance, who are included in the average employment statistics only to a limited extent.

[33] Data from the enterprise sector cover enterprises with the number of employees exceeding 9 persons and does not include persons working on the basis of civil law contracts. Moreover, this sector does not include certain areas of economic activity, in particular public administration, education, health care, agriculture and financial and insurance activity.

before the pandemic, evidencing the persistently low labour demand.[34]

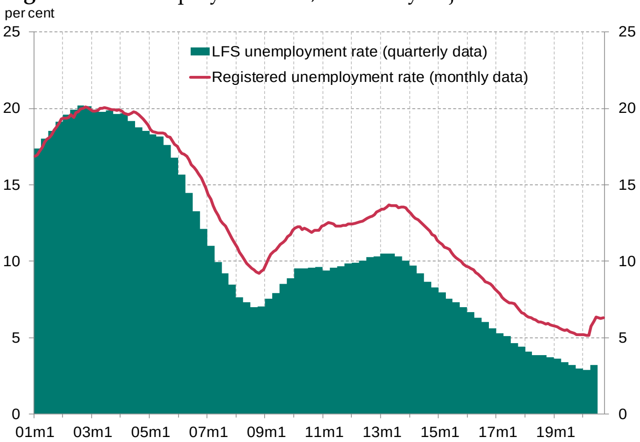
The lower number of employed people in 2020 Q2 was accompanied by a corresponding increase in the number of the economically inactive, with no significant change to the number of the unemployed according to LFS (Figure 2.28). Labour force participation declined especially in younger age groups, which was related to difficulties in searching for work as a result of the epidemic restrictions, as well as to parents taking over childcare due to the closure of nursery schools and schools.

At the same time, the number of unemployed people registered in labour offices increased in 2020 Q2, although to a limited extent (the seasonally-adjusted registered unemployment rate reached 6.0% in 2020 Q2, compared to 5.2% in 2020 Q1; Figure 2.30). Available data for 2020 Q3 indicate a stabilisation in registered unemployment (after seasonal adjustment) at 6.3%, while the decline in the number of the employed came to a halt. Registered unemployment was also stabilised, although to a lesser degree, by the possibility to obtain a solidarity allowance, without the requirement to register in the labour office, in the case of people who have lost their job as a result of the COVID-19 epidemic.

The coronavirus pandemic has also caused a moderate outflow of immigrants from the domestic labour market.[35]

Against the background of weakened demand for labour, growth in the average wage in the national economy slowed down to 3.8% y/y in 2020 Q2, compared to 7.7% in 2020 Q1. Available data from the enterprise sector indicate that 2020 Q3 saw an

Figure 2.30 Unemployment rate, seasonally adjusted data



Source: Statistics Poland (GUS) data, NBP calculations.

Data adjusted by NBP for seasonal factors and breaks related to the change in Statistics Poland (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 unemployed people registered in labour offices, while LFS unemployment rate is based on survey results.

[34] In September 2020, the number of vacancies in labour offices increased by 15.1 thousand m/m and after seasonal adjustment was 9.0% lower than in February 2020 and 3.2% lower than in September 2019.

[35] Data on border crossings at land border crossing points between Poland and Ukraine indicate that the number of foreigners staying in Poland who crossed that border decreased in 2020 Q2 by 19,800 (*Statistical information for 2020 Q1* and *Statistical information for the first half of 2020*, Border Guard). After a fall in 2020 Q2, in July and August 2020 the number of foreigners insured in the Polish Social Insurance Institution (ZUS) rose significantly. As of the end of August 2020, the number of foreigners insured in ZUS was almost 12,000 lower than before the pandemic, i.e. in February 2020, and 4,200 lower than at the end of August 2019 (*ZUS Statistical Portal*).

increase in wage growth (to 4.3% from 2.1% in 2020 Q2) due to the restoration of work intensity and non-wage benefits as well as the execution of earlier-suspended wage increases (Figure 2.31).

2.5 Monetary policy and asset markets

After a significant easing of NBP monetary policy in 2020 Q2[36], the basic parameters of monetary policy have been kept unchanged in recent months. In particular, the NBP reference rate has been kept at 0.1%.

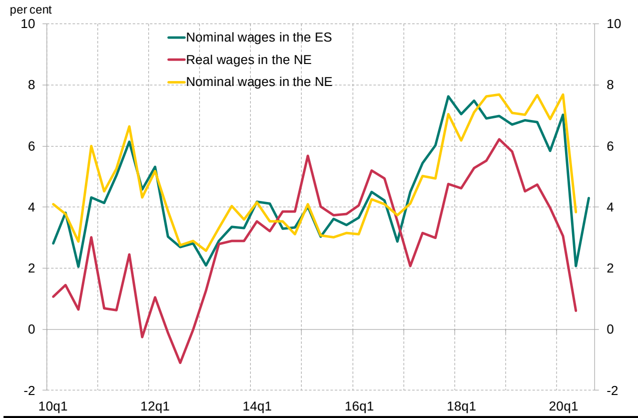
At the same time, NBP has continued to purchase government securities and government-guaranteed debt securities on the secondary market. In recent months the scale of the purchases has been smaller than in 2020 Q2, and in total (as at the end of October 2020) NBP has purchased securities at a nominal value of PLN 105.3 billion, i.e. PLN 110.9 billion at the purchase price. NBP has also offered bill discount credit aimed at refinancing loans granted to enterprises by banks.

Financial market participants expect that NBP interest rates will remain close to zero in the coming years (Figure 2.32).

2.5.1 Financial market

Following a significant fall in the first half of 2020, yields on Polish government bonds have continued to decline in recent months (Figure 2.33). As a result, they have reached a record low, similar to many other countries around the world (see Chapter 1.5 *International financial markets*)[37]. Low Polish government bond yields are supported by the low current level of the NBP interest rates, the expectations of financial market participants that short-term interest rates will stay low in the future, and the ongoing purchases of securities by NBP. At the same time, highly accommodative monetary policy around the world, including close to zero or

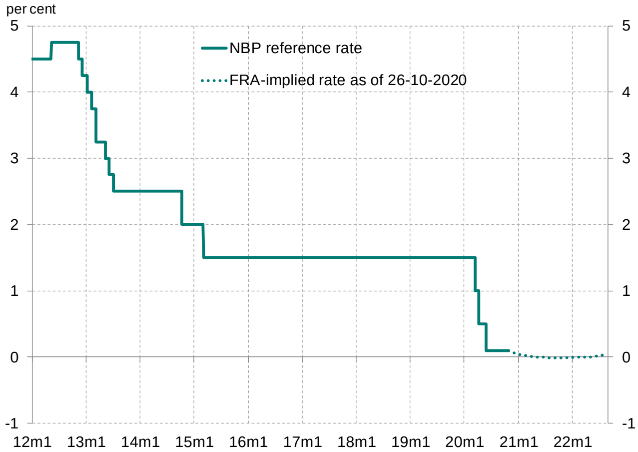
Figure 2.31 Annual nominal and real wage growth rates in the national economy (NE) and annual nominal wage growth rate in the enterprise sector (ES)



Source: Statistics Poland (GUS) data.

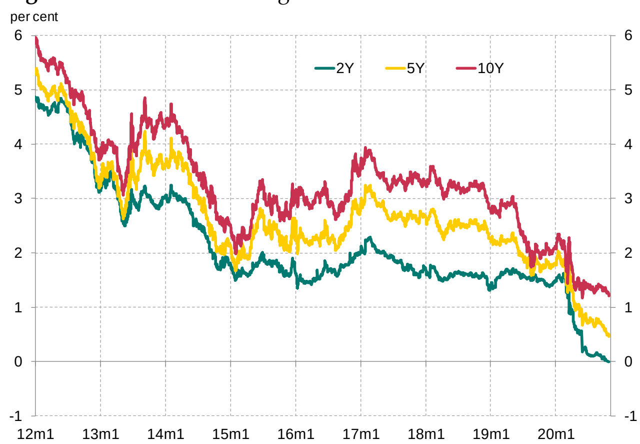
Wages in enterprise sector (ES) concern entities classified in certain PKD (NACE) sections that employ 10 or more people. Data on wages in the national economy (NE) cover the whole statistical population, regardless of the number of people employed.

Figure 2.32 NBP reference rate and 3M WIBOR FRA-implied expected interest rate



Source: NBP and Bloomberg data, NBP calculations.

Figure 2.33 Yields on Polish government bonds



Source: Bloomberg data.

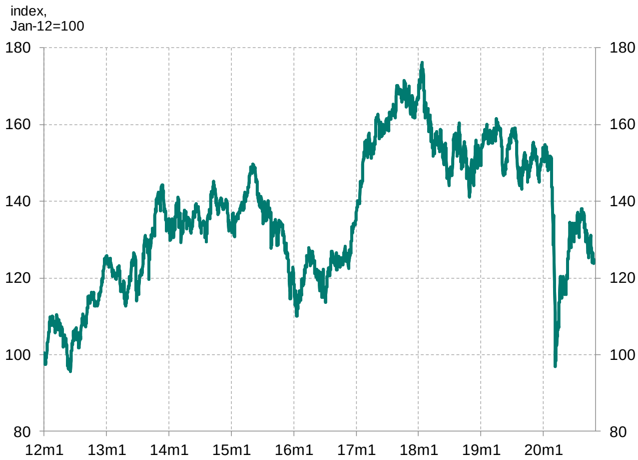
[36] See Box 2: *Monetary policy of Narodowy Bank Polski in response to the COVID-19 pandemic* in: *Inflation Report – July 2020*, NBP.

[37] Yields on 10-year Polish Treasury bonds in October 2020 were running on average at 1.28%, while those on 2-year bonds stood at 0.01%.

negative interest rates in the advanced economies and asset purchases conducted by many central banks, have exerted downward pressure on yields (see Chapter 1.4 *Monetary policy abroad*).

After a slump and a partial rebound in the first half of 2020, in recent months equity prices on the Warsaw Stock Exchange, similarly to stock prices around the world, have been subject to volatile trends, and in October 2020 were running on average somewhat lower than in June 2020 (Figure 2.34). Initially, in July and August, equity prices were boosted by an earlier easing of epidemic restrictions in Poland and the ensuing rebound of economic activity as well as an improved, compared to the first half of 2020, sentiment in global financial markets. However, since September equity prices have been dragged down by, above all, fears regarding the impact of a renewed surge in the pandemic and the tightening of sanitary restrictions in Poland on economic activity and the financial performance of enterprises.

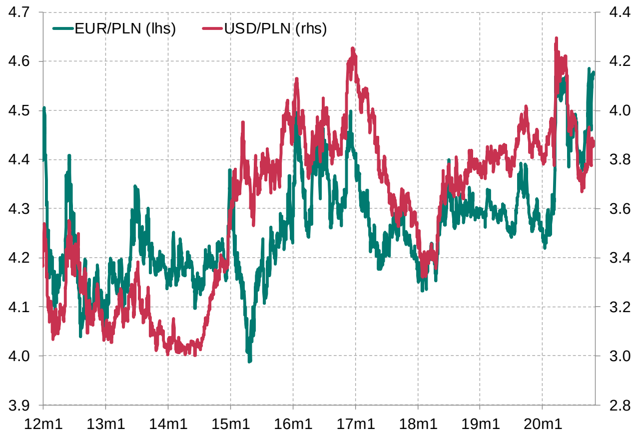
Figure 2.34 WIG stock market index



Source: Bloomberg data.

Since the publication of the previous *Report*, the zloty exchange rate against the major currencies has been subject to temporary fluctuations, mainly as a result of global factors. In October 2020, the zloty exchange rate was approx. 2% weaker than in June 2020 against the euro, and approx. 3% stronger against the US dollar (Figure 2.35).[38] The changes in the zloty exchange rate in this period have taken place amid a US dollar depreciation against the remaining major currencies and many emerging market currencies. The more favourable epidemic and economic conditions in Poland in 2020 Q2 compared to many other economies, including European economies, strengthened the zloty exchange rate against the major currencies, particularly up to August 2020. In contrast, fears about the further course of the pandemic in view of the rising numbers of COVID-19 infections, in

Figure 2.35 Nominal exchange rate of euro and US dollar in Polish zloty



Source: Bloomberg data.

[38] In October 2020 the average zloty exchange rate against the euro was 4.53 (compared to 4.45 in June 2020), and against the US dollar 3.85 (compared to 3.95 in June 2020).

particular in the Central and Eastern Europe region (see Box 1: *The COVID-19 global epidemic situation*), may have put downward pressure on the zloty exchange rate, particularly in September and October 2020.

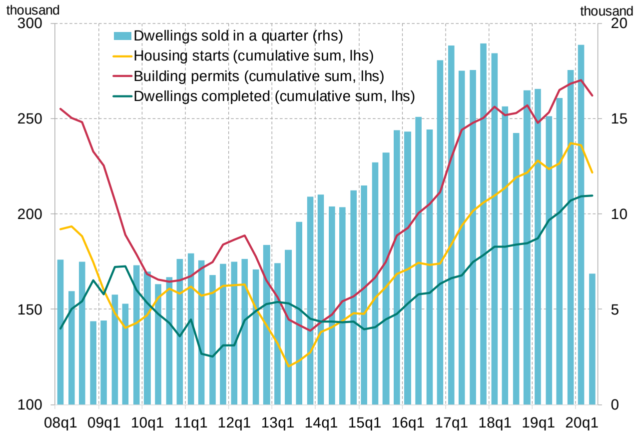
2.5.2 Real estate market

In 2020 Q2, activity in the housing market declined amid the COVID-19 pandemic and the related sanitary restrictions.[39,40] According to available data, a lower number of transactions in the housing market compared to previous quarters was accompanied by a slight decline in transaction prices in the primary market and a small increase in prices in the secondary market (in quarterly terms)[41].

The number of dwellings sold in the largest primary markets in 2020 Q2 was almost three times as low as in the previous periods (Figure 2.36). The number of home building permits and housing starts also decreased, whereas the number of completed housing units continued to grow. Despite lower activity in the housing market in 2020 Q2, housing construction costs continued to grow on the back of high construction demand observed in previous quarters, which led to an increase in the prices of land and materials.

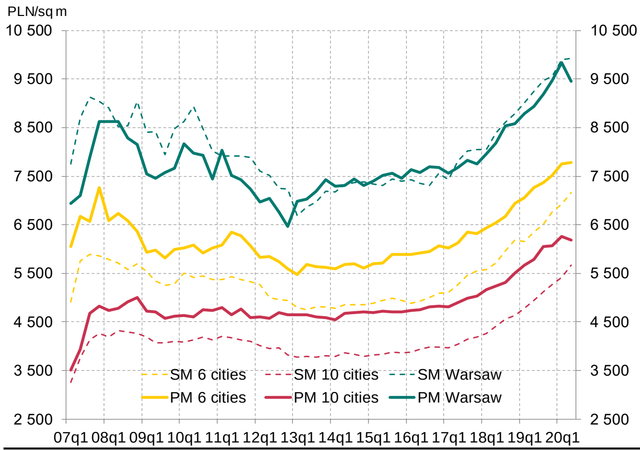
According to NBP data for 2020 Q2, the average transaction prices – having risen in previous quarters – declined in the primary market by 1.4% q/q, and rose in the secondary market by 2.6% q/q (Figure 2.37).[42]

Figure 2.36 Residential construction in Poland (4-quarter rolling sum) and new dwellings sold in a quarter



Source: Statistics Poland (GUS) and JLL/REAS data, NBP calculations.
Sales data cover 6 major markets in Poland (Warszawa, Kraków, Tri-City, Wrocław, Poznań and Łódź).

