NARODOWY
BANK POLSKI

Monetary Policy Council

July 2021

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 *Report* includes data available until 1 July 2021.

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

Contents

Summary

In the first half of 2021, the global economy continued on a recovery path. Global GDP increased in 2021 Q1 in annual terms for the first time since the outbreak of the pandemic, which was largely due to the low base effect of the previous year. At the same time, GDP in many economies remained lower than before the outbreak of the pandemic. The economic conditions in individual countries and months still strongly depended on the epidemic situation and related restrictions. In particular, in Europe, the economic activity in 2021 Q1 was limited by the continuing difficult epidemic situation. At the same time, the economic conditions in the global industry and services continued to diverge. In 2021 Q1, industrial production and world trade in goods were above their pre-pandemic levels. Alongside that, activity in services in 2021 Q1 continued to be lower than before the pandemic, although in major advanced economies sentiment indicators in this sector have increased in recent months as the epidemic eased.

Consumer price inflation in the world economy has risen significantly since the beginning of 2021 and in May it reached its highest level since 2011. The rise in inflation primarily reflected the higher energy price growth associated with an increase in energy commodity prices, in particular oil prices. In some economies, core inflation also picked up. At the same time, producer price indicators rose markedly in a number of economies, boosted – along with strong energy commodity price growth – by the prices of metals, which were markedly higher that in the previous year, disruptions in the global supply chain and a very strong increase in freight prices. Inflation in the euro area has been running at a higher level than at the beginning of the year and – according to preliminary estimates – in June it stood at 1.9% y/y. Inflation in the United States has grown markedly in recent months: in May 2021, CPI inflation reached 5.0% y/y, and core inflation 3.8% y/y.

Major central banks around the world have continued to conduct strongly expansionary monetary policy. Many of those banks keep their interest rates close to zero, including a portion of the banks that keep them below zero, and also purchase assets. In recent months, central banks have justified maintaining accommodative monetary conditions – despite increasing price dynamics and improved economic outlook – mainly by a temporary nature of factors driving inflation and the need to support recovery of economic activity after the COVID crisis and amid persistently high uncertainty about the evolution of the pandemic. At the same time, financial market participants expect the interest rates of the major economies to run at a low, albeit slightly higher-than-current level in the coming years.

In recent months, sentiment in international financial markets has continued to improve. Market sentiment was supported by progressing COVID-19 vaccination programmes in the major economies and the associated expectations for a marked economic recovery in the coming quarters. However, the continuing uncertainty about the evolution of the pandemic, and the reports on the discovery of new SARS-CoV-2 variants had the opposite effect. The US dollar – after its prior depreciation – has recently appreciated against other currencies. In turn, yields on 10-year government bonds in most major advanced economies were relatively stable in recent months, while equity prices in many economies have continued to rise.

In Poland, consumer price growth had been increasing in the first months of 2021, and in June – according to Statistics Poland flash estimate – it declined to 4,4% y/y. The higher consumer price growth than at the beginning of the year was predominantly the effect of an increase in the prices of fuels for private means of transport, due to the rising prices of crude oil in the global markets and the strong base effect related to their decline in 2020 Q2, i.e. after the outbreak of the COVID-19 pandemic. A significant positive contribution to CPI inflation was still made by administered prices (including electricity prices and waste disposal charges), and from April 2021 also by food prices, i.e. factors which – similar to commodity prices – are beyond the control of domestic monetary policy. In June, inflation was dragged down by the slower growth in the prices of fuels, which however remained high. At the same time, Statistics Poland data give reasons to assume that also the growth of prices of non-food goods and services slowed down. Consequently, according to preliminary estimates, core inflation excluding food and energy prices declined substantially in June. By contrast, a further rise in food prices contributed to higher inflation.

In early-2021, economic activity in Poland remained under a considerable influence of the epidemic situation, even though this impact was weaker than at the initial stage of the pandemic. In 2021 Q1, the annual GDP growth in Poland increased, yet remained negative (running at -0.9% y/y as compared with -2.7% y/y in 2020 Q4). Private consumption – amid partially relaxed Covid restrictions – picked up slightly in annual terms, nonetheless stayed lower than before the outbreak of the pandemic. Gross fixed capital formation reached – also for the first time since the onset of the pandemic – higher level than a year before. This was driven, above all, by higher corporate investment growth which was probably partly due to an improvement in the economic outlook related to the launch of the COVID-19 vaccination programme, among other things. As in previous quarters – albeit to a lesser extent – public consumption growth had a positive impact on annual GDP growth, while the contribution of net exports to GDP growth was negative.

The available data show that, following a partial rebound in the demand for labour in the second half of 2020, at the beginning of 2021 the demand remained slightly lower than before the pandemic. Annual growth of average employment both in the national economy and in the enterprise sector remained negative in 2021 Q1, though higher than in the initial stage of the pandemic. The registered unemployment rate after seasonal adjustment remained relatively stable in recent months, at slightly higher level than immediately before the outbreak of the pandemic, but decidedly lower than in previous years. In turn, the annual growth rate of the average wage in the national economy picked up slightly in 2021 Q1 which was mainly due to a faster wage growth outside the enterprise sector.

After a significant easing of NBP monetary policy in the first half of 2020, in subsequent quarters NBP has kept its interest rates unchanged and continued to pursue other measures adopted in response to the pandemic. Specifically, the NBP reference rate was kept at the level of 0.1%. At the same time, NBP has continued to purchase government securities and government-guaranteed debt securities in the secondary market. NBP has also continued to offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

The yields on Polish government bonds are much lower than in previous years. In recent months, the yields on 10-year bonds – similarly as in many other economies – have been relatively stable, while yields on the bonds of a shorter maturity have risen somewhat. In turn, the average exchange rate of the zloty – both against the euro and the US dollar – in June, was close to the level seen in February 2021. Alongside that, equity prices on the Warsaw Stock Exchange rose markedly.

Annual growth of M3 monetary aggregate in the first months of 2021 slowed down and in May was close to the 2019 average. The annual growth of household loans in 2021 Q1 declined, while that of corporate loans remained negative. The decrease in the value of corporate loans largely reflected the lower-than-in-the-pre-pandemic-period corporate demand for bank financing related to, among others, the financial support provided to enterprises under the government anti-crisis measures.

The current account balance stood at a high level in 2021 Q1. The positive balance was the effect of the continued surplus in the trade in goods and services. In turn, the primary income balance remained negative reflecting mainly the relatively high income earned by foreign direct investors in Poland. External imbalance indicators evidence that the Polish economy is well balanced.