Figure 2.37 Nominal transaction prices of flats in major cities in Poland



Source: NBP data.
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.

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[39] For more information on the Polish housing market see the NBP publication *Information on home prices and the situation in the residential and commercial real estate market in Poland in 2020 Q2*, NBP, September 2020.
[40] The data collected in the NBP database during the quotation of 2020 Q2 include offers pending as of 1 June 2020 and transactions concluded in the period March-May 2020. Due to the time lag in the transaction data (according to the date of sale), 2020 Q2 analysed in this chapter does not coincide with the calendar quarter. For more information on the Real estate market survey (BaRN) see (in Polish): https://www.nbp.pl/home.aspx?f=/publikacje/rynek_nieruchomosci/ankieta.html.
[41] The number of transactions in the real estate market in 2020 Q2 was lower due to epidemic restrictions. Alongside higher uncertainty as to the levels of prices in Q3, i.e. after the easing of some restrictions, this calls for caution in formulating conclusions regarding the current trends in the real estate market.
[42] The average home transaction price (PLN/m2) in 17 cities (16 voivodeship capitals and Gdynia) weighted by the housing stock. In annual terms price growth remained positive, both in the primary (6.6%) and secondary market (11.3%).

In the office real estate market, the supply of new office space remained high in 2020 Q2, which resulted from construction projects that had started earlier. This was supported by persistently higher rates of return on investment in this type of real estate in Poland than abroad over the last few years. However, the growth in demand was not sufficiently high to absorb new supply, and the vacancy rate[43] in large cities rose slightly (to 9%[44]).

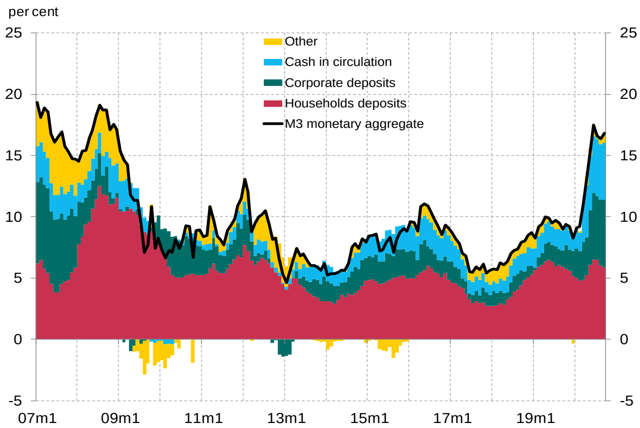
In retail and services real estate, new space increased only slightly in 2020 Q2, as in previous periods. For a number of years now, retail tenants have been shifting their business to online trade, which weakens demand for commercial space rental. In such circumstances, the warehouse sector is growing strongly. Demand in this segment is driven mostly by logistics and trade companies, including those active in e-commerce.

2.6 Money and credit[45]

Since the publication of the previous *Report*, annual broad money (M3) growth has stabilised at a relatively high level (in September 2020 it amounted to 16.8% y/y compared to 15.6% y/y in May 2020; Figure 2.38) after a marked increase early in the year, which mainly resulted from higher growth of corporate deposits and cash in circulation.[46]

Among the counterparts of broad money, an increase in net credit to central government and a rise in the outstanding value of financial institutions' debt securities had the highest share in M3 growth (Figure 2.39). The increase in the two

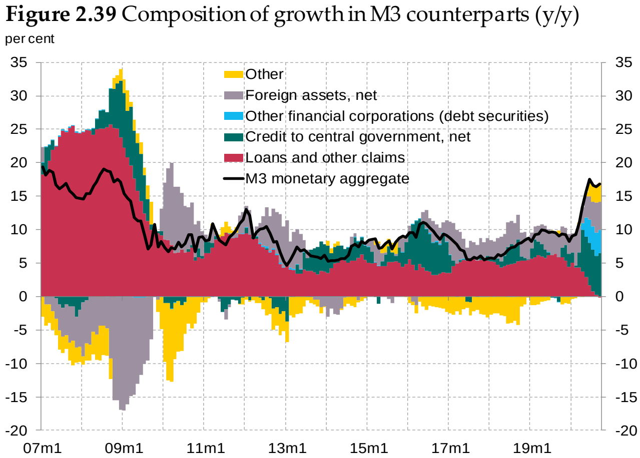
Figure 2.38 Composition of M3 growth (y/y)



Source: NBP data.

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

Figure 2.39 Composition of growth in M3 counterparts (y/y)



Source: NBP data.

Other financial institutions cover i.a. Polish Development Fund (PFR), pension funds, insurance corporations and investment funds.

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[43] The vacancy rate is the share of unleased space to the total space for rent.

[44] See Colliers report "Poland Market Insights, H1 2020".

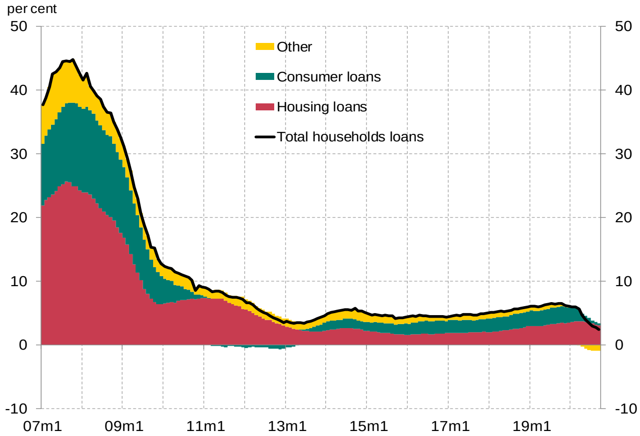
[45] In this chapter, the growth in the broad money aggregate M3 and loans is defined as the annual growth resulting from transaction changes. The data refer to monetary financial institutions.

[46] The high growth of cash in circulation results primarily from a temporary rise in cash withdrawals by clients fearing the introduction of sanitary restrictions that would limit their access to money kept at bank accounts in March and April 2020. In subsequent months, monthly increases in cash in circulation were significantly smaller and in 2020Q3 they stood at PLN 2.5 billion, on average; thus, they were close to the 2019 average level (PLN 1.7 billion). The increase in corporate deposits is largely an effect of the liquidity support provided under the government anti-crisis measures, mainly in 2020 Q2.

categories was driven by financing of the government anti-crisis measures.

The growth rate of household loans declined modestly (to 2.5% y/y in September 2020 compared to 3.9% y/y in May 2020) due to, among others, persistent uncertainty and worse consumer sentiment than before the pandemic outbreak (see Chapter 2.2.1 *Consumption*; Figure 2.40). Slower growth in housing loans (5.4% y/y in September 2020 compared to 6.3% y/y in May 2020) and consumer loans (1.1% y/y against 3.5% y/y in May 2020) contributed to this fall.[47] A certain tightening of lending policy by banks after the COVID-19 pandemic outbreak may have also put a downward pressure on household credit growth.[48] At the same time, the Credit Information Bureau (Biuro Informacji Kredytowej; BIK) data show that household demand for credit, particularly housing and durable goods loans, has been gradually recovering since May 2020.[49]

Figure 2.40 Composition of growth in household loans (y/y)

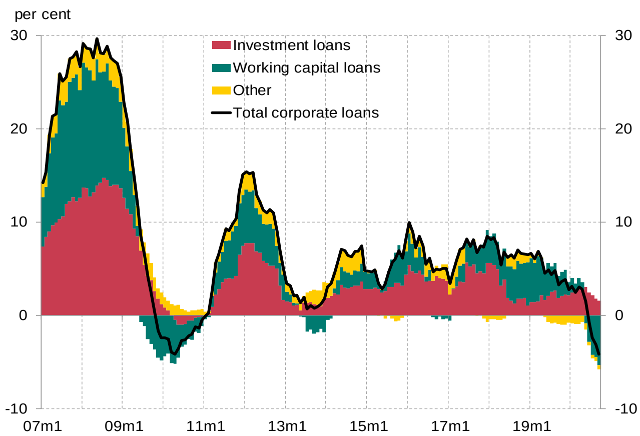


Source: NBP data.

The category *Other* covers credit card loans, loans to individual entreprenuers and individual farmers as well as other receivables.

In September 2020, corporate loans fell by 4.2% y/y, compared to a 1.5% y/y rise in May 2020. A deeper decline in the value of working capital loans (-13.3% y/y compared to -2.2% y/y in May 2020) and slower investment loan growth (3.0% y/y against 5.9% y/y in May 2020; Figure 2.41) contributed to this fall. The decrease in the value of corporate loans was largely driven by reduced loan demand; the financial support provided to enterprises under the government anti-crisis measures contributed to this reduction. The decline in investment outlays (see Chapter 2.2.2 *Investment*), a reduction in business activity of some enterprises and higher uncertainty also put downward pressure on demand for credit.[50] At the same time, the lower corporate demand for bank financing was

Figure 2.41 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 i.a. car loans, loans for security purchases and other receivables.

[47] In the category of housing loans, zloty-denominated loans grew (by 10.6% y/y) amid a continued decrease in the portfolio of FX loans (-7.6% y/y).
[48] *Senior loan officer opinion survey on bank lending practices and credit conditions. 3rd quarter 2020*, NBP, July 2020; *Senior loan officer opinion survey on bank lending practices and credit conditions. 4th quarter 2020*, NBP, October 2020.
[49] https://media.bik.pl/informacje-prasowe/586309/newsletter-kredytowy-bik-najnowsze-dane-o-sprzedazy-kredytow-w-polsce-2020-10-23; https://media.bik.pl/informacje-prasowe/578007/bik-indeks-popytu-na-kredyty-mieszkaniowe-wyniosl-we-wrzesniu-2020-r-5-4.
[50] *Access to credit of the non-financial corporations sector during the COVID-19 pandemic. Selected issues*, NBP, September 2020.

accompanied by a certain tightening of the bank lending policy in this segment after the COVID-19 pandemic outbreak.

2.7 Balance of payments

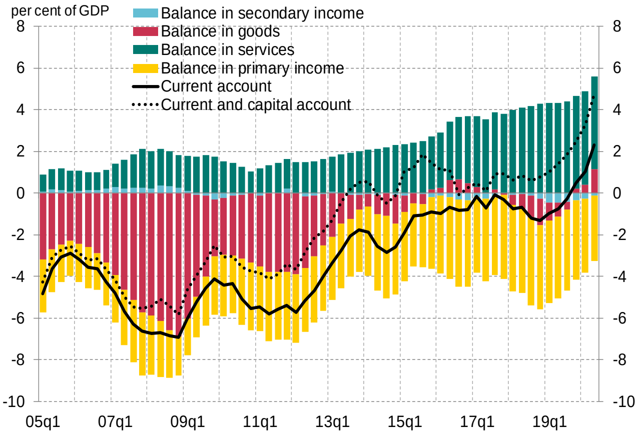
In 2020 Q2, the current account balance increased to 2.3% of GDP[51] (from 1.0% of GDP in 2020 Q1; Figure 2.42).[52] The significantly higher than a year ago balance of trade in goods had the biggest impact on this change, followed by an improvement in the primary income balance.

The increase in the balance of trade in goods in 2020 Q2 was the result of a greater fall in imports than exports (of 18.7% y/y and 11.6% y/y, respectively; see Chapter 2.2.5 *External trade*). The primary income balance improved compared to 2020 Q2 mainly due to a drop in the income of foreign direct investors in Poland. This decline was caused by the deterioration in the financial results of enterprises amid the COVID-19 pandemic (see Chapter 2.3 *Financial situation of enterprises*). In turn, the balance of services was lower than a year ago amid sharp falls in both exports and imports of services (with exports decreasing by 16.1% y/y, and imports by 20.0% y/y), recorded, in particular, in the "foreign travel" category. At the same time, in terms of a four-quarter rolling sum the balance of services in relation to GDP remained high in 2020 Q2 (4.4% of GDP).

The surplus on the capital account, which results from the inflow of EU funds, rose in 2020 Q2 to 2.4% of GDP (from 2.2% of GDP in 2020 Q1). Along with the increase in the current account balance, this contributed to a rise in the joint current and capital account balance to 4.7% of GDP (from 3.3% of GDP in 2020 Q1).

In 2020 Q2, the financial account balance increased to 3.8% of GDP (against 2.7% of GDP in 2020 Q1;

Figure 2.42 Current account balance (4-quarter rolling sum)



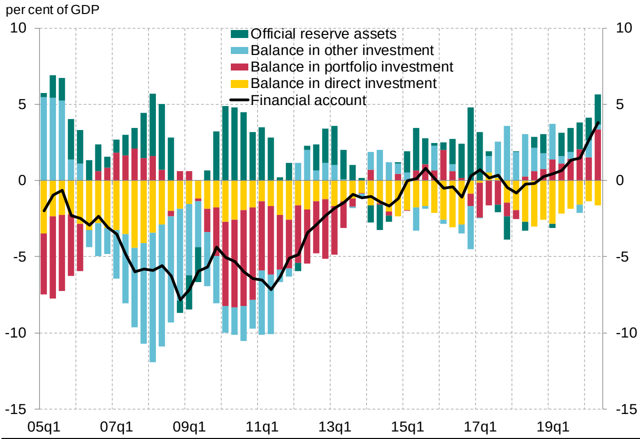
Source: NBP data.

[51] In this chapter, data on the balance of payments in relation to GDP are presented in terms of a four-quarter rolling sum.
[52] In July and August, the current account balance was PLN 14.7 billion higher than a year ago, which might suggest a further improvement in the balance in relation to GDP in 2020 Q3.

Figure 2.43)[53], which meant a rise in Poland's net foreign assets. This was primarily due to an increase in the balance of portfolio investment, caused mainly by a decrease in liabilities under debt securities.[54] The rise in the financial account balance was also influenced by a positive and higher than in the previous year balance of transactions registered in the official reserve assets.[55] On the other hand, lower than in the previous year balance of direct investment and other investment reduced the financial account balance.[56]

External imbalance indicators in 2020 Q2 evidence a further improvement in the balance of the Polish economy (Table 2.4). The negative net international investment position of Poland and the level of foreign debt in relation to GDP improved in 2020 Q2.

Figure 2.43 Financial account balance (4-quarter rolling sum)



Source: NBP data.

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

Table 2.4 Selected external imbalance indicators (4-quarter rolling sum in per cent, unless indicated otherwise)

	2018				2019				2020	
	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
Current account balance/GDP	-0.8	-0.7	-1.2	-1.3	-1.0	-0.8	-0.3	0.5	1.0	2.3
Current and capital account balance/GDP	0.6	0.8	0.6	0.8	1.0	1.4	1.9	2.5	3.3	4.7
Trade balance/GDP	3.5	3.4	3.1	3.0	3.5	3.7	4.0	4.7	4.9	5.6
Official reserve assets (in monthly imports of goods and services)	4.8	4.7	4.6	4.8	4.6	4.6	5,0	5.1	5.2	5.2
Foreign debt/GDP	67	67	65	64	62	61	61	59	59	58
Net international investment position/GDP	-60	-57	-58	-56	-55	-54	-52	-49	-46	-45
Official reserve assets/short-term foreign debt and forecast current account balance	102	98	98	115	114	123	148	165	166	166
Official reserve assets/short-term foreign debt	106	102	99	112	108	105	111	118	118	124

Source: NBP data.

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

[53] In July and August, the financial account balance was PLN 4.0 billion higher than a year ago, which might suggest a further improvement in the balance in relation to GDP in 2020 Q3.
[54] The decrease in liabilities was primarily the result of the timely redemption of foreign-issued government securities, as well as – but to a lesser extent – stemmed from non-residents reducing the portfolio of zloty-denominated bonds.
[55] The higher balance was the result of NBP's own transactions and transactions carried out on behalf of the Ministry of Finance and the European Commission.
[56] The lower balance of direct investment resulted from a fall in assets, particularly a negative balance of transactions in debt instruments. In turn, the lower balance of other investment stemmed from an increase in liabilities due to the *repo* transactions carried out by NBP, amid a simultaneous decline of assets as Polish residents withdrew funds from banks abroad.

3. Monetary policy in July – November 2020

At the meetings held between July and November 2020 the Monetary Policy Council kept the NBP interest rates unchanged at the following levels: reference rate 0.10%, lombard rate 0.50%, deposit rate 0.00%, rediscount rate 0.11%, discount rate 0.12%.

This chapter includes the previously published *Minutes of the Monetary Policy Council decision-making meetings* held between July and September 2020 as well as the *Informations from the meetings of the Monetary Policy Council* in October and November 2020.

Minutes of the Monetary Policy Council decision-making meeting held on 14 July 2020

While discussing the current economic situation, the Council members drew attention to the fact that the Covid-19 pandemic had contributed to a fall in global economic activity. At the same time, it was underlined that data for the recent period indicated that along with the gradual easing of the containment measures, sentiment in many economies had improved and economic activity had started to recover. It was judged that the economic activity rebound – after a sharp fall – stemmed partly from resumption of previously suspended business activity and from the realisation of deferred consumer demand. It was underlined that economic activity growth would also be supported by the fiscal measures introduced in many economies as well as the accompanying easing of monetary policy, including the interest rate cuts and asset purchases. It was noted that these measures would mitigate the impact of the pandemic on the financial situation of companies and, as a result, on the situation in the labour market.

Referring to the global economic outlook, it was pointed out that current forecasts indicated a further improvement in economic conditions in the second half of 2020. The majority of Council members judged that economic activity growth in the coming months might be slower than immediately after lifting of the containment measures. They drew attention to the fact that forecasts predicted only a gradual return to the pre-pandemic activity level. Council members also underlined that increased uncertainty persisted regarding the pace and robustness of the recovery in the global economic conditions in the coming quarters. The most important factors of uncertainty included the further development of the epidemic situation around the world, as well as the scale of adjustment of the enterprise sector and labour market to the potential termination of the economic stimulus programmes. At the same time it was emphasised that so far the major central banks had not signalled the possibility of reducing the scale of monetary expansion and financial market participants were not expecting a tightening of monetary policy for many quarters.

The recent weakening of corporate and household pessimism was accompanied in recent weeks by some improvement in global financial markets sentiment. At the same time, the prices of some commodities rose, remaining, however, at significantly lower levels than at the beginning of the year. In particular, despite a slight increase, oil prices remained low, as a result of – according to certain Council members – the decline in demand for this commodity following the slump in global economic activity as well as the announced termination of cooperation on limiting oil production between Russia and Saudi Arabia. Council members emphasised that low commodity prices, along with decrease in economic activity, were contributing to inflation remaining at low levels in many countries, including Poland's major trading partners.

In Poland, incoming information suggests that following an earlier sharp deterioration of economic situation, in the recent period there had been a gradual improvement in sentiment and a recovery in economic activity. It was pointed out that in May – as some of the pandemic-related restrictions were lifted – a sharp month-over-month rise was recorded in retail sales and industrial output. At the same time, the majority of Council members observed that activity remained lower than a year ago and assessed that the rate of recovery might slow down in the coming months. It was also underlined that the still weakened economic activity was having a negative impact on the labour market situation, which was indicated by a further, although limited, fall in employment and a marked decline in wage growth in enterprises.

Council members judged that in the coming months economic activity could be expected to recover further. It was pointed out that such a scenario was also indicated by the results of NBP's July projection. The opinion was expressed that domestic activity would be supported by an improvement in the economic situation in the external environment of the Polish economy and by economic policy measures, including the easing of NBP's monetary policy. It was judged that economic growth in 2020 Q3 might be boosted by increased consumption expenditure due to a significant increase in the number of consumers spending their vacation in Poland.

At the same time, the majority of Council members expressed the opinion that, as indicated by NBP's July projection, the improvement in the economic situation in the coming quarters would only be gradual. These Council members pointed out that the scale of the expected recovery may be limited by uncertainty about the consequences of the pandemic, lower incomes and weaker sentiment than in previous years, as well as the lack of a significant adjustment of the zloty exchange rate to the global shock caused by the pandemic and NBP's monetary policy easing. Certain Council members were of the opinion that economic growth might be slower than indicated by the July projection. According to these Council members, GDP growth would be limited by the likely increase in precautionary savings amid an expected decline in household income growth and by still weakened investment demand. In turn, certain Council members judged that the economic recovery might proceed faster than assumed in the projection due to the positive impact on GDP of large infrastructure projects.

According to the Statistics Poland (GUS) flash estimate, CPI inflation in Poland stood in June at 3.3% y/y. The majority of Council members judged that inflation growth in June was temporary and probably resulted from the adjustment of service prices to an increased demand – boosted by the realisation of purchases that had been deferred while the pandemic-related restrictions were in force – as well as the introduction by some service providers of a so-called sanitation charge. These members expressed the opinion that, as indicated by NBP's July projection, in the coming months price growth would most likely decline. The significantly lower wage growth than in previous years, the expected growth in the unemployment rate, intensifying price competition between companies amid weakened demand, and the low inflation forecast abroad would contribute to lower inflation. According to these Council members, consumers and enterprises inflation expectations, which had recently declined, also pointed to a likely decrease in inflation later in the year.

However, certain Council members judged that inflation might be higher than indicated in NBP's July projection. These Council members drew attention to the recent elevated readings of inflation excluding food and energy prices, judging that core inflation would also remain relatively high in the coming months. They pointed out that the realisation of purchases deferred while the pandemic restrictions were in force, as well as the significant increase in administered prices and – potentially – electricity prices, would contribute to faster price growth. In the opinion of these Council members, inflation might additionally be increased by higher food prices due to a likely agricultural drought and – in the long term – by higher prices of intermediate goods the possible deglobalisation. Moreover, these Council members judged that despite a slight decline, inflation expectations of consumers and enterprises remained elevated.

The Council members pointed out that NBP's measures taken so far had contributed to an easing of the financing conditions in Poland. In particular it was emphasised that interest rate cuts had translated into lower expenses of indebted companies and households, supporting their budgets. It was also judged that the NBP interest rate cuts were reflected in lower yields on government bonds. It was underlined that this effect was boosted by the asset purchase programmes conducted by NBP. However, certain Council members emphasised that in response to the reduction in NBP interest rates, commercial banks had also cut interest rates on deposits. In the opinion of these Council members, cutting interest rates on bank deposits amid a rise in savings of some households due to the pandemic led to a significant increase in current deposits at the expense of term deposits and to depositors seeking higher-risk investment. Moreover, certain Council members underlined that the monetary policy easing had contributed to a reduction in short-term interest rates to a greater extent than long-term rates.

The majority of Council members judged that due to their positive impact on the financial situation of indebted companies and households, the interest rate cuts would support the stability of the banking sector. However, certain Council members emphasised that they might lead to a deterioration in banks' interest income. These Council members also drew attention to the fact that banks might attempt to improve their financial results by increasing fees and commissions.

The Council members were of the opinion that following the earlier significant interest rate cuts and the launch of asset purchase programmes, the present meeting should keep interest rates unchanged and continue to pursue NBP's remaining measures. It was pointed out that NBP's monetary policy easing mitigated the negative economic effects of the pandemic, limiting the scale of the decline in economic activity and supporting the income of households and enterprises. As a result, NBP's monetary policy contributes to mitigating the fall in employment and limiting the deterioration of the financial situation of enterprises, supporting a quicker economic recovery after the pandemic ends. NBP's measures reduce the risk of inflation falling below the NBP inflation target in the medium term and through the positive impact on the financial situation of borrowers, they contribute to the strengthening of the stability of the financial system.

The Council decided to keep the NBP interest rates unchanged: the reference rate at 0.10%, the lombard rate at 0.50%, the deposit rate at 0.00%, the rediscount rate at 0.11%, and the discount rate at 0.12%.

Minutes of the Monetary Policy Council decision-making meeting held on 15 September 2020

The Council members pointed out that data on GDP in 2020 Q2 in many economies confirmed a sharp drop in activity, including in the immediate environment of the Polish economy. In particular, euro area GDP declined by 14.7% y/y. It was observed that confidence in many economies had improved in July and August 2020 as the epidemic restrictions had been relaxed. This was also supported by the introduced fiscal measures and the accompanying easing of monetary policy. The Council members also judged activity in this period to have been boosted by an increase in households' demand for goods and services that could not be satisfied earlier due to the restrictions.

The Council members emphasised that the global economic activity, in particular industrial output in many economies and global trade, was still below the levels observed before the onset of the pandemic. It was pointed out that current forecasts indicated an improvement in global economic conditions in the second half of 2020, yet activity would remain lower than before the pandemic. At the same time, it was underscored that uncertainty persisted about the pace and robustness of the improvement in the global economic conditions. The further path of the pandemic remained the key risk factor here. In this context, the Council members observed that the number of new coronavirus infections in the world was on the rise again, exceeding in many countries the March or April 2020 figures. As a result, some countries were opting for a restoration or tightening of epidemic restrictions.

The Council members pointed out that according to current forecasts economic activity in the largest economies, including in the Poland's immediate environment, would rebound to the pre-pandemic levels only in 2022. It was assessed at this point that global economic activity in the subsequent quarters would be hampered by – besides increased uncertainty – deteriorating labour market conditions, a decline in global trade and a rise in debt, which, while helping to alleviate the impact of the economic crisis at the moment, might drag on growth in the longer term.

According to current forecasts, global inflation is to remain low, which, apart from depressed economic activity, will also be supported by the previous fall in global commodity prices. In this context, it was pointed out that the annual price growth in the euro area had dropped below zero in August.

The Council members observed that considering the above macroeconomic conditions, the major central banks were signalling the maintenance of interest rates at a level close to zero and continued asset purchases in the subsequent quarters. Against this background it was emphasised that the Federal Reserve had recently de facto raised its inflation target for the subsequent years, thus indicating it would not tighten its monetary policy for some time to come.

In Poland, a marked decline in GDP occurred in 2020 Q2, albeit smaller than in many other EU countries. Council members emphasised that despite the fall in both domestic demand – including private consumption and investment – and exports, the decline in GDP was smaller than forecast. At the same time, it was pointed out that in 2020 Q2, the number of persons working in the economy had fallen and wage growth in the economy had declined.

The Council members assessed that incoming data pointed to an improvement in sentiment and a revival in economic activity in the past few months, even though GDP would remain lower in 2020 Q3 than the year before. It was pointed out that the annual growth in retail sales, industrial output and exports had turned positive by July, yet the decline in construction and assembly output had deepened. It was highlighted that business and consumer sentiment indicators had decreased in August, following their prior rise. Certain Council members stressed that surveys of companies suggested that their investment activity would remain limited. On the other hand, certain Council members highlighted the fact that the expected rise in consumption and exports, coupled with the implementation of infrastructure projects from public funds, would support investment.

The Council members were of the opinion that economic activity might be expected to pick up further in the subsequent months. This would be supported by continued improvement in the economic climate in the external environment of the Polish economy and economic policy measures, including monetary easing by NBP. At the same time, it was assessed that the scale of the recovery might be limited by uncertainty about the future development and effects of the pandemic, which might have an adverse effect on consumption, investment and lending. The Council members also observed that the scale of economic recovery might be dampened by the lower wage growth and weaker business sentiment than in previous years. The majority of the Council members judged in this context that the risks to economic growth in the coming quarters were mostly tilted to the downside. The majority of Council members were of the opinion that the pace of economic growth might be also limited by the lack of a visible zloty exchange rate adjustment to the global pandemic-driven shock and to the monetary easing introduced by NBP.

The Council members also emphasised that a key factor determining economic conditions in the coming quarters would be the situation in the labour market. Against this background, it was pointed out that wage growth had slowed down substantially in recent months, while the decline in the number of working persons and the increase in unemployment was limited. At this point, some Council members drew attention to the fact that as the instruments of the anti-crisis shield were phased out, a greater adjustment to the depressed demand in the economy might take place, which would have a negative impact on household sentiment and consumption. In this context, it was pointed out that the concerns of the surveyed households about unemployment had risen recently.

When referring to inflation, the Council members emphasised its decline to 2.9% y/y in August 2020. It was pointed out that the annual CPI index was 1.8 percentage points lower in August than in February 2020. Some Council members underlined the sustained negative producer price growth. In turn, certain Council members observed that core inflation and services price growth continued to exceed CPI inflation.

The majority of the Council members judged that inflation might be expected to decline further in the subsequent quarters, which would be supported by the persistently negative output gap, higher unemployment, slower wage growth and absence of inflationary pressure from abroad. A further decline in inflation was also indicated by external forecasts. These members judged that although some regulatory factors might put upward pressure on prices, their impact on inflation would probably be smaller than in 2020. On the other hand, certain Council members were of the opinion that inflation in the coming quarters might remain close to the currently observed level, which might result from the persistence of elevated services price growth, impact of regulatory factors and a potential rise in commodity prices.

The Council members pointed to out a decrease in annual lending growth in the economy. In this context, particular attention was given to the decline in corporate lending growth. It was stressed that the decline had been caused to a large extent by lower demand for working capital loans, which might be related to companies receiving funds as part of the anti-crisis shield. Certain Council members judged that the drop in corporate lending in recent months was cyclical in nature and that the surveyed enterprises did not report any deterioration in the availability of bank credit. In contrast, certain Council members drew attention to a tightening of lending criteria reported by banks.

The Council members observed that the measures taken by NBP so far had contributed to an easing of financing conditions in Poland. In particular it was emphasised that interest rate cuts had translated into lower expenses of indebted enterprises and households, and as a result they supported their budgets. It was also judged that the NBP interest rate cuts were reflected in lower yields on Treasury bonds. It was underlined that this effect was boosted by the asset purchases conducted by NBP.