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 are described in Chapter 2. Chapter 3 includes *Minutes of the Monetary Policy Council decision-making meetings* held between March and June 2021, together with the *Information from the meeting of the Monetary Policy Council in July 2021*. Chapter 5 presents the Monetary Policy Council voting records from the meetings held between February and May 2021.

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 July projection prepared under the assumption of unchanged NBP interest rates and taking into account data available until 22 June 2021 there is a 50-percent probability that the annual price growth will be in the range of 3.8-4.4% in 2021 (against 2.7-3.6% in the March 2021 projection), 2.5-4.1% in 2022 (compared to 2.0-3.6%) and 2.4-4.3 in 2023 (compared to 2.2-4.2%). At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of 4.1-5.8% in 2021 (against 2.6-5.3% in the March 2021projection), 4.2-6.5% in 2022 (compared to 4.0-6.9%) and 4.1-6.5% in 2023 (compared to 4.0-6.8%).

1. External developments

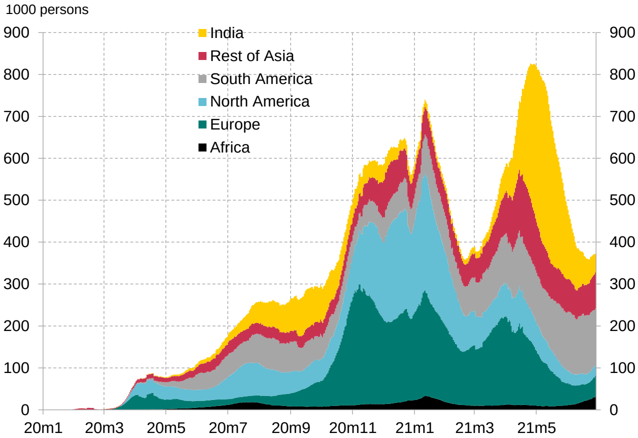
1.1 Economic activity abroad

In the first half of 2021, the global economy continued on a recovery path. At the same time, the economic conditions in individual countries and months still strongly depended on the epidemic situation and related restrictions.

At the beginning of 2021, in Europe and North America, the number of COVID-19 cases persisted at a high level (Figure 1.1). This was accompanied by tight restrictions in economic and social life (Figure 1.2). By the end of 2021 Q1, the number of new infections in North America decreased, while in Europe it still remained high at the beginning of 2021 Q2. In many other regions of the world, the epidemic situation in 2021 Q2 was still difficult. In April and May, there was a strong increase in the number of infections in India. Consequently, epidemic restrictions were tightened there and in many other Asian countries. In South America, the number of COVID-19 cases remained elevated throughout the first half of the year.

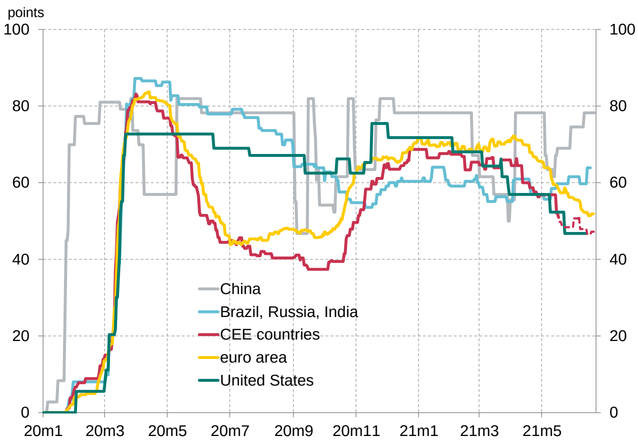
In 2021 Q2, the vaccination process worldwide accelerated significantly. Among the largest economies, the highest percentages of vaccinated people are recorded in the United Kingdom, as well as in the United States and the EU (Figure 1.3). In most emerging market economies, the vaccination coverage of the population in mid-2021 was markedly lower than in advanced economies. In China, the vaccination rate has strongly accelerated since May. In Brazil and Turkey, the progress in vaccination programs is also relatively fast compared to other major emerging market economies.

Figure 1.1 Daily number of new coronavirus infections by world regions



Source: data by Center for Systems Science and Engineering at Johns Hopkins University, Our World in Data.

Figure 1.2 Stringency index of pandemic restrictions in selected economies



Source: University of Oxford Coronavirus Government Response Tracker data, NBP calculations.

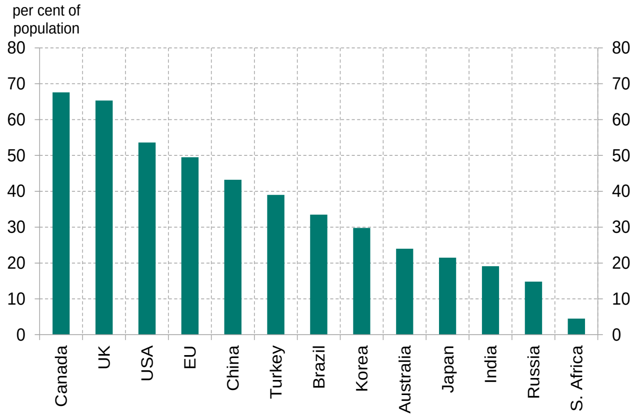
Index for a group of countries is an arithmetic mean of the index's values for respective countries. "CEE countries" – non-euro area Central and Eastern European EU member states (excluding Poland): Bulgaria, Czech Republic, Croatia, Hungary and Romania. Dashed line indicates mean for CEE countries excluding Hungary, as data for this country are not available for the last weeks.

Global GDP increased in 2021 Q1 in annual terms for the first time since the outbreak of the pandemic, which was largely due to the low base effect of the previous year (Figure 1.4). The pace of improvement was limited by the continuing difficult epidemic situation in Europe and the tightening of sanitary restrictions in large Asian economies. At the same time, the economic situation in the global industry and services continued to diverge. In 2021 Q1, industrial production and world trade in goods were above their pre-pandemic levels. Activity indicators in 2021 Q2 pointed to a further increase in global demand for industrial goods, and some markets started to see supply constraints. At the same time, in many countries the activity in services in 2021 Q1 continued to be lower than before the pandemic, although in major advanced economies sentiment indicators in this sector have increased in recent months as the epidemic eased. The pace of economic growth also continued to differ across countries. In 2021 Q2, the marked improvement in economic indicators in major advanced economies was accompanied by weak readings from some emerging market economies where the epidemic situation remained difficult.

The recovery in the world economy continued to be strongly supported by anti-crisis fiscal measures, including the implementation of a large fiscal package in the United States, and the accommodative monetary policy of the major central banks (see Chapter 1.4 *Monetary policy abroad*).

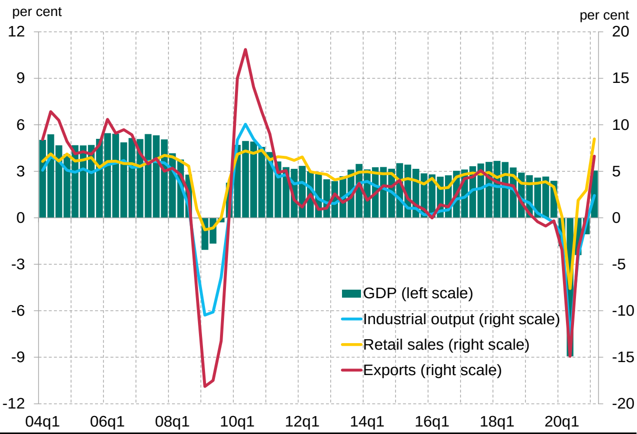
GDP in the euro area decreased in 2021 Q1 by 1.3% y/y, after a 4.7% y/y decline in 2020 Q4, and was 5.1% lower than before the outbreak of the pandemic (Figure 1.5, Figure 1.8).[1] In many euro area countries, economic activity slowed down in 2021 Q1 as compared to the previous quarter due to the persistence of relatively strict restrictions,

Figure 1.3 Share of population who received at least one dose of the COVID-19 vaccine in selected countries



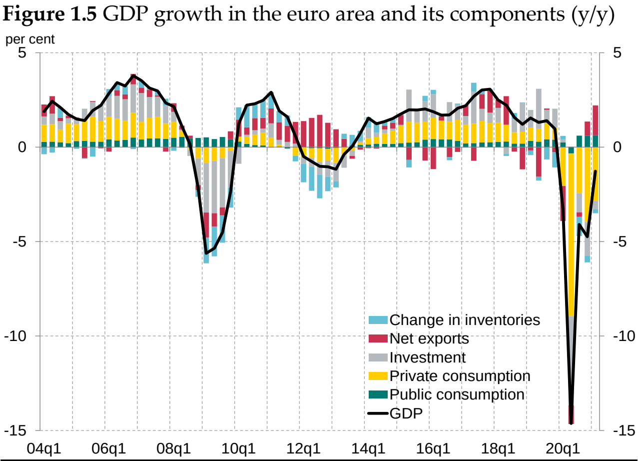
Source: data by Center for Systems Science and Engineering at Johns Hopkins University, Our World in Data.
Data for China – as of 10 June; South Africa – 25 June, United Kingdom – 26 June, others – 27 June.

Figure 1.4 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 1.5 GDP growth in the euro area and its components (y/y)



Source: Eurostat data, NBP calculations.

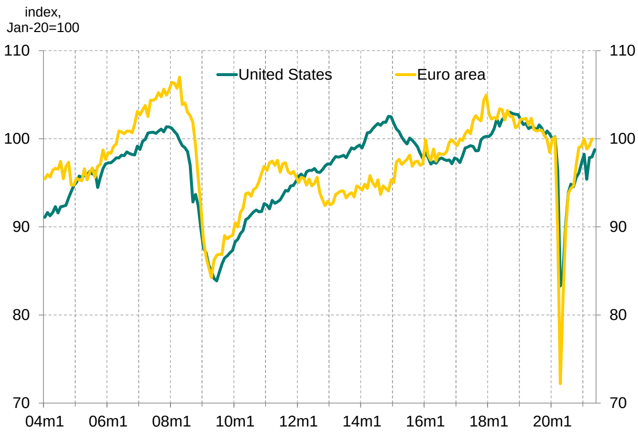
[1] The improvement in GDP growth in year-on-year terms compared to 2020 Q4 mainly reflected the base effect related to the GDP decline in 2020 Q1. In quarter-on-quarter terms, GDP decreased by 0.3%, after a decline of 0.6% in 2020 Q4.

which put a downward pressure on activity in the services sector. At the same time, the growing activity in industry continued to contribute to GDP growth (Figure 1.6). Due to the job retention schemes, the impact of the pandemic on the labour market remained weaker than on economic activity. The decline in the number of new infections in 2021 Q2 was reflected in the gradual lifting of epidemic restrictions and a marked improvement in sentiment indicators and high-frequency indicators of economic activity.

In Germany, GDP in 2021 Q1 fell by 3.1% y/y, after a 3.3% y/y decline in 2020 Q4, to a level 5% lower than before the pandemic. The further decline in GDP was mainly driven by the fall in private consumption, in particular of services, as a result of the imposed restrictions. Spending on durable goods also decreased following an increase in the VAT rate, temporarily lowered due to the pandemic.[2] The decline in investment, especially in construction, due to unfavourable weather conditions, also contributed to weaker GDP growth. At the same time, the increase in foreign demand was conducive to strengthening export growth.

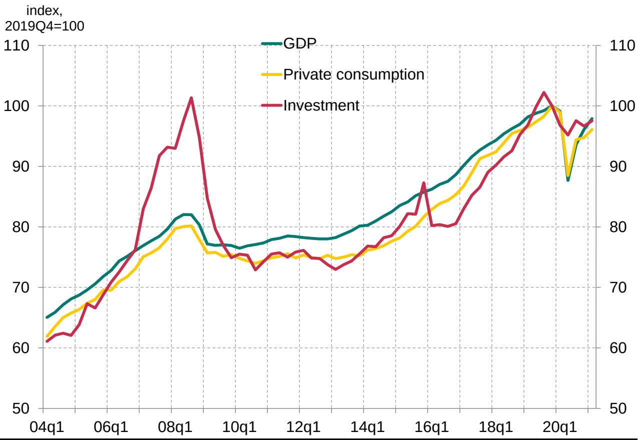
In 2021 Q1, GDP in non-euro area countries in Central and Eastern Europe fell by 1.2% y/y (against a decline of 3.9% y/y in 2020 Q4). The scale of the decline in economic activity in the countries of the region decreased despite relatively strong waves of infections and the related persistence of epidemic restrictions (Figure 1.7). This was supported by the progressive recovery in industrial activity, backed by favourable global trade conditions. At the same time, the first increase in investment in annual terms since the onset of the pandemic was recorded, although the level of investment remained lower than before the pandemic. The easing of the restrictions since April

Figure 1.6 Industrial production volume in selected economies (seasonally adjusted)



Source: Fed and Eurostat data, NBP calculations.

Figure 1.7 GDP volume and its selected components in Central and Eastern Europe



Source: Eurostat data, NBP calculations.
Index of combined volume of 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.