Certain Council members emphasised that in response to the reduction in the NBP interest rates, commercial banks had also cut interest rates on deposits. In the opinion of these Council members, cutting interest rates on bank deposits led to an increase in current deposits at the expense of term deposits, and to depositors seeking higher-risk investment, including in the real estate market. Yet the majority of Council members assessed that no imbalances that might pose a threat to macroeconomic or financial stability were building up in the real estate market.

The majority of Council members judged that due to their positive impact on the financial position of indebted enterprises and households, the interest rate cuts would support the stability of the banking sector. These members also judged that the banking sector was characterised by high capital ratios and high liquidity, and that lending margins remained relatively high, which created favourable conditions for banks to expand lending. It was pointed out that the increased risk in the economy had been a factor curbing lending. Certain Council members pointed out that the number of banks reporting losses had increased.

The Council members were of the opinion that following the earlier significant interest rate cuts and the launch of asset purchases, the present meeting should keep interest rates unchanged and continue to pursue NBP's remaining measures. It was pointed out that NBP's monetary policy easing mitigated the negative economic effects of the pandemic, limiting the scale of the decline in economic activity and supporting the income of households and enterprises. As a result, NBP's monetary policy contributes to mitigating the fall in employment and limiting the deterioration of the financial situation of enterprises, supporting a quicker economic recovery. NBP's measures reduce the risk of inflation falling below the NBP inflation target in the medium term, and through a positive impact on the financial situation of borrowers, they contribute to the strengthening of the stability of the financial system.

The Council decided to keep the NBP interest rates unchanged: the reference rate at 0.10%, the lombard rate at 0.50%, the deposit rate at 0.00%, the rediscount rate at 0.11%, and the discount rate at 0.12%.

Information from the meeting of the Monetary Policy Council held on 7 October 2020

The Council decided to keep the NBP interest rates unchanged: reference rate at 0.10%, lombard rate at 0.50%, deposit rate at 0.00%, rediscount rate at 0.11%, discount rate at 0.12%.

NBP will continue to purchase government securities and government-guaranteed debt securities on the secondary market as part of the structural open market operations. The timing and scale of the operations will depend on the market conditions.

Furthermore, NBP will offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

Incoming data confirmed that following a sharp fall in global GDP in 2020 Q2, the economic activity has been recovering in recent months. The improvement in the global economic conditions has been supported by earlier easing of containment restrictions, introduced fiscal measures as well as the accompanying easing of monetary policy, including interest rate cuts and asset purchases. Despite the rebound, economic activity in most countries remains lower than before the outbreak of the pandemic. Recently, there has been a renewed increase in number of new Covid-19 infections. As a consequence, the uncertainty about the further course of the pandemic as well as the pace and robustness of the recovery in the global economic conditions has also increased.

The growing number of new Covid-19 cases has contributed to some deterioration in global financial market sentiment, mirrored inter alia in depreciation of emerging market currencies. Prices of commodities on the global markets remain significantly lower than at the beginning of the year. Along with weaker economic activity, this has contributed to inflation staying at low levels in many countries, including Poland's main trading partners.

In Poland, the incoming data indicated a recovery in economic activity in 2020 Q3, after a significant fall in GDP in 2020 Q2. At the same time, data on retail sales and production in August suggested that the economic recovery has slowed down compared to previous months. This was accompanied by a stabilisation in the number of people employed in enterprise sector, along with wage growth in this sector staying significantly below its pre-pandemic level. At the same time, inflation in September – according to the Statistics Poland *flash* estimate – stood at 3.2% y/y.

A further recovery in economic activity may be expected over the coming months, however its pace may be slower than observed so far. The improvement in the economic situation will be supported by economic policy measures, including the easing of NBP's monetary policy. At the same time, an increase in activity may be curbed by high uncertainty about the further course and effects of the pandemic and weaker sentiment of economic agents than in previous years. The economic conditions in the environment of the Polish economy will also have a significant impact on the activity growth. The pace of the economic recovery could also be limited by the lack of visible and more durable zloty exchange rate adjustment to the global pandemic-driven shock and to the monetary policy easing introduced by NBP.

NBP will continue to purchase government securities and government-guaranteed debt securities on the secondary market as part of the structural open market operations. These operations are aimed at changing the long-term liquidity structure in the banking sector, ensuring the liquidity in the secondary markets for the purchased securities and enhancing the impact of the NBP interest rate cuts on the economy, i.e. strengthening the monetary policy transmission mechanism. The timing and scale of the operations will depend on the market conditions.

Furthermore, NBP will also offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

The NBP monetary policy easing mitigates the negative economic impact of the pandemic, supports economic recovery and reduces the risk of inflation falling below the NBP inflation target in the medium term. Due to its positive impact on the financial situation of debtors, it is also conducive to strengthening of financial system stability.

Information from the meeting of the Monetary Policy Council held on 6 November 2020

The Council decided to keep the NBP interest rates unchanged: reference rate at 0.10%, lombard rate at 0.50%, deposit rate at 0.00%, rediscount rate at 0.11%, discount rate at 0.12%.

NBP will continue to purchase government securities and government-guaranteed debt securities on the secondary market as part of the structural open market operations. The timing and scale of the operations will depend on the market conditions.

Furthermore, NBP will offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

Incoming data confirm that following a sharp fall in global GDP in 2020 Q2, economic activity was recovering in Q3. The improvement in the global economic conditions had been supported by the earlier easing of the containment restrictions, the fiscal measures introduced, as well as the accompanying easing of monetary policy, including interest rate cuts and asset purchases by central banks. Despite the rebound, economic activity in most countries remained lower than before the outbreak of the pandemic.

Recently, however, there has been a significant increase in the number of COVID-19 infections. As a consequence, many countries have once again tightened the pandemic restrictions. At the same time uncertainty about the further course of the pandemic as well as future economic conditions in the global economy has increased.

The growing number of new COVID-19 cases has also contributed to a deterioration in global financial market sentiment, mirrored, among others, in a depreciation of emerging market currencies. Global commodity prices remain significantly lower than at the beginning of the year. Along with weaker economic activity, this has contributed to inflation staying at low levels in many countries, including Poland's main trading partners.

In Poland, the incoming data also confirm a strong rebound in economic activity in 2020 Q3, after a significant fall in GDP in 2020 Q2. This is indicated by, in particular, data on retail sales and industrial output in September. This was accompanied by a certain improvement in the labour market situation, including higher wage growth in the corporate sector. At the same time, inflation in October – according to the Statistics Poland flash estimate – decreased to 3.0% y/y (compared to 3.2% y/y in September).

The sharp increase in the number of new COVID-19 infections in the recent period and the tightening of the pandemic restrictions will contribute to a further deterioration in the economic conditions in 2020 Q4. In particular, domestic economic conditions will be held back by a decline in activity in the services sector, restrictions introduced in trade, increased uncertainty about the further course and effects of the pandemic and a deterioration in economic agents' sentiment. Domestic economic activity may be also limited by economic downturn in the environment of the Polish economy as well as by the lack of a visible and more durable zloty exchange rate adjustment to the global pandemic-driven shock and to the monetary policy easing introduced by NBP. In turn, the fall in the activity will be limited by the economic policy measures, including the easing of NBP's monetary policy.

The Council became acquainted with the results of the November projection of inflation and GDP based on the NECMOD model. In line with the projection prepared under the assumption of unchanged NBP interest rates and taking into account data available until 4 November 2020, there is a 50-percent probability that the annual price growth will be in the range of 3.4–3.5% in 2020 (against 2.9–3.6% in the July 2020 projection), 1.8–3.2% in 2021 (compared to 0.3–2.2%) and 1.6–3.6% in 2022 (compared to 0.6–2.9%). At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of -4.1 – -3.0% in 2020 (against -7.2 – -4.2% in the July 2020 projection), 0.8–4.5% in 2021 (compared to 2.1–6.6%) and 3.8–7.8% in 2022 (compared to 1.9–6.0%).

NBP will continue to purchase government securities and government-guaranteed debt securities on the secondary market as part of the structural open market operations. These operations are aimed at changing the long-term liquidity structure in the banking sector, ensuring the liquidity in the secondary markets for the purchased securities and enhancing the impact of the NBP interest rate cuts on the economy, i.e. strengthening the monetary policy transmission mechanism. The timing and scale of the operations will depend on the market conditions.

Furthermore, NBP will offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

NBP's monetary policy mitigates the negative economic impact of the pandemic, supports economic activity and stabilises inflation at the level consistent with the NBP's medium-term inflation target. Due to its positive impact on the financial situation of debtors, it is also conducive to the strengthening of financial system stability.

The Council adopted the *Inflation Report – November 2020* as well as the *Opinion on the 2021 Draft Budget Act*.

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 November projection based on the NECMOD model covers the period from 2020 Q4 to 2022 Q4. The starting point for the projection is 2020 Q3.

The cut-off date for the data used in this projection is 4 November 2020

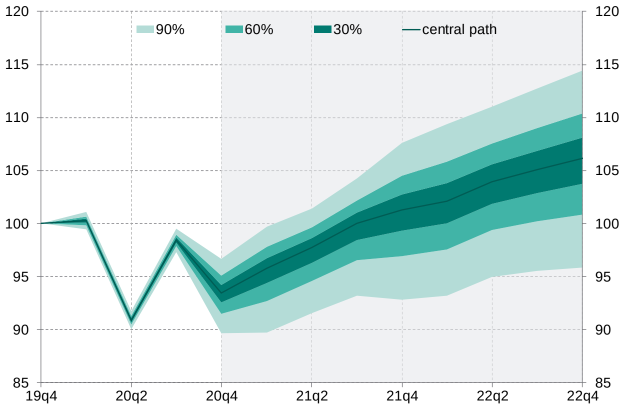
4.1 Summary

In 2020 Q3, after a sharp fall in GDP in 2020 Q2, there was a marked recovery in domestic economic activity on a larger scale than that indicated in the July projection. This revival was supported by a significant easing of the restrictions on social and economic life, the resumption of purchases of goods and services deferred by household during the economic lockdown, the anti-crisis measures by the government and Narodowy Bank Polski and an improvement in the business conditions abroad.

However, in recent weeks the epidemiological situation has deteriorated, both in Poland and in many other countries in Europe. In response to the surge in infections, the government has once again begun to increase the scope of the existing restrictions and introduce new ones on economic and social life. At the same time, there has been a deterioration in sentiment of firms and households, who have cut back on their spending regardless of the restrictions introduced. Consequently, in 2020 Q4 economic activity will decline again. However, the scale of the fall in GDP will be smaller than in 2020 Q2, when the strong negative shock affected the majority of the sectors of the economy, limiting industrial activity, construction and services, and at the same time foreign demand slumped. In the projection it was assumed that the current lockdown will be shorter than that introduced last spring.

In the years 2021-2022 there will be a gradual and rather slow rebound in economic activity. The recovery, particularly in 2021, will be held back by the likely renewed increase in infections and the imposition of temporary restrictions on the functioning of the economy (or individual sectors), as well as the heightened uncertainty. Due to higher operating costs of enterprises and, in some cases, a suspension of activity, there has been a

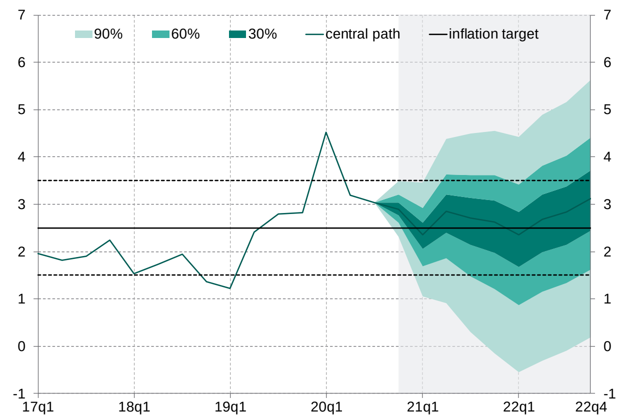
Figure 4.1 Level of real GDP (Q4 2019 = 100)



Source: Statistics Poland (GUS) data, NBP calculations.

Fan charts depict the probability distribution of possible outcomes of the level of GDP (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. 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.).

Figure 4.2 CPI inflation (y/y, %)



Source: Statistics Poland (GUS) data, NBP calculations.

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

permanent decrease in the productive potential of the domestic economy.

Inflation will remain elevated in 2020 as a result of the increased operating costs of companies due to the pandemic and the lower utilisation rate of fixed assets (which is reflected in the introduction by some firms of the so-called "COVID fee"), as well as the effects of the earlier increases in administrative prices and the depreciation of the zloty.

In 2021 CPI inflation will decline, reacting with a delay to the currently observed fall in demand amid a merely limited improvement in business conditions in the next year and continued uncertainty about the further course of the pandemic. At the same time, in the coming quarters the one-off factors currently boosting inflation will gradually fade away and the increase in the supply of some agricultural products will slow down food price growth. The gradual rebound in economic activity and the improvement in the situation in the market will translate – taking into account the delayed reaction of inflationary processes – into a renewed acceleration of price growth in 2022. Over the whole projection horizon CPI inflation will run within the symmetrical band of deviations from the NBP inflation target defined as 2.5% +/- 1 percentage point.

COVID-19 pandemic and the changes in the behaviour of entities amid alternating easing and tightening of administrative restrictions and the freedom to conduct business. The balance of uncertainty factors in the case of GDP growth and – to a lesser extent – CPI inflation suggests that these categories are more likely to remain below the central projection scenario.

4.2 External environment

Economic growth

In 2020 Q2 there was an unprecedented fall in GDP in the major developed economies, which was the result of the wide-ranging administrative social and economic restrictions in force at the time in response to the rapid spread of the COVID-19 pandemic. In 2020 Q3 there was a significant rebound in global economic activity, including in the economies of Poland's main trading partners. However, in view of the significant deterioration in the pandemic situation in Autumn this year, the tightening and introduction of new restrictions, the GDP path abroad is expected to return in the coming quarters close to a level predicted in July's projection (Table 4.1). The gradual recovery of global GDP will be disrupted by the possible introduction of temporary economic restrictions due to an increase in the number of infections. As a result, economic activity in the coming quarters will continue to be characterised by high volatility dependent to the greatest extent on the future course of the COVID-19 pandemic in Europe and around the world.

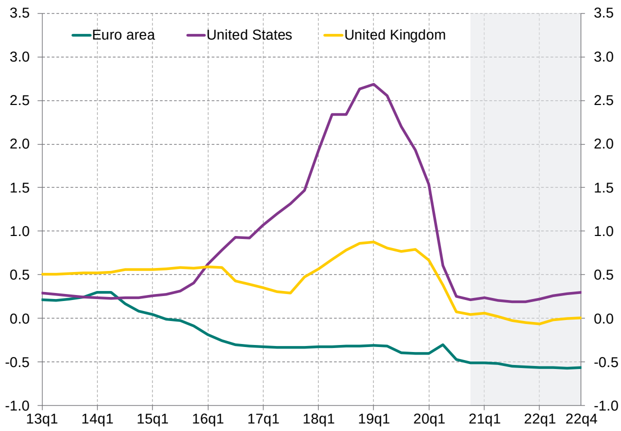
Table 4.1 GDP abroad - November projection versus July projection

	2020	2021	2022
GDP in Euro Area (y/y, %)			
November 2020	-7.5	3.2	4.0
July 2020	-9.1	5.2	3.2
GDP in United States (y/y, %)			
November 2020	-3.8	3.3	2.3
July 2020	-5.7	3.4	2.7
GDP in United Kingdom (y/y, %)			
November 2020	-10.4	4.2	4.5
July 2020	-9.6	5.1	3.3

Source: NBP calculations.