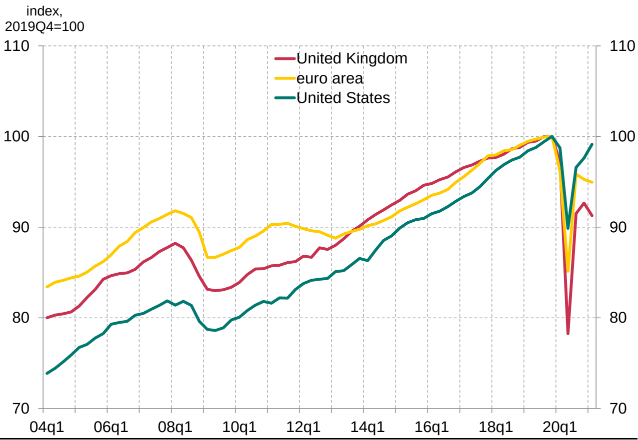
[2] The lower VAT rate was in force from July to December 2020.

2021 caused a marked improvement in consumer and business sentiment.

In the United States, GDP growth in 2021 Q1 accelerated to 0.4% y/y (from -2.4% y/y in 2020 Q1; Figure 1.8). The improvement in economic conditions was mainly driven by rising private consumption, supported by a strong increase in household income due to transfers paid under the American Rescue Plan Act of 2021. Consumption of durable goods increased particularly strongly, while spending on services remained lower than a year before owing to the relatively stringent restrictions in place in most states at the beginning of this period.[3] The relatively strong growth in housing investment, reflecting high demand – supported, among others, by low interest rates – and growing investments of enterprises in machinery and equipment as well as intellectual property helped to boost GDP. At the same time, due to the negative impact of the pandemic on the commercial real estate market, the scale of the decline in capital expenditure on non-residential construction deepened. The sentiment indicators and high frequency indicators in 2021 Q2 point to a further increase in activity. At the same time, the degree of resource underutilization in the labour market remains high.

GDP in the United Kingdom decreased by 6.1% y/y in 2021 Q1, after a drop by 7.3% y/y in 2020 Q4, and was 8.7% lower than before the outbreak of the pandemic. The scale of rebound in GDP growth in 2021 Q1 was limited by the reintroduction of severe restrictions at the beginning of January 2021. In particular, the growth of household consumption, especially services, decreased. The growth of corporate investment also slowed down, the sharpest decline being observed in investment in means of transport. The easing of many restrictions in 2021 Q2 resulted in an improvement in activity indicators, especially in services.

Figure 1.8 GDP volume in selected advanced economies



Source: Bureau of Economic Analysis, Eurostat, Office for National Statistics data, NBP calculations.

[3] In the United States, the highest wave of infections so far was observed at the turn of 2020 and 2021. For this reason, in the first weeks of 2021 relatively stringent restrictions were put in place. As the epidemic eased, most states relaxed restrictions in March.

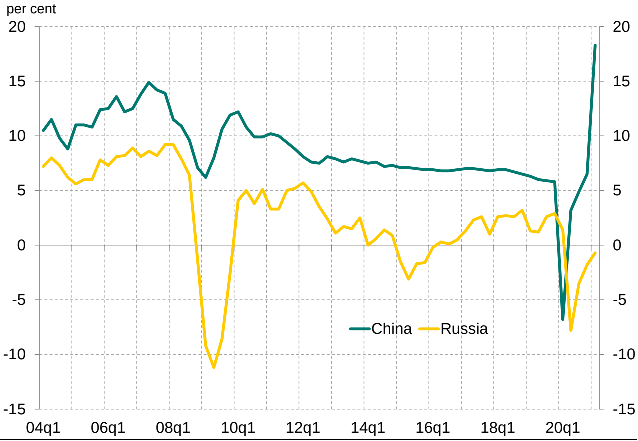
In China, GDP increased by 18.3% y/y in 2021 Q1 after a 6.5% y/y rise in 2020 Q4 (Figure 1.9). High GDP growth largely reflected the base effect related to the decline in GDP in 2020 Q1. However, in quarter-on-quarter terms, GDP growth in 2021 Q1 weakened, which was related to the introduction of mobility restrictions in response to the increased epidemic risk in China. At the same time, foreign demand for Chinese goods remained strong, especially as regards medical devices, protective equipment and electronic equipment. The high growth of Chinese exports continued at the beginning of 2021 Q2, whereas consumer demand was still relatively subdued.

Other emerging market economies continued to see a rebound in economic activity in 2021 Q1. As in the second half of 2020, it varied across countries. In Russia, the decline in GDP slowed down to 0.7% y/y, and in Brazil and India, GDP grew by 1.0% y/y and 1.6% y/y, respectively.

1.2 Inflation developments abroad

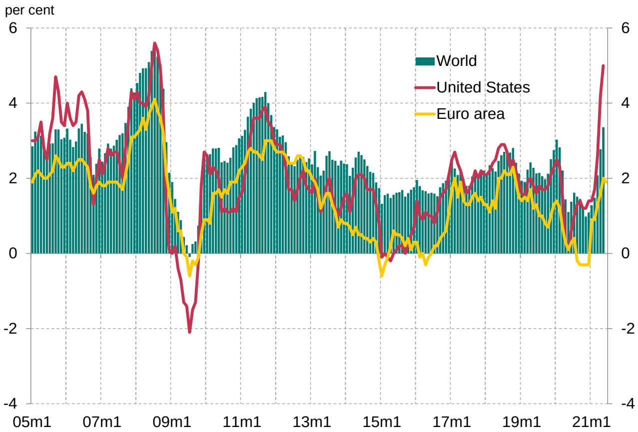
Consumer price inflation in the world economy has risen significantly since the beginning of 2021 and in May it reached its highest level since 2011 (Figure 1.10). The increase in inflation primarily reflected the higher energy price growth associated with an increase in energy commodity prices, in particular oil prices (see Chapter 1.3 *Global commodity prices*). In some economies core inflation also increased. At the same time, producer price indicators rose strongly in a number of economies, supported – along with strong energy commodity price growth – by the prices of metals,[4] which were markedly higher that in the previous year, and disruptions in the global supply chain (Figure 1.11). This was

Figure 1.9 Economic growth in selected emerging market economies (y/y)



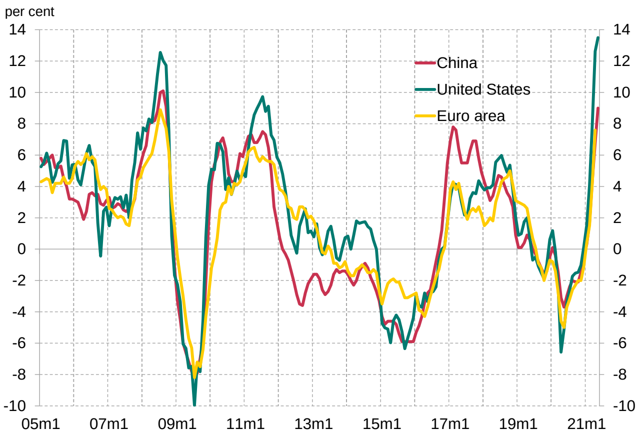
Source: Bloomberg data.

Figure 1.10 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 1.11 Producer price indices in selected economies (y/y)



Source: Bloomberg, Bureau of Labor Statistics data, NBP calculations.
The United States – producer price index growth in manufacturing industries. Euro area and China – producer price index growth in industry.

[4] In May 2021, in copper prices amounted to 94.0% y/y, in aluminum prices to 66.0% y/y, and iron ore prices to 122.1% y/y, according to IMF data. The prices of metals are currently running at much higher levels than before the outbreak of the pandemic.

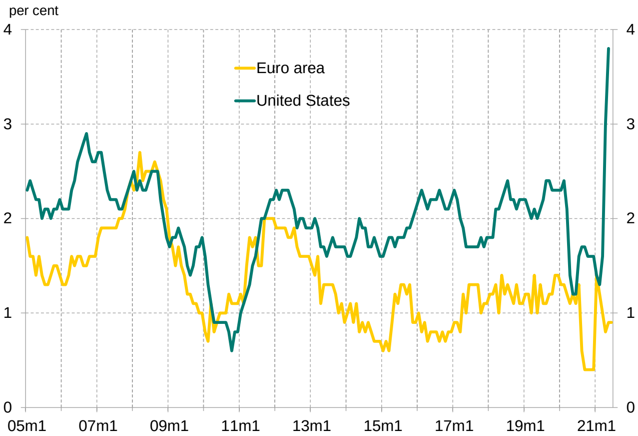
accompanied by a very strong increase in freight prices.[5]

Inflation in the euro area has been running at a higher level than at the beginning of the year (according to preliminary estimates, in June it was 1.9% y/y compared to 0.9% y/y in January 2021). In addition to rising energy prices, the increase in inflation in the euro area economy was driven by higher growth in the prices of goods due to the renewed increase in VAT rates in Germany to their pre-pandemic levels. At the same time, services price growth remained moderate, as reflected in relatively stable core inflation which amounted to 0.9% y/y in June 2021 (compared to 1.4% y/y in January; Figure 1.12).

Inflation in the United States has markedly grown in recent months, reaching higher levels than observed before the outbreak of the pandemic. In May 2021, CPI inflation reached 5.0% y/y, and core inflation 3.8% y/y.[6] Inflation growth since the beginning of 2021 was the consequence of the rise in energy commodity prices, increases in the prices of leisure, recreation and transport after the easing of most pandemic-related restrictions, as well as a rise in the prices of durable goods (especially used cars and trucks).

Inflation in the non-euro area Central and Eastern European countries has also grown since the beginning of 2021 (Figure 1.13). This was mainly attributable to a substantial increase in energy prices, especially fuels for private means of transport. Moreover, inflation growth in the Czech Republic was driven by an increase in the excise tax rate for tobacco products and changes in regulated prices related to water supply, sewage and refuse collection, as well as to health care. In Hungary, which registers the highest inflation levels in the EU, consumer price growth was also pushed up by

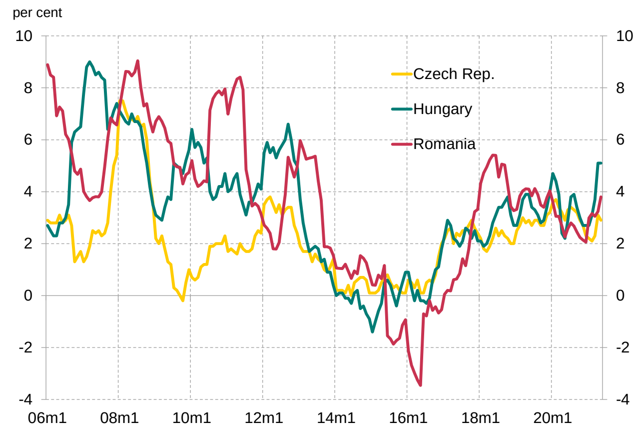
Figure 1.12 Core inflation in the United States and the euro area (y/y)



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



Source: Bloomberg data.

[5] In May, the Baltic Dry Index rose by 506% y/y and the Shanghai Containerized Freight Index grew by 283% y/y. The strong growth of freight prices was driven by a rise in global demand for imported goods and the disruptions in the operation of Chinese ports due to detected cases of COVID-19 infection.

[6] In May 2021, inflation in the United States was 3.6 percentage points higher than in January 2021, of which the estimated base effect accounted for 1.5 percentage points.

a rise in the excise tax rate on tobacco products, and in Romania – by deregulation of the electricity market.

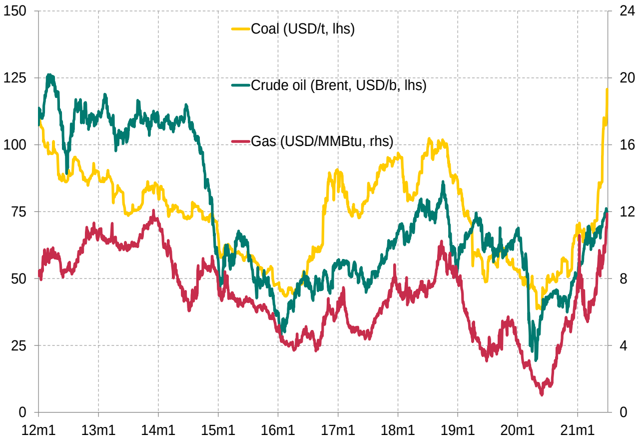
1.3 Global commodity markets

Following a sharp decline at the initial stage of the pandemic, since mid-2020 commodity prices have risen sharply amid recovery in global economic activity. Consequently, in mid-2021, the annual price growth of the majority of commodities was high.

After a strong growth at the end of 2020 and beginning of 2021, the past few months saw a continued gradual rise in crude oil prices to run above the pre-pandemic level (Figure 1.14). At the same time – due to the strong base effect connected with a deep fall in the first months of the pandemic – the annual growth in oil prices was very high (it stood at 110.8% y/y in May and 80,0% y/y in June). The rise in oil prices in the recent period was driven by both growing demand reflecting some improvement in economic conditions worldwide as well as reduced oil supply. These reductions resulted from maintaining oil output limits by OPEC+ countries and still reduced oil production by enterprises – compared to pre-pandemic level – among others, in the United States[7].