In the baseline scenario it is assumed that economic activity abroad will return to its pre-pandemic level by the end of the projection horizon. The slow recovery of economic activity in this period will reflect the need to keep in place – or even temporarily extend– the current restrictions, the more stringent sanitary regime, and the heightened uncertainty of economic entities.

Figure 4.3 Interest rates abroad (%)



Source: Bloomberg data, NBP calculations.

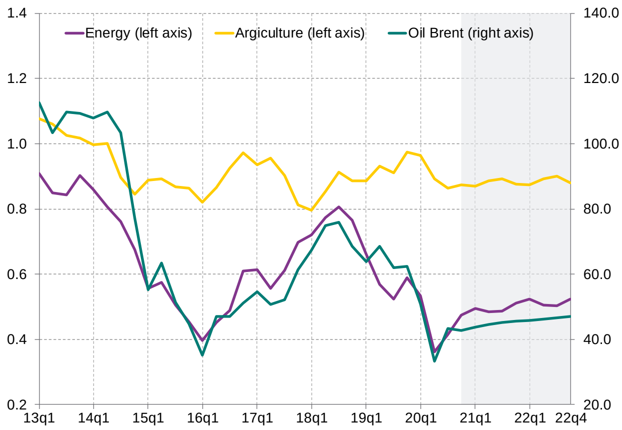
The fall in GDP in the euro area in 2020 Q2 affected all components of domestic demand, with a stronger collapse of investment than private consumption. The pace of the recovery of this economy will be curbed in the coming quarters by the deterioration in the epidemic situation and the intensified coronavirus restrictions, the unfavourable financial situation of firms, marked increase in unemployment in the services sector, and weak external demand, reflecting the global scale impact of the pandemic. A negative risk factor is also the possibility of a no-deal Brexit. It is expected that the German economy will be less affected by the crisis than the remaining large economies of the euro area due to Germany's better effectiveness in stabilising the epidemic situation, the greater scale of fiscal policy easing, and smaller dependence of the German economy on foreign tourism. In turn, the unfavourable outlook for economic activity in the United Kingdom is a reflection of the weaker than expected GDP readings in the UK economy in 2020 Q2, still difficult epidemic situation, and the increased uncertainty about the conclusion of a trade agreement with the EU (Table 4.1).

Inflation and commodity markets

Following a sharp fall in oil prices at the end of 2020 Q1 and beginning of 2020 Q2, driven by the decline in demand as a result of the outbreak of the COVID-19 pandemic, a gradual increase in oil prices has been observed since May due to the improvement in activity in the global economy as well as supply-side adjustments (Figure 4.4). Global market prices of natural gas and hard coal followed a similar pattern. A new spike in infections around the world in recent weeks and growing concerns about the durability of the recovery in global demand have curbed the upward trend in oil prices.

Over the projection horizon it is assumed that along with an only moderate improvement in the epidemic and economic situation around the world, energy commodity prices will grow, but remain relatively low (Figure 4.4). However, the realisation of this scenario will depend on the future course of the pandemic and the development of demand for energy commodities as well as the future decisions of the OPEC countries and other producers regarding production volumes.

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



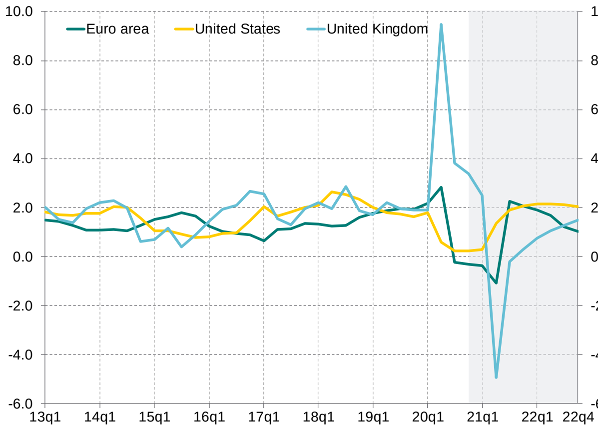
Source: Bloomberg data, NBP calculations.

The index of the prices of energy commodities includes prices of crude oil, coal and natural gas, taking into account of the consumption structure of these commodities in Poland. The agricultural commodity price index includes prices of wheat, pork, skimmed milk powder, butter, sugar, cocoa, coffee, frozen concentrated orange juice, potatoes, oilseed, allowing for weights reflecting the consumption structure of Polish households.

After a slight rise in prices in August and September on the back of an improvement in global demand, the majority of agricultural prices remained at relatively low levels (Figure 4.4). Over the projection horizon the negative demand effects of the coronavirus pandemic and the persistence of low oil prices, which have an impact on the costs of freight and artificial fertilizers will curb further growth in prices of agricultural commodities. The main risk to the forecast, besides the future course of the COVID-19 pandemic, is the development of the ASF pandemic in Germany and the future agrometeorological conditions.

In 2020 Q2 there was an increase in the gross value added deflator in the United Kingdom and the euro area (Figure 4.5), which reflected the stabilising impact of the anti-crisis packages on the wage fund and companies' profits in these economies amid a sharp fall in production. Over the projection horizon price growth in the immediate environment of the Polish economy will decline under the influence of low demand pressure, which will have a lagged impact on inflation, and a moderate rise in labour costs.

Figure 4.5 Inflation abroad (y/y, %)



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

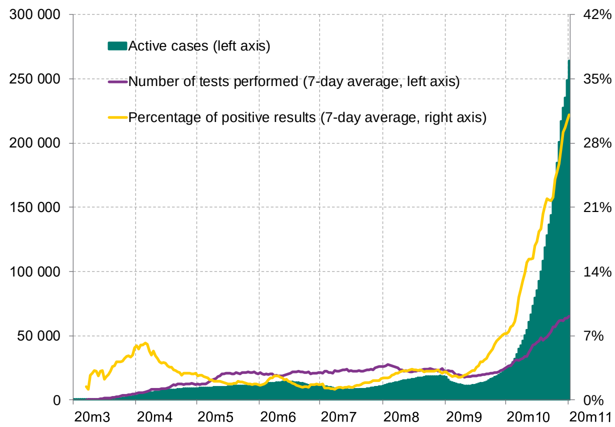
4.3 Polish economy in 2020-2022

Assumptions regarding the development of the epidemic and scope of government restrictions

In March 2020, in response to the increase in SARS-CoV-2 infections (Figure 4.6), Poland, like many other countries, introduced a range of restrictions freezing a large part of the economy. After the number of new cases has slowed down, in the second half of April the government began to gradually ease the restrictions.

In the autumn the epidemic situation deteriorated significantly, both in Poland and in many European countries. In response to a sharp rise in the number of infections, the government began again to extend the scope of the restrictions already in place and impose further ones on economic and social life. Since 7 November another package of

Figure 4.6 Patients with COVID-19 in Poland, number of tests performed and percentage of positive results (daily data)



Source: Ministry of Health data.

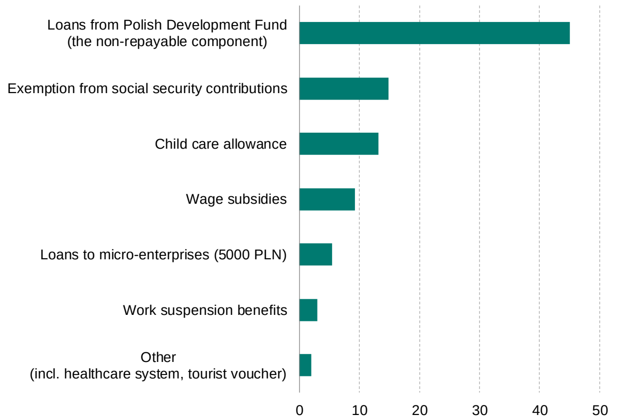
restrictive measures has been introduced, which most constrain the activity of companies from the service sector: trade, catering, culture, education and sport. All cinemas, theatres, museums and other cultural institutions have been closed, schools have shifted to remote learning, the operation of shopping malls has been significantly restricted, and restaurants can only prepare take-away meals. However, the scale of restrictions currently imposed on the economy is less extensive than this spring, in particular with regard to the operation of some service outlets (e.g. hairdressers, rehabilitation) and hotels. The projection also assumed that the current lockdown will be shorter than that introduced in the spring.

New infections are likely to rise again in winter, entailing the introduction of temporary constraints on the functioning of the economy (or its individual sectors). Thus, some of the restrictions currently in place may be maintained over a longer period, and those that will been lifted may be reintroduced if the epidemic situation deteriorates again. The key risk factors to the economic outlook are the evolution of the pandemic different from that assumed in the projection and the scale of the restrictions.

Anti-crisis measures

In order to mitigate the negative impact of the pandemic on economic activity, as of 2020 Q2 the government has implemented a range of anti-crisis measures. The amount of non-repayable support financed from national sources may total, in line with current expectations, approx. PLN 93 billion in 2020[57] (Figure 4.7). Also, with the approval of the European Commission, part of the EU funds under the individual operational programmes for 2014-2020 have been redirected by the government to finance the anti-crisis measures, with the majority of these funds to be used in 2020 (see also Figure

Figure 4.7 Anti-crisis measures - non-repayable support financed from national sources (PLN billion)



Source: NBP estimates based on regulatory impact assessment and ZUS, MRPiPS, MRPiT, PFR data.

[57] As companies are still in the process of applying for support under certain instruments, the final scale of anti-crisis measures is fraught with uncertainty. The amount cited is the value adopted for the purposes of the projection based on government assumptions and available data on the implementation of individual instruments.

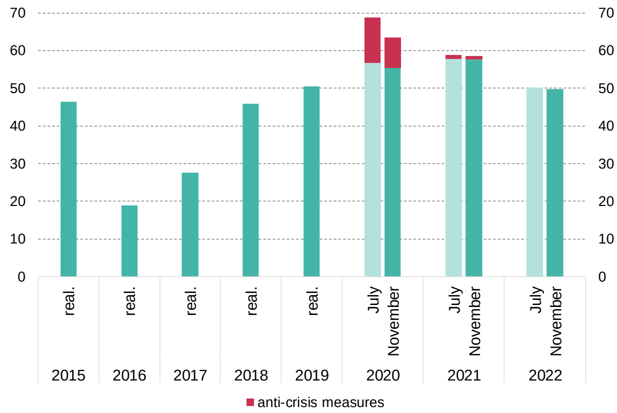
4.8). At the same time, the projection does not take into account EU funds under the Next Generation EU programme, as there is no specific information on its distribution.[58]

Protecting jobs and preventing the growth of unemployment were among the top priorities, as well as supporting enterprises through limiting their operating costs and strengthening their liquidity. Support under the instruments introduced in the spring of 2020 has largely been completed due to the end of the period for submission of applications or disbursement of funds. Among the key programmes still in use is the wage subsidy from the Guaranteed Employee Benefit Fund and the disbursement of funds to large firms under the Financial Shield of the Polish Development Fund (PFR). The current surge in infections, the new tightening of restrictions imposed on economic activity and introduction of new restrictions may involve the reintroduction of some of the instruments applied in the spring. However, as no details of such measures were available until the cut-off date for the data, they were not assumed in the projection.

The positive impact of anti-crisis measures on the Polish economy is not exclusively limited to the year 2020, but will also make its mark on the subsequent quarters through a decline in the percentage of persons faced with long-term unemployment and a higher number of businesses which - thanks to the aid received - were able to survive the period of a sharp drop in their revenues.

In order to mitigate the negative effects of the pandemic, the Monetary Policy Council has eased the monetary policy stance. In particular, between March and May 2020, the Council cut the NBP interest rates, including the reference rate to 0.1%. Additionally, structural open market operations were launched, involving secondary-market

Figure 4.8 EU funds absorption under cohesion policy, highliting amounts allocated for anti-crisis measures (PLN billion)



Source: MFiPR, Statistics Poland (GUS) data, NBP calculations.

[58] This approach was adopted by the European Commission in its autumn forecasting round. Only funds included in the draft budget acts of the individual countries have been included.

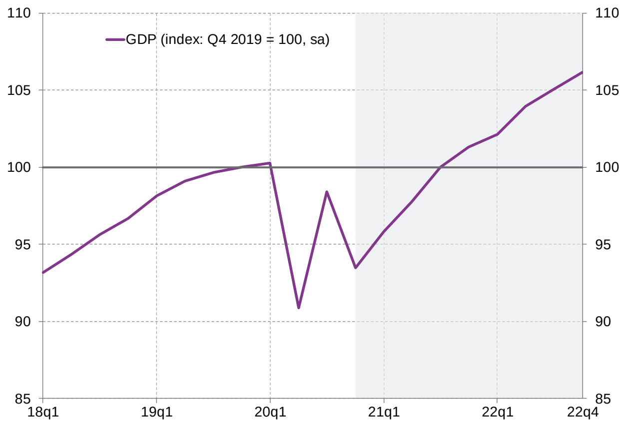
purchase of Treasury securities and debt securities guaranteed by the State Treasury. As a result, financing and debt service costs in the Polish economy have lowered substantially. In particular, there has been a fall in the interbank market interest rates, which affect the instalments of many household and corporate loans. A decline was also observed in Treasury bond yields. The easing of the NBP's monetary policy stance is having a beneficial effect on economic activity in Poland through supporting consumption and investment and improving financing conditions of the fiscal incentives.

Economic activity

In 2020 Q3, following a sharp decline in GDP in the previous quarter, domestic economic activity rebounded markedly, although it was still running below its pre-pandemic level (see also Figure 4.9, Figure 4.10). The recovery was supported by a considerably reduced scale of the restrictions, purchases of goods and services deferred by households for the duration of the lockdown (see also Figure 4.11), the anti-crisis measures of the government and Narodowy Bank Polski (see also the section *Anti-crisis measures*), as well as improved business conditions abroad. However, consumption demand growth was partly curbed by a deterioration in consumers' income situation and a change in the behaviour patterns for fear of SARS-CoV-2 infection. In addition, amid the elevated uncertainty and concerns about loss of income, households were more inclined to save at the expense of current consumption.