The past few months saw a marked rise in the prices of natural gas and hard coal, which reached significantly higher levels than a year before and exceeded those recorded before the outbreak of the pandemic. Prices of gas and oil were boosted, apart from seasonal factors, mainly by growing global demand driven by the improved economic prospects as well as the cold winter season in many regions of the world. At the same time, low gas reserves contributed to higher gas prices.

Figure 1.14 Energy commodity prices



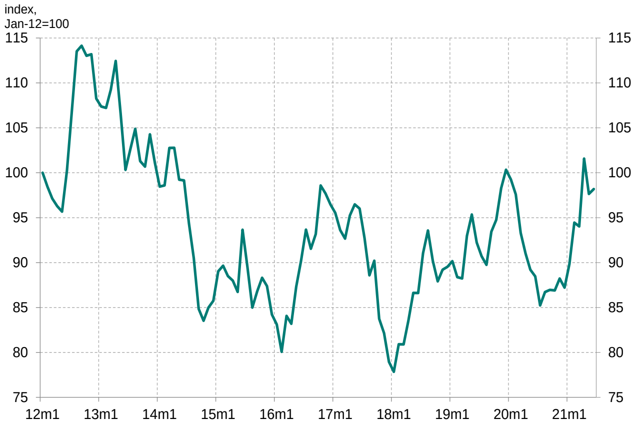
Source: Bloomberg data, NBP calculations.

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).

[7] A limiting effect on oil production in the United States could have been caused by, among others, the environmental policy of the Joe Biden administration. In particular, in January 2021, President Biden signed an order halting new oil and gas leases on federal lands.

Since mid-2020, the agricultural commodity price index had also seen a marked increase, and its annual growth reached 11.0% in June 2021 (Figure 1.15). Prices of agricultural commodities were mainly driven upward by rising prices of cereals and oilseeds as a result of lower crops in Europe, the gradually deteriorating global supply outlook in the economic season 2020/2021 amid high demand and export restrictions imposed by Russia at the beginning of 2021. Prices of agricultural commodities were also boosted by a steady rise in the prices of dairy products driven by the strong global demand and rising sugar prices. This was the result of demand exceeding supply, appreciation of currencies of sugar producing countries against the US dollar and growing crude oil prices[8]. Since the beginning of 2021, European pork prices have also been on a rise due to continued strong exports despite the ASF outbreaks in Germany in September 2020.

Figure 1.15 Index of agricultural commodity prices

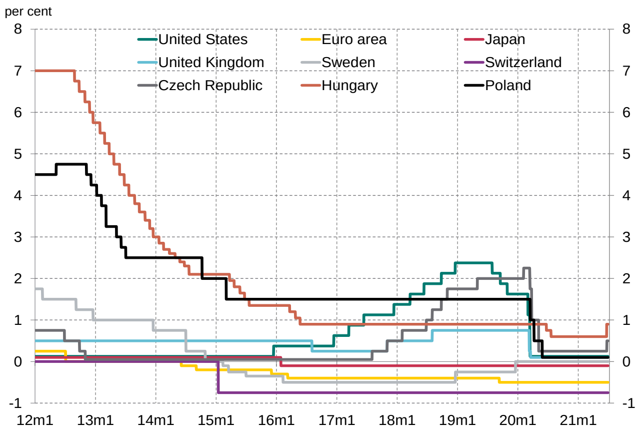


Source: Bloomberg data, NBP calculations.
Index of agricultural prices includes prices of wheat, colza, pork, potatoes, sugar, cocoa, coffee, skimmed milk powder, butter and frozen concentrated orange juice. The weights reflect the consumption structure of Polish households.

1.4 Monetary policy abroad

Major central banks around the world have continued to conduct strongly expansionary monetary policy. Many of those banks keep their interest rates close to zero, including a portion of the banks that keep them below zero, and also purchase assets (Figure 1.16, Figure 1.17).

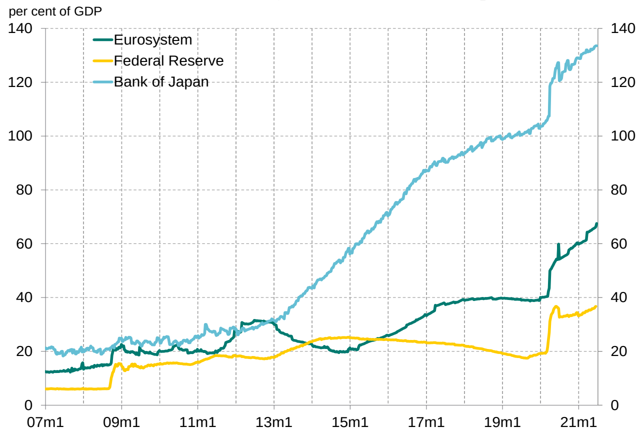
Figure 1.16 Interest rates of selected central banks



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.

In recent months, central banks have justified maintaining accommodative monetary conditions – despite increasing price dynamics and improved economic outlook – mainly by a temporary nature of factors driving inflation and the need to support recovery of economic activity after the COVID crisis and amid persistently high uncertainty about the evolution of the pandemic (see Chapter 1.1 *Economic activity abroad* and 1.2 *Inflation developments abroad*). At the same time, financial market participants expect the interest rates of the major economies to run at a low, albeit slightly

Figure 1.17 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 2021 Q2 based on GDP as of 2021 Q1.

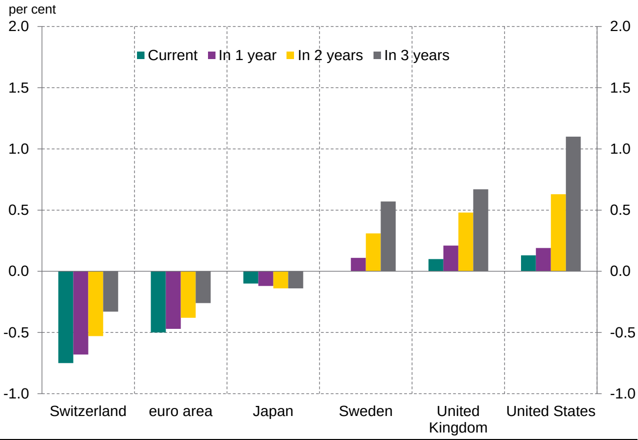
[8] The increase in crude oil prices results in higher profitability of the production of biofuels from sugar cane, which limits the supply of sugar cane intended for sugar production. As a result, sugar prices are also on the rise.

higher-than-current level in the coming years (Figure 1.18).