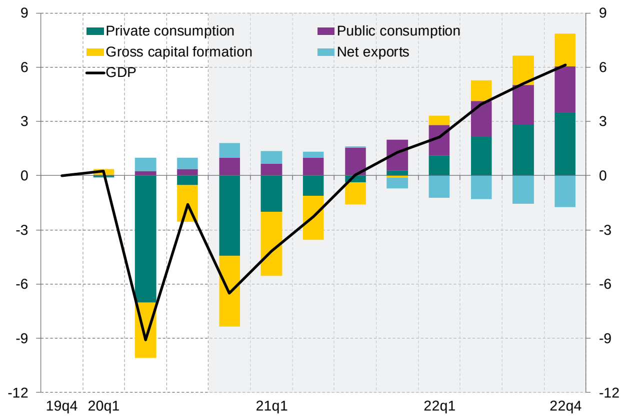
As the global economy recovered in 2020 Q3, the volume of exports and imports increased (Figure 4.14). The forecasts of exports of the surveyed enterprises returned to the levels observed in the middle of 2019.[59] At the same time, the volume of imports increased at a relatively slower pace, due to depreciation of the zloty and the considerably

Figure 4.9 Level of real GDP



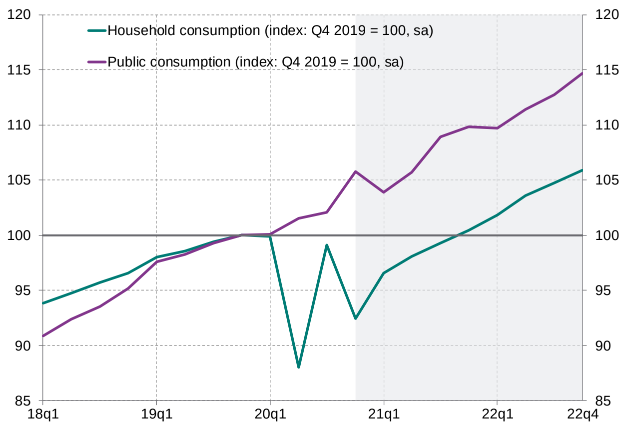
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.10 GDP and its components (changes in %, reference period Q4 2019)



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.11 Household and public consumption



Source: Statistics Poland (GUS) data, NBP calculations.

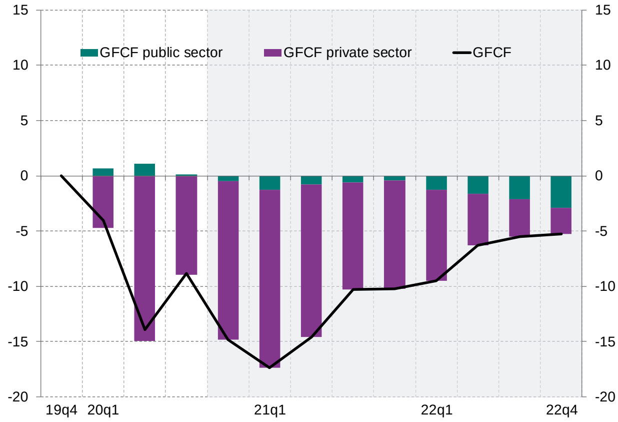
[59] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, October 2020.

limited tourist foreign travel. As a consequence, the contribution of net exports to GDP growth remained positive in 2020 Q3, in accordance with the historically observed countercyclical reaction of this category in Poland.

In 2020 Q4, economic activity will subside again significantly due to the restrictions introduced in connection with the new surge of the COVID-19 pandemic and the persistently high uncertainty about its future development. As a result, the sentiment of businesses and households, who irrespective of the restrictions had cut spending on some services, deteriorated. Yet the scale of the GDP decline will be smaller than in 2020 Q2, when the massive negative shock hit industrial and services activities, with a concurrent collapse in foreign demand. This time sanitary restrictions and constraints to economic activity on such a large scale are expected to last shorter than in the spring of 2020. However, due to a delayed reaction to the pandemic crisis, a decline in construction activity will be more pronounced than in 2020 Q2.

In 2020 Q4 corporate investment will decline sharply (Figure 4.12). Against the backdrop of heightened uncertainty, economic agents will be reluctant to incur long-term financial commitments. This is confirmed by the business surveys – even before the steep rise in new cases of coronavirus infections, the forecasts for the investment outlays planned for this year were unfavourable and strongly negative.[60] The scale of the decline in gross fixed capital formation in 2020 will be partly mitigated by public investment, in particular the infrastructure projects on account of the increase in EU funds earmarked to finance this expenditure (Figure 4.13). The scale of the cyclical drop in demand for housing may also be smaller since some households have increased their savings, interest rates are running at record low

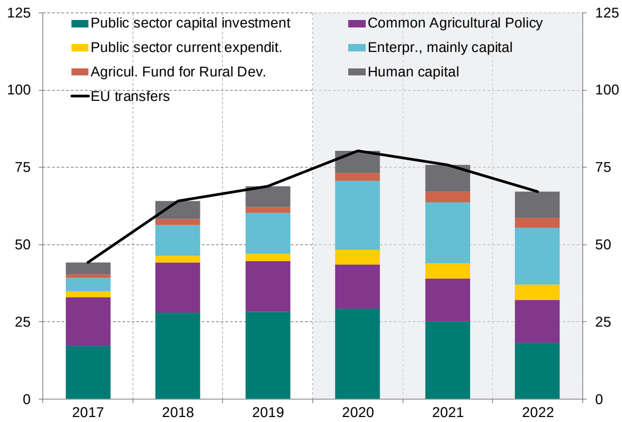
Figure 4.12 Gross fixed capital formation and its components (changes in %, reference period Q4 2019)



Source: Statistics Poland (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.

Figure 4.13 Expenditure financed by EU funds (in PLN billion) – breakdown



Source: NBP calculations.

[60] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, October 2020.

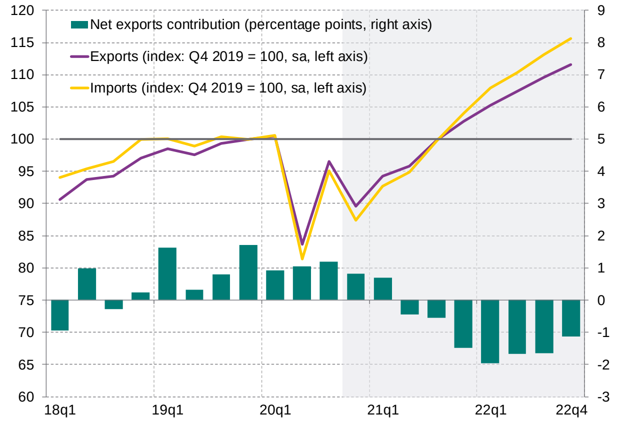
levels, and housing demand in some locations rises during the pandemic.

A recovery in 2021-2022 is contingent on the assumed gradual normalisation of the pandemic situation, a revival of economic activity abroad and improved outlook for private demand. The projection scenario assumes relatively slow economic growth in 2021-2022, given the considerable scale of the decline in economic activity in 2020. The pace of the recovery in domestic economic activity will be hampered by the potentially recurring increases in infections, entailing the reintroduction of temporary restrictions on the operation of the economy and a delay in lifting of the existing restrictions. Also, high uncertainty surrounding the further development of the COVID-19 pandemic will remain a factor limiting the growth of household expenditures and investment outlays in the projection horizon.

Private consumption growth, following a sharp fall in 2020, will gradually pick up in the projection horizon. Yet the scale of this acceleration, supported by the recovery of households' disposable income due to improved labour market conditions, will continue to be dragged down by a change in the behaviour patterns and the importance of the precautionary motive. Consequently, households' saving rate will persist at an elevated level throughout the projection period.

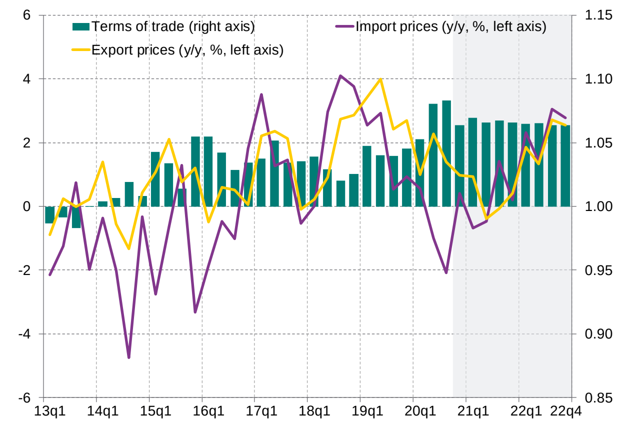
Heightened uncertainty and the related restraints on firms' activity will continue to hamper the recovery of investment demand in the projection horizon. This is evidenced by the business surveys conducted even before the surge in infections and the introduction of new restrictions – nearly half of the enterprises were unable to assess the time horizon within which their investment activity will return to the growth path.[61] As a result, despite

Figure 4.14 Foreign trade



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.15 Export and import prices



Source: Statistics Poland (GUS) data, NBP calculations.

[61] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, October 2020.

gradual improvement in the situation at home and abroad, particularly in the German economy, gross fixed capital formation will remain well below its pre-pandemic level over the projection horizon. Housing demand will suffer to a lesser extent, as it will start to increase again later in the projection horizon, supported by relatively high household saving rate and economic recovery.

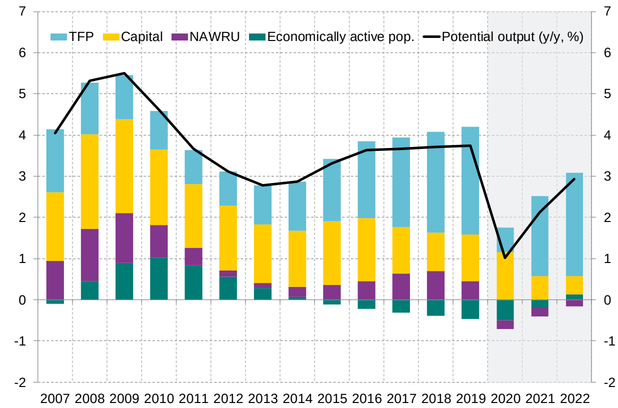
The gradual improvement in the situation both in Poland and abroad will contribute to an increase in the volume of exports and imports. At the same time, due to its countercyclical character, the balance of trade will gradually decline, rendering a negative contribution of net exports to growth later in the projection horizon.

Potential output and the output gap

In response to the economic crisis caused by the COVID-19 pandemic, potential output growth also declined in 2020, albeit to a lesser extent than demand (Figure 4.16). Total factor productivity (TFP) growth is set to slow down markedly, with a diminished contribution of labour to the potential growth.

The slower TFP growth in 2020 stems from the changes observed in the labour market in the wake of the COVID-19 outbreak — among others, reduced working hours, sending employees on leave or workers taking advantage of care leave. Moreover, the increasing number of people in quarantine is disrupting the work system of companies. The outbreak of the pandemic has also spurred an extensive shift to new forms of work organisation: the switch to remote work in the case of persons who have not previously done so may require getting used to new tools and responsibilities. Total factor productivity growth is also constrained by the rise in corporate operating costs, related, among others, to the provision of workstations with the necessary personal protective equipment and the reduction in the use of fixed assets.

Figure 4.16 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.

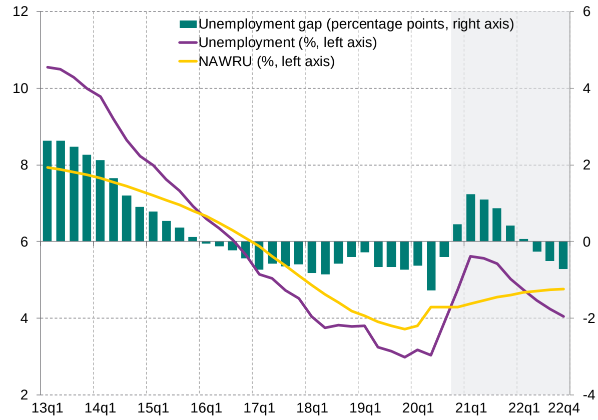
The outbreak of the COVID-19 pandemic has also caused a fall in the potential workforce. This is due to, firstly, a greater skill mismatch in the labour market. Some of the laid-off workers in the industries affected by the crisis will not find other work due to the lack of required qualifications and skills as well as the time needed to acquire them. At the same time, certain sectors of the economy, which are permanently gaining in importance as a result of the pandemic and its consequences, are reporting problems with the availability of qualified workers. The increase in skill mismatch in the labour market is reflected in a rise in the equilibrium unemployment rate (NAWRU, Figure 4.17). Secondly, the potential output of the Polish economy is also negatively affected by a significant increase in the number of economically inactive persons observed in 2020 Q2 according to the LFS. The labour force participation rate in 2020 will run below pre-pandemic levels.

As a result, potential output will rise by approx. 1% in 2020, compared to the average of 3.5% y/y during the past 10 years.

In 2021-2022 potential GDP growth will pick up, although it will continue to run below the average of the years 2010-2019. The pace of the recovery in potential output growth will be slowed down by the impact of the re-imposition of new restrictions on the Polish economy, leading to constrained supply of some goods and services. The scale of potential GDP recovery will also be curbed by the lack of a rapid return of investment outlays to pre-pandemic levels and the resulting permanent reduction in productive capital assumed in the projection.

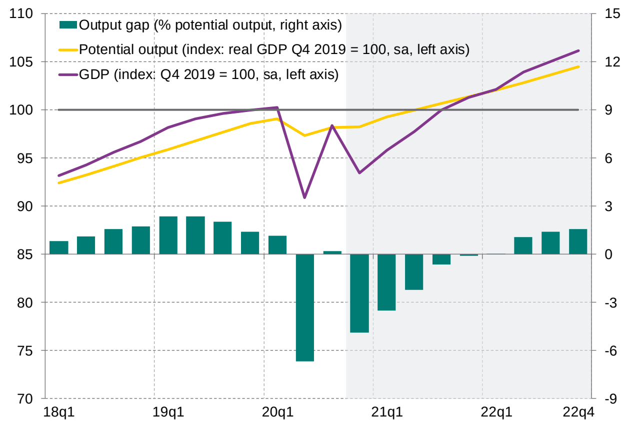
Much stronger decline in demand than in potential output will result in the negative output gap in 2020 (Figure 4.18). In the coming years, the output gap will narrow, but will not turn positive until the last year of the projection. This path of the output gap is the result of the high persistence of factors

Figure 4.17 Unemployment



Source: Statistics Poland (GUS) data, NBP calculations.
$NAWRU_t$ – non-accelerating wage rate of unemployment in the equilibrium

Figure 4.18 Output gap



Source: Statistics Poland (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.

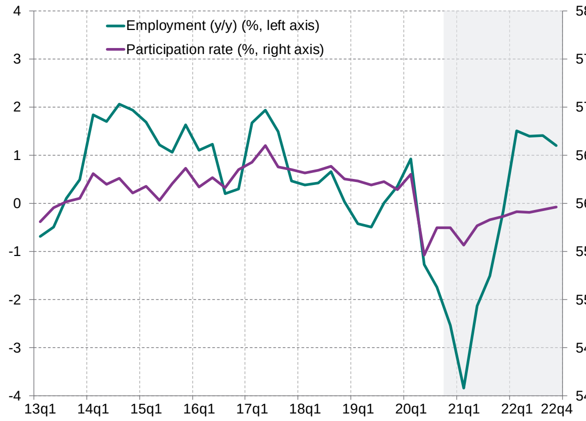
currently reducing demand, with the supply-side constraints being more quickly removed.