The European Central Bank (EBC) is keeping the deposit rate negative at -0.50% and points out that interest rates will remain at their present or lower levels until it has seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2% within its projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics. The ECB also conducts the asset purchase programme (APP) at the level of EUR 20 billion per month, without stipulating its termination date, and the pandemic emergency purchase programme (PEPP) to purchase securities, with an envelope of EUR 1,850 billion, until March 2022. In March 2021, the ECB announced an acceleration of purchases under the PEPP to maintain accommodative monetary conditions, including to reduce an upward pressure on bonds yields. As a result, the scale of purchases under the PEPP in April and May 2021 has been the highest since mid-2020. Moreover, the ECB carries out longer-term operations to provide liquidity to the banking sector.

The Federal Reserve of the United States (Fed) is maintaining the target range for the fed funds rate at the level of 0.00%-0.25% and continues to conduct asset purchases at a large scale[9]. According to the press release, the Fed expects to maintain the present level of interest rates until the goals of maximum employment and inflation on track to exceed 2% for some time are achieved. In June 2021, the number of Fed representatives expecting an interest rates hike in the coming years increased, although the median of projections for the fed funds rate was still low (0.1% at the end of 2022 and 0.6% at the end of 2023). At the same time, the Fed vows to continue to conduct purchases of Treasury securities of the value of at least USD 80 billion per

Figure 1.18 Current and expected level of central banks' interest rates in selected advanced economies



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*; for Switzerland – the *policy rate*; for the United Kingdom – the *Bank Rate*; for Sweden – the 1W repo rate. Market expectatations according to Bloomberg based on OIS, as of 1 July 2021.

[9] In June 2021, the Fed maintained the target range for the fed funds rate at the level of 0.00%-0.25% and made a correction regarding monetary policy implementation by increasing the interest rate on reserves by 0.05 percentage point, to 0.15%. At the press conference the Fed Chair J. Powell called the change a technical adjustment and highlighted that it has no bearing on the current stance of the monetary policy, nor on the future fed funds rate path.

month and mortgage-backed securities of the value of at least USD 40 billion per month ”until substantial further progress has been made toward the maximum employment and price stability goals”, signalling that potential tapering of the asset purchase programme will occur before a possible interest rate hike.

Many of the remaining central banks, including in Japan, United Kingdom, Sweden, Norway, Switzerland, Canada, Australia and New Zealand are also keeping their interest rates below zero or close to it. In most of those economies, central banks also conduct asset purchases. At the same time, none of the central banks of larger advanced economies has increased interest rates since the outbreak of the COVID-19 pandemic.

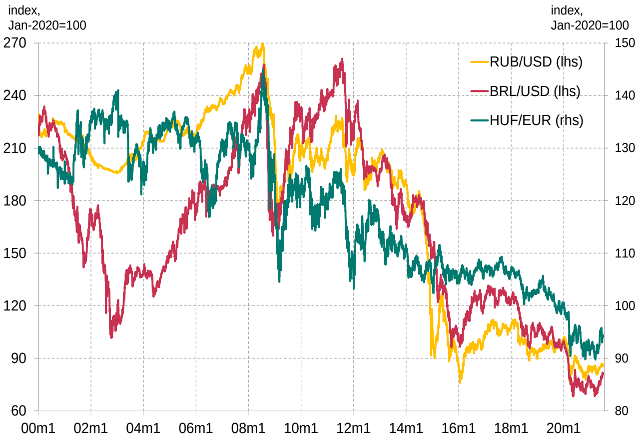
In contrast, certain central banks of emerging market economies (including Brazil, Russia, Turkey and Hungary) have raised their interest rates over the recent months in response to rising inflation, earlier depreciation of national currencies to their all-time lows and inflation expectations developments (Figure 1.19). The Czech National Bank has also increased its interest rates of late.

1.5 International financial markets

In recent months, sentiment in international financial markets has continued to improve. The positive effect on market sentiment was due to the progressing COVID-19 vaccination programme in the major economies and the associated expectations for a marked economic recovery in the coming quarters, particularly in advanced economies (see Chapter 1.1 *Economic activity abroad*). However, the continuing uncertainty about the evolution of the pandemic, and the reports on the discovery of new SARS-CoV-2 variants had the opposite effect.

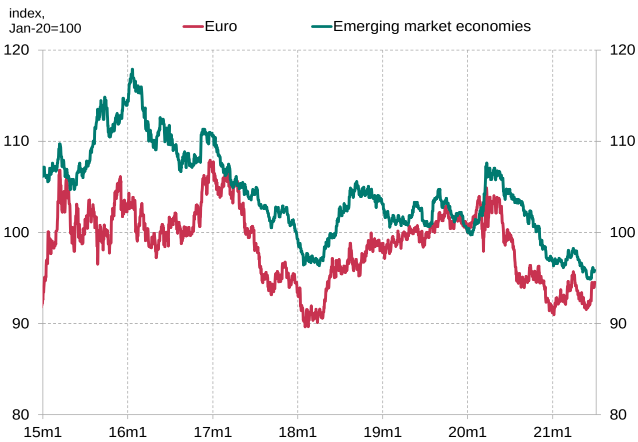
The US dollar – after its prior depreciation – has recently appreciated against other currencies (Figure 1.20). This was the effect of a certain increase in the interest rates forecast for the coming

Figure 1.19 Exchange rates of selected emerging market economies currencies against US dollar or euro



Source: Bloomberg data.
An increase means appreciation of the given emerging market economy currency.

Figure 1.20 US dollar exchange rates against the currencies of emerging market economies and the euro (rise indicates appreciation of the dollar)



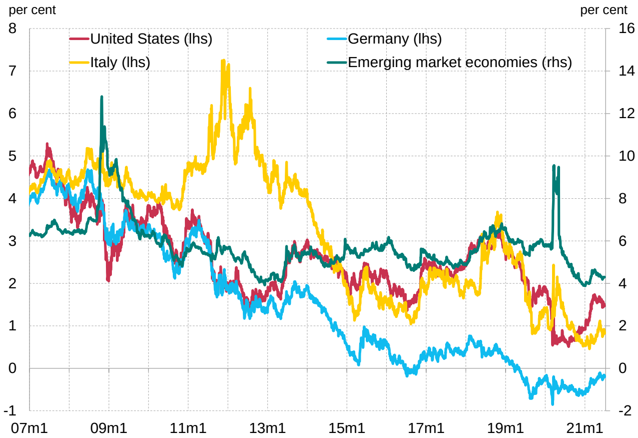
Source: Bloomberg data, NBP calculations.
Emerging market economies – *MSCI Emerging Market Currency Index*.

years by some representatives of the Fed and of fears associated with the new coronavirus variants appearing (see Chapter 1.4 *Monetary policy abroad*). In effect, in June 2021 the US dollar exchange rate against the euro was running, on average, close to the level recorded in February 2021. At the same time – amid somewhat higher appetite for risk in international financial markets – the scale of the recent appreciation of the US dollar against the currencies of emerging market economies was smaller, hence the dollar remained slightly weaker against them than in February 2021.