Labour market

The decline in economic activity due to the outbreak of the pandemic will affect the domestic labour market adversely, not only during the current year, but also in 2021 (Figure 4.19). The drop in demand for labour will coincide with a reduction in the effective supply of labour due to concerns about infection, absenteeism due to childcare during the closures of educational establishments and due to infections[62]. In 2020, the scale of the reduction in employment is mitigated by the government's anti-crisis measures and firms' propensity for labour hoarding. That notwithstanding, owing to the merely moderate improvement in economic conditions forecast in 2021 and the potential new increase in infections leading to administrative restrictions on economic activity and a temporary decline in demand for labour, the unemployment rate will continue to run at an elevated level.

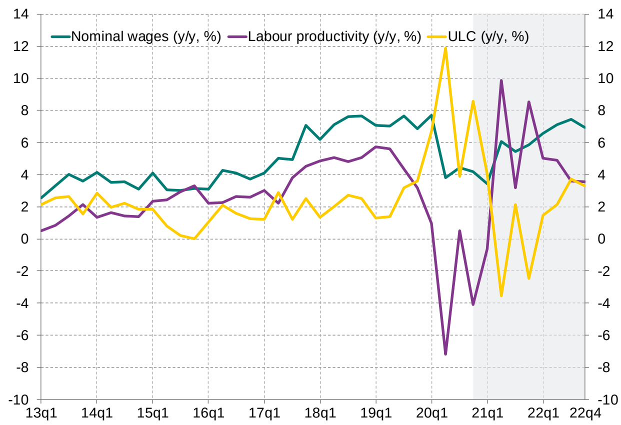
In the second half of 2021, a gradual reversal of the adverse labour market trends is possible. With a partial return to the pre-pandemic mode of operation, there will be a gradual increase in wage growth in the economy (Figure 4.20). It will be driven by the restoration of labour intensity and the reinstatement of non-wage allowances or wage increases previously planned but abandoned. Wage levels will also be affected by the planned increase of 7.7% in the minimum wage as of January 2021. However, given the heightened unemployment rate, wage growth will not reach the level of 2018-2019 in the projection horizon.

Figure 4.19 Employment and labour force participation



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.20 Unit labour costs



Source: Statistics Poland (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 product of average wages and the number of employed persons 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. Unit labor costs (ULC) presented in the chart include employers' social security contributions.

[62] Available data show that in August 2020 the number of care benefits disbursed by the Social Insurance Institution on general principles persisted at a much higher level than before the pandemic. This was despite the fact that the additional care benefit for parents of children aged no more than 8 years, introduced as a part of the anti-crisis shield, was not available at that time. Since 26 October, the older primary school classes have switched to remote education and from November 9th also children in classes 1-3 are learning remotely, while kindergartens and crèches continue to participate in classroom activities. Due to illness, some educational establishments are being closed down, which results in an increased number of parents who can take advantage of the additional benefit again. At the same time, kindergardents are stricter in their approach to the presence of children with signs of infection, which also leads to more frequent sick leave.

CPI inflation

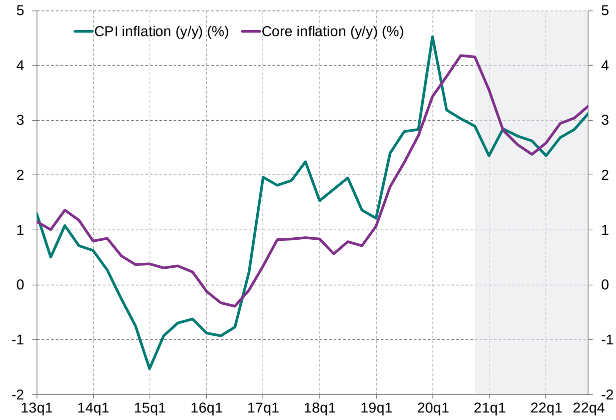
In 2021 CPI inflation will decline, to rise again in 2022, and will run within the tolerance band of the NBP inflation target, set as 2.5% +/- 1 percentage points, throughout the projection horizon (Figure 4.21, Figure 4.22, Figure 4.23).

The decline in inflation in 2021 will be supported by a number of factors. Firstly, price growth will manifest a lagged response to the currently observed decline in demand, amid a merely moderate improvement in economic conditions in 2021 and persistent uncertainty about the future path of the pandemic. Inflation will also be constrained by weak growth in unit labour costs resulting from the persistently elevated unemployment rate. In the coming quarters, price growth will also be curbed by a marked increase in the supply of cereals, vegetables and fruit due to improved weather conditions in 2020. Owing to the global reach of the pandemic, economic conditions abroad have also weakened, contributing to a drop in inflation also in Poland's external economic environment.

In 2021 prices of goods and services will continue to be boosted by the reduced productivity of some of the firms, related to the imposed restrictions, absenteeism of employees remaining in quarantine and taking care of the children as well as changes in consumers' preferences amid social distancing. Against this background, the so-called "Covid fees" introduced by some firms in 2020 to cover the increased costs and the reduced degree of fixed asset utilisation, will probably be maintained in 2021. However, unless the scale of these fees increases substantially, their impact on inflation y/y will fade in 2021, constituting another downward influence on inflation.

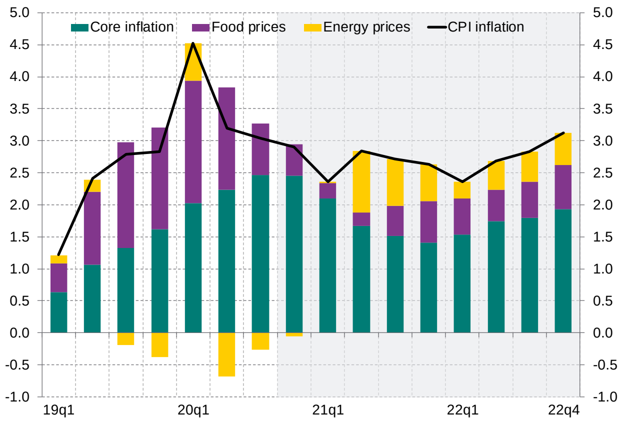
Administered price growth will probably continue at robust rates in 2021. Electrical energy bills will be boosted by the introduction of the capacity charge. At the same time, some local governments are signalling further rises in waste disposal charges.

Figure 4.21 CPI and core inflation



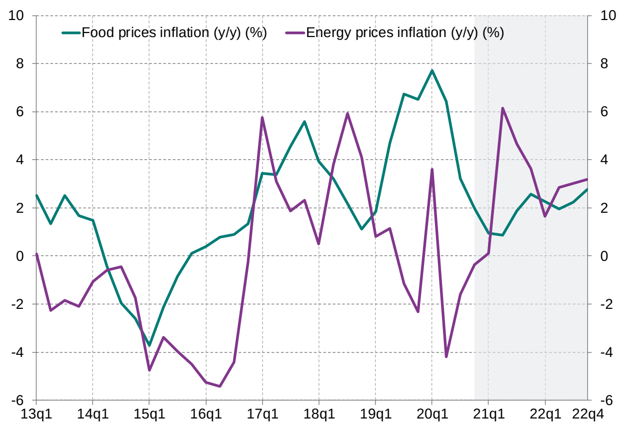
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.22 CPI inflation (y/y, %) – breakdown



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.23 Food and energy price inflation



Source: Statistics Poland (GUS) data, NBP calculations.

Yet due to the price-setting mechanism relating to these prices, their forecast is fraught with high uncertainty.

The scale of the decline in CPI inflation in 2021 will, on the other hand, be curbed by a rise in energy prices. It will be a consequence of the new rise in fuel price growth after a substantial drop in demand for oil, and hence in its prices, in the spring of 2020, due to the imposed restrictions. The introduction of the sugar tax as of January 2021 may work in the same direction.

In 2022 a new, moderate rise in inflation will be observed, related to the further recovery of domestic and foreign demand and, consequently, the output gap turning positive. Another upward factor will be the anticipated rise in inflation in Poland's external economic environment, causing prices of imports to rise. At the same time, due to improved labour market conditions, unit labour cost growth will pick up again, which will also support higher consumer price growth.

Table 4.2 November projection versus July projection

	2020	2021	2022
GDP (y/y, %)			
November 2020	-3.5	3.1	5.7
July 2020	-5.4	4.9	3.7
CPI inflation (y/y, %)			
November 2020	3.4	2.6	2.7
July 2020	3.3	1.5	2.1

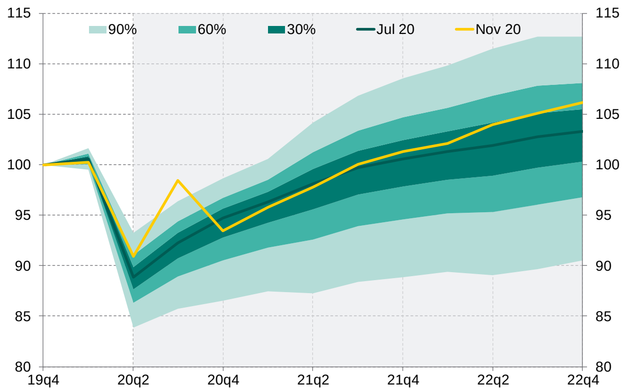
Source: NBP calculations.

4.4 Current versus previous projection

Data received after the cut-off date of the July projection have contributed to an upward revision of the forecasted average level of GDP (with higher growth in 2020 and 2022 and lower growth in 2021) and CPI inflation over the projection horizon (Table 4.2, Figure 4.25, Figure 4.27).

The GDP path in the current projection was shifted upwards by the higher than expected growth in 2020 Q2, as reported by GUS. The impact of the government anti-crisis programmes supporting the labour market and enterprises turned out to be stronger than assumed in the July projection, leading to a smaller than expected fall in consumption and investment in that quarter. Monthly data for 2020 Q3 also indicate that economic activity in that period rebounded faster than expected in the July projection amid a better labour market situation. The currently observed deterioration in the epidemic situation and the

Figure 4.24 November projection versus July projection: level of real GDP (Q4 2019 = 100)

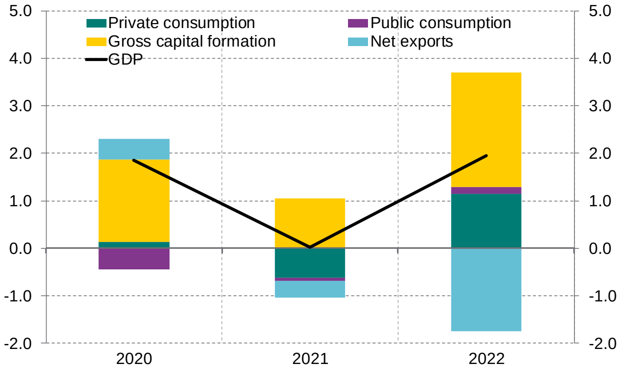


Source: Statistics Poland (GUS) data, NBP calculations.

subsequent extension of the scope of existing restrictions and the introduction of new measures contribute to the GDP path reapproaching in the following quarters the levels forecast in July projection. In particular, due to the growing uncertainty and negative sentiment of economic agents caused by the resurgence of the pandemic, in 2020 Q4 and in 2021 private consumption might temporarily run slightly below the level forecast in July.

The upward revision of the CPI inflation path compared to the July projection results from both domestic and external factors. Despite the current increase in the number of infections, stronger demand pressure and faster unit labour cost growth compared to the previous forecast round are expected on average over the projection horizon. Stronger than expected growth in firms' operating costs, stemming from the need to adapt to pandemic environment, rises the prices of services and therefore also contributes to a higher inflation path in the current projection. Energy prices are additionally boosted by the adjustment of oil prices in the global markets, with a further impact on fuel prices in Poland. The upward revision of energy prices is also driven by the increase in the prices of CO_2 emission allowances, leading to an upward trend in wholesale electricity prices on the Polish Power Exchange in recent months. In the current forecasting round the impact of the sugar tax, which comes into force as of January 2021 (passed in August 2020), on the prices of beverages has been taken into account as well. At the same time, the scale of inflation adjustment in this projection is limited by supply situation in Polish agriculture following this year's harvest, more favourable than it was expected at the stage of formulating the assumptions for the July projection, as well as lower global agricultural commodity prices, both of which affect domestic food prices.

Figure 4.25 Percentage change between GDP in the July and November projections (for the index based on 2019 Q4 = 100) and its decomposition

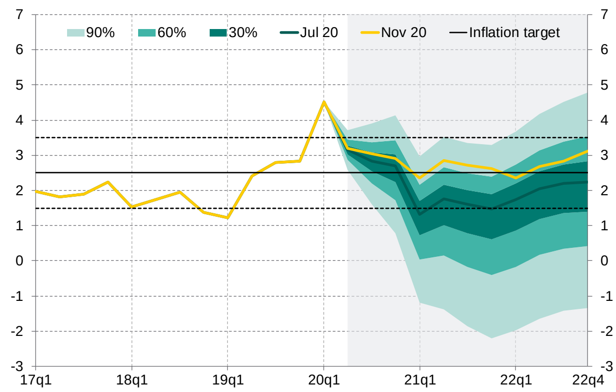


Source: NBP calculations.

The above change is cleared of the impact of the shift in the level of GDP as a result of the revision of the GUS data. Changes for the components (for example private consumption) have been calculated according to the formula:

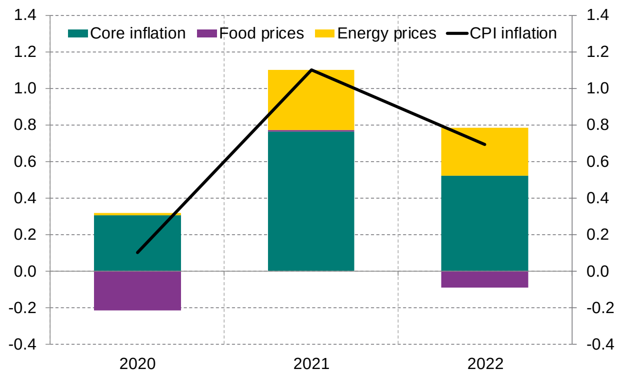
$$\frac{\frac{conp_t^{Nov}}{PKB_{19q4}^{Nov}} - \frac{conp_t^{Jul}}{PKB_{19q4}^{Jul}}}{PKB_t^{Jul}/PKB_{19q4}^{Jul}} * 100$$

Figure 4.26 November projection versus July projection: CPI inflation (y/y, %)



Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.27 Decomposition of deviations between November and July projection: CPI inflation (percentage points)



Source: NBP calculations.

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

4.5 Forecast uncertainty sources

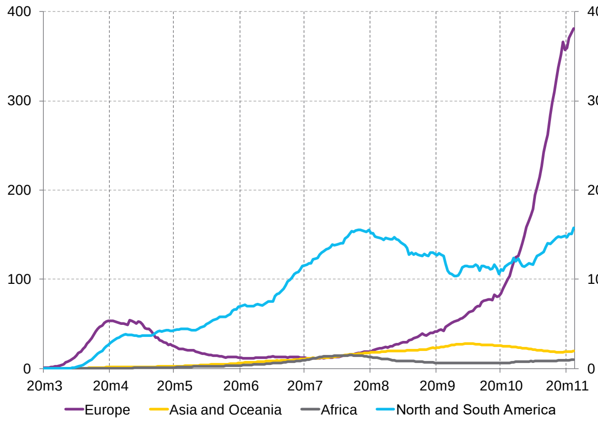
The central scenario of the projection, presenting the most likely macroeconomic developments in Poland, is subject to uncertainty reflected in the fan charts (Figure 4.1; Figure 4.2). A further development of the pandemic continues to be the major source of risk for economic activity and, to a lesser extent, inflation in Poland as the impact of the pandemic on changes in inflation is the result, on the one hand, of changes in demand, and, on the other hand, of changes in the operating costs of enterprises. The balance of uncertainty factors in the case of GDP growth and CPI inflation indicates a higher probability of outcomes below the central projection scenario (Table 4.3). Under the assumption of an unchanged 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 medium term) declines in the first quarters and then stabilises at approx. 45% until the end of the projection horizon (Table 4.3).

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%)
20q4	0.00	0.13	0.95	0.50	0.95
21q1	0.15	0.62	0.96	0.54	0.81
21q2	0.14	0.43	0.79	0.56	0.65
21q3	0.23	0.51	0.80	0.58	0.57
21q4	0.30	0.56	0.81	0.59	0.52
22q1	0.37	0.62	0.85	0.58	0.48
22q2	0.30	0.53	0.77	0.58	0.47
22q3	0.25	0.48	0.72	0.56	0.46
22q4	0.20	0.39	0.63	0.54	0.43

Source: NBP calculations.

Figure 4.28 Daily new cases of COVID-19 in the world (thous. of people, 7-day average, per million inhabitants)



Source: Johns Hopkins University data, NBP calculations.

More severe course of the pandemic connected with a permanent decline in economic activity in Poland

The main risk for the realisation of the central projection path in the current forecasting round is a more severe course of the coronavirus pandemic than assumed in the scenario. It assumes that the complete containment of the pandemic will not be possible over the projection horizon due to the lack of effective and widespread methods of treatment or prevention of new COVID-19 infections. The high number of infections may require the introduction of more radical or long-term containment measures and administrative restrictions on economic activity by the governments of individual countries. Even if they are not introduced, employee absenteeism due to quarantine and the necessity to care for children in the case of closure of schools and educational care facilities may lead to a reduction in production and even a suspension of some business activities. At the same time, employee absenteeism and the necessity to maintain an appropriate sanitary regime would increase the operating costs of enterprises and reduce labour productivity.

An escalation of the pandemic would lead to permanent changes in economic behaviour of the population in accordance with the principle of increased social distancing, which would translate into a reduction in demand for many types of personal services. In turn, the continued high uncertainty and pessimistic business sentiment could result in an increase in tensions on financial markets as well as reduced access of economic entities to external sources of financing and a fall in corporate investment. The persistence of these unfavourable conditions would lead to an increase in the number of company bankruptcies. especially, in services such as recreation and culture, and catering, which are the most exposed to the pandemic shock.

These negative trends could additionally be strengthened by the slowdown or reversal of the globalisation process, including the escalation of trade disputes between the United States, the European Union and China, as well as the intensification of the adverse effect of Brexit. These actions may lead to the break-up of the existing global value chains, thus permanently increasing the scale of the disruptions in global trade. Difficulties in controlling the pandemic in certain emerging economies may in turn translate into reduced access to foreign financing of their growing borrowing needs and capital outflow.

Another factor which could delay the rebound in economic activity may be the limited possibility for further assistance measures on the part of economic policy as well as the intensification of fiscal problems in the euro area countries most affected by the crisis and a deterioration in business and consumer sentiment.

A longer and more severe course of the coronavirus pandemic than assumed in the baseline scenario and the materialisation of one of the above risks would lead to a prolonged decline in economic activity in the global economy as well as in Poland. A significant reduction in corporate investment, employee absenteeism, young people left outside the labour market and slower total factor productivity growth would result in a permanent loss of productive potential of the domestic economy.

A milder course of the pandemic combined with a faster return to the long-term path of economic growth

On the other hand, although much less likely, a milder development of the pandemic abroad and in Poland than assumed in the baseline scenario is possible. This could be as a result of the high effectiveness of the containment measures introduced, stricter compliance with the sanitary regime, or significant progress in treating or preventing COVID-19. In such a case, the rules regarding conducting economic activity would return to a state similar to the one before the pandemic, and household and business sentiment would improve. The reduction of employee absenteeism would have a positive impact on economic activity. Along with the possibility of easing the sanitary regime, this would also contribute to a reduction in costs of enterprises and an increase in labour productivity.

An improvement in global sentiment would translate into a gradual easing of tensions in world trade and an increase in the volume of international trade. In this scenario the fiscal and monetary measures taken would turn out to be sufficient support for economic entities, allowing relatively rapid growth in economic activity and a recovery of productive potential. Stronger growth in household disposable income, while maintaining the assumption of low interest rates, would additionally support housing investment. The introduction of a new stimulus package which has not been taken into account in the central scenario of the projection, the so-called Next Generation EU, which in the most optimistic variant could begin as early as in 2021, would also have a positive impact on economic growth in Poland.

In the scenario assuming a milder development of the pandemic, with a significant reduction in uncertainty, the economic activity would recover close to the level projected before the pandemic outbreak by the end of 2022.

Prices of energy and agricultural commodities

Besides uncertainty related to the future course of the pandemic and its impact on the domestic economy, changes in the prices of energy and agricultural commodities, both in the global and local markets, continue to be a significant source of uncertainty for the inflation path in the baseline scenario. The prices of oil and other energy commodities in the global markets could be subject to significant volatility, not only due to changes in demand, but also due to action taken by the major producers in response to their budget situation or the condition of domestic production sectors, including the financial situation of private firms. In turn, the risk of a significant deviation of meteorological conditions compared to the long-term average in Poland and countries that are significant food producers as well as the spread of African Swine Flu (ASF) in the European Union are additional sources of uncertainty for food price developments over the projection horizon.

Table 4.4 Central path of inflation and GDP projection

	2019				2020				2021				2022				2019	2020	2021	2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Consumer Price Index CPI (%, y/y)	1.2	2.4	2.8	2.8	4.5	3.2	3.0	2.9	2.4	2.8	2.7	2.6	2.4	2.7	2.8	3.1	2.3	3.4	2.6	2.7
Core inflation net of food and energy prices (%, y/y)	1.1	1.8	2.2	2.7	3.4	3.8	4.2	4.2	3.6	2.8	2.6	2.4	2.6	2.9	3.0	3.3	2.0	3.9	2.8	3.0
Food prices (%, y/y)	1.8	4.7	6.7	6.5	7.7	6.4	3.2	2.0	0.9	0.9	1.9	2.6	2.3	2.0	2.2	2.8	4.9	4.8	1.6	2.3
Energy prices (%, y/y)	0.8	1.2	-1.2	-2.3	3.6	-4.2	-1.6	-0.4	0.1	6.1	4.7	3.6	1.7	2.9	3.0	3.2	-0.4	-0.9	3.6	2.7
GDP (%, y/y)	5.3	5.1	4.4	3.6	1.9	-8.4	-1.2	-6.5	-4.5	7.5	1.6	8.4	6.6	6.4	5.1	4.8	4.5	-3.5	3.1	5.7
Domestic demand (%, y/y)	3.8	5.0	3.7	1.9	1.0	-9.9	-2.5	-7.6	-5.3	8.3	2.3	10.3	8.9	8.3	6.9	6.1	3.5	-4.7	3.6	7.5
Household consumption (%, y/y)	3.9	4.4	4.1	3.6	1.2	-10.8	-0.4	-7.5	-3.3	11.4	0.2	8.6	5.5	5.6	5.5	5.4	4.0	-4.2	3.9	5.5
Public consumption (%, y/y)	8.7	5.5	6.8	4.5	2.6	3.4	2.8	5.8	3.8	4.1	6.7	3.8	5.6	5.4	3.5	4.4	6.2	3.6	4.6	4.7
Gross fixed capital formation (%, y/y)	11.5	8.7	4.3	6.2	0.9	-10.7	-7.5	-14.8	-13.9	-0.8	-1.6	5.4	9.6	9.7	5.3	5.5	7.2	-8.2	-3.0	7.5
Contribution of net exports (percentage points, y/y)	1.6	0.3	0.8	1.7	0.9	1.1	1.2	0.8	0.7	-0.4	-0.5	-1.5	-2.0	-1.7	-1.7	-1.1	1.1	1.1	-0.4	-1.6
Exports (%, y/y)	8.6	3.7	5.5	3.0	2.0	-14.5	-2.5	-10.4	-6.2	14.5	3.5	14.7	11.7	12.2	9.7	8.7	5.1	-6.4	6.1	10.5
Imports (%, y/y)	6.1	3.4	4.3	-0.3	0.4	-18.0	-5.1	-12.6	-7.9	16.7	4.8	18.9	16.4	16.3	13.4	11.2	3.3	-8.7	7.4	14.2
Gross wages (%, y/y)	7.1	7.0	7.7	6.9	7.7	3.8	4.4	4.2	3.4	6.1	5.4	5.9	6.6	7.1	7.4	7.0	7.2	4.9	5.2	7.0
Total employment (%, y/y)	-0.4	-0.5	0.0	0.4	0.9	-1.3	-1.7	-2.5	-3.8	-2.1	-1.5	-0.2	1.5	1.4	1.4	1.2	-0.1	-1.2	-1.9	1.4
Unemployment rate (%)	3.8	3.2	3.1	3.0	3.2	3.0	3.9	4.7	5.6	5.6	5.4	5.0	4.7	4.5	4.2	4.0	3.3	3.7	5.4	4.4
NAWRU (%)	4.1	3.9	3.8	3.7	3.8	4.3	4.3	4.3	4.4	4.5	4.5	4.6	4.7	4.7	4.7	4.8	3.9	4.2	4.5	4.7
Labour force participation rate (%, y/y)	56.2	56.2	56.2	56.1	56.3	55.5	55.7	55.7	55.6	55.8	55.8	55.9	55.9	55.9	55.9	56.0	56.2	55.8	55.8	55.9
Labour productivity (%, y/y)	5.8	5.6	4.4	3.2	1.0	-7.2	0.5	-4.1	-0.6	9.9	3.2	8.5	5.0	4.9	3.6	3.5	4.7	-2.3	5.1	4.3
Unit labour cost (%, y/y)	1.3	1.4	3.2	3.6	6.7	11.9	3.9	8.6	4.0	-3.5	2.1	-2.5	1.5	2.1	3.7	3.3	2.4	7.6	-0.1	2.7
Potential output (%, y/y)	3.7	3.8	3.8	3.7	3.3	0.6	0.5	-0.3	0.2	2.7	2.5	3.2	2.8	2.9	3.0	3.1	3.7	1.0	2.1	2.9
Output gap (% potential GDP)	2.4	2.4	2.0	1.4	1.2	-6.7	0.2	-4.9	-3.5	-2.2	-0.6	-0.1	0.0	1.1	1.4	1.6	2.0	-2.5	-1.6	1.0
Index of agricultural commodity prices (EUR; 2011=1.0)	0.89	0.93	0.91	0.97	0.96	0.89	0.86	0.87	0.87	0.89	0.89	0.88	0.87	0.89	0.90	0.88	0.93	0.90	0.88	0.89
Index of energy commodity prices (USD; 2011=1.0)	0.66	0.57	0.52	0.59	0.53	0.36	0.42	0.47	0.49	0.48	0.49	0.51	0.52	0.50	0.50	0.52	0.59	0.45	0.49	0.51
Inflation abroad (%, y/y)	1.9	2.0	2.0	1.9	2.0	2.8	0.3	0.2	0.2	-0.8	2.0	1.9	1.9	1.7	1.4	1.3	2.0	1.3	0.8	1.6
GDP abroad (%, y/y)	1.5	1.2	1.3	1.0	-2.6	-14.5	-4.7	-7.1	-3.2	11.6	1.2	5.0	4.8	4.2	3.5	2.9	1.3	-7.2	3.4	3.9
Current and capital account balance (% GDP)	1.0	1.4	1.9	2.5	3.3	4.7	6.1	6.3	6.9	6.1	5.1	4.5	3.5	2.8	2.3	1.9	2.5	6.3	4.5	1.9
WIBOR 3M (%)	1.72	1.72	1.72	1.71	1.62	0.58	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	1.72	0.67	0.24	0.24

Source: Bloomberg, Eurostat, Statistics Poland (GUS), NBP calculations.

For the majority of variables, the values up to Q1 2020 are determined on the basis of raw quantities, while in the projection horizon are presented seasonally adjusted data. In the case of the unemployment rate, the NAWRU rate, the labour force participation rate, potential output growth, the output gap, the agricultural commodity price index, the energy commodity price index, inflation abroad and GDP growth abroad only seasonally adjusted data are presented, while the WIBOR 3M rate and import price growth are not seasonally adjusted series.

LFS data on total employment, labour force participation rate and unemployment rate. The agricultural commodity price index includes prices of wheat, pork, skimmed milk powder, butter, sugar, cocoa, coffee, frozen concentrated orange juice, potatoes, oilseed, allowing for weights reflecting the consumption structure of Polish households. The energy commodity price index covers prices of crude oil, coal and natural gas, taking into account the structures of consumption of these commodities in Poland.

5. The voting of the Monetary Policy Council members in May – August 2020

■ Date: 28 May 2020

Subject matter of motion or resolution:
Motion to lower the NBP reference rate by 0.40 percentage points and to set the remaining NBP interest rates as follows:

- reference rate 0.10%
- lombard rate 0.50%
- deposit rate 0.00%
- rediscount rate 0.11%
- discount rate 0.12%.

MPC decision:
Motion passed.

Voting of the MPC members:

For: A. Glapiński
G. M. Ancyparowicz
C. Kochalski
E. M. Łon
R. Sura
J. Żyżyński

Against: E. Gatnar
Ł. J. Hardt
J. J. Kropiwnicki
K. Zubelewicz

■ Date: 28 May 2020

Subject matter of motion or resolution:
Resolution No. 7/2020 on reference rate, refinancing credit rate, deposit rate as well as the rediscount and discount rates at the NBP.

MPC decision:
MPC lowered the reference rate by 0.40 percentage points and set the remaining NBP interest rates as follows:

- reference rate 0.10%
- lombard rate 0.50%
- deposit rate 0.00%
- rediscount rate 0.11%
- discount rate 0.12%.

Voting of the MPC members:

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

Date: 28 May 2020

Subject matter of motion or resolution:

Resolution No. 8/2020 on approving the Report on monetary policy in 2019.

Voting of the MPC members:

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

Date: 28 May 2020

Subject matter of motion or resolution:

Resolution No. 9/2020 on evaluation of the activities of the NBP Management Board as regards the implementation of monetary policy guidelines for 2019.

Voting of the MPC members:

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

Date: 28 May 2020

Subject matter of motion or resolution:
Resolution No. 10/2020 on approving the report on the operations of Narodowy Bank Polski in 2019.

Voting of the MPC members:

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

Date: 28 May 2020

Subject matter of motion or resolution:
Resolution No. 11/2020 amending the resolution on accounting principles, the layout of balance sheet assets and liabilities and profit and loss account of Narodowy Bank Polski.

Voting of the MPC members:

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

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