Yields on 10-year government bonds in most major advanced economies were relatively stable in recent months (Figure 1.21). Above all, it was the improvement in economic outlook that supported a rise in yields, while a certain fall in recent weeks in long-term market inflation expectations, among others in the United States – after an earlier marked increase – had the opposite effect. As a result, yields on 10-year government bonds in the United States and Germany have been recently running close to their pre-pandemic levels and lower than average in previous years. This was accompanied by stabilisation in yields on government bonds in emerging market economies slightly above the record lows, amid the inflow of portfolio investment into those markets.

Favourable sentiment in international financial markets also translated into a further rise in share prices in many economies. As a result, equity indices of the world's major stock exchanges have been recently running at or close to their record highs (Figure 1.22).

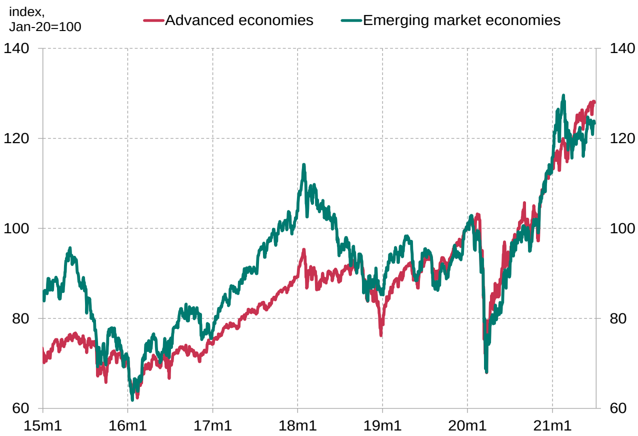
Figure 1.21 Government bond yields



Source: Bloomberg data.

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

Figure 1.22 Equity prices



Source: Bloomberg data.

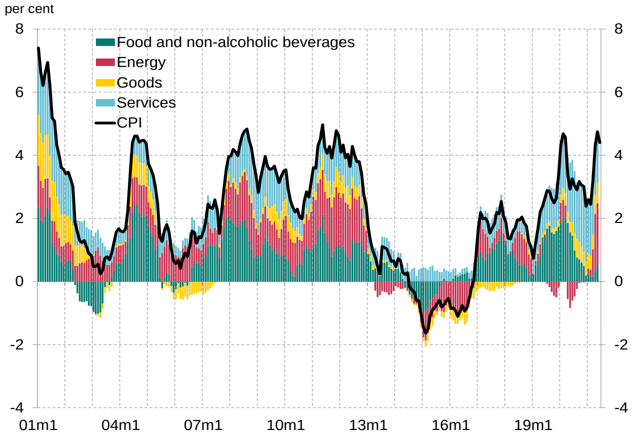
Advanced economies – *MSCI World Equity Index*; emerging market economies – *MSCI Emerging Markets Equity Index*.

2. Domestic economy

2.1 Inflation developments

Consumer price growth in Poland had been increasing in the first months of 2021 (in May it amounted to 4.7% y/y), while in June – according to Statistics Poland flash estimate – it declined to 4,4% y/y (Figure 2.1). The higher consumer price growth than at the beginning of the year was predominantly the effect of an increase in the prices of fuels for private means of transport, due to the rising prices of crude oil in the global markets and the strong base effect related to a decline in their prices in 2020 Q2, i.e. after the outbreak of the COVID-19 pandemic (see Box 2: *Base effects in CPI inflation - statistical and economic approach*). A significant positive contribution to CPI inflation was still made by administered prices[10] (including electricity prices and waste disposal charges), and from April 2021 also by food prices, i.e. factors which – similar to commodity prices – are beyond the control of domestic monetary policy (see Box 1: *Statistical and model-based identification of factors affecting inflation in Poland*). In June, inflation was dragged down by the slower growth in the prices of fuels for private means of transport, which however remained high (27.3% y/y). At the same time, Statistics Poland data give reasons to assume that also the growth of prices of non-food goods and services slowed down. Consequently, according to preliminary estimates, core inflation excluding food and energy prices declined substantially in June. By contrast, a further rise in food prices contributed to higher inflation.

Figure 2.1 Composition of CPI inflation (y/y)



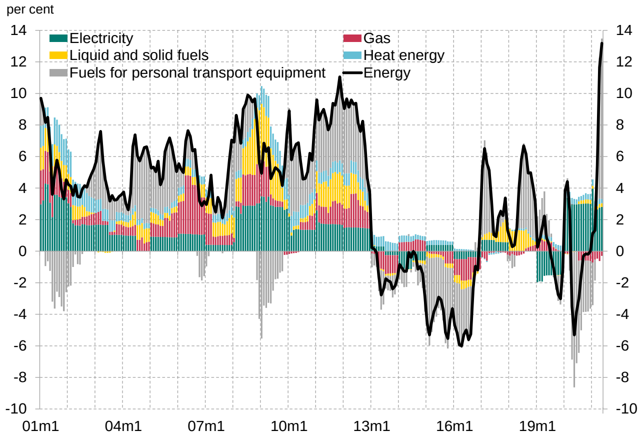
Source: Statistics Poland (GUS) data, NBP calculations.

[10] In May 2021, fuels for private means of transport and administered prices contributed a total of 2.5 percentage points to CPI inflation.

Growth in the prices of food and non-alcoholic beverages was decreasing in the first three months of 2021 (to 0.5% y/y in March 2021) to rebound to 1.7% y/y in May 2021. Decline in inflation in this category at the beginning of the year was the effect of the decelerating growth of unprocessed food prices (to -1.7% y/y in March).[11] Rising prices of non-alcoholic beverages – due to the sugar charge in force since 1 January 2021 – acted in the opposite direction. In May 2021, the growth in food price inflation was driven by faster growth in prices of meat, mainly poultry, on the back of the base effect related to their sharp fall in May 2020.[12]

Energy price growth has increased strongly in recent months and in May 2021 it was 13.2% y/y (Figure 2.2). The acceleration of energy price growth was primarily driven by higher growth in fuel prices (in year-on-year terms) related to rising global crude oil prices and the strong effect of the previous year's low base (in May, fuel price growth was 33.0% y/y; see Chapter 1.3 *Global commodity prices*). High annual electricity bill growth also made a significant positive contribution to energy price growth due to a rise in the average electricity bill, mostly as a result of the introduction of the capacity charge at the beginning of 2021.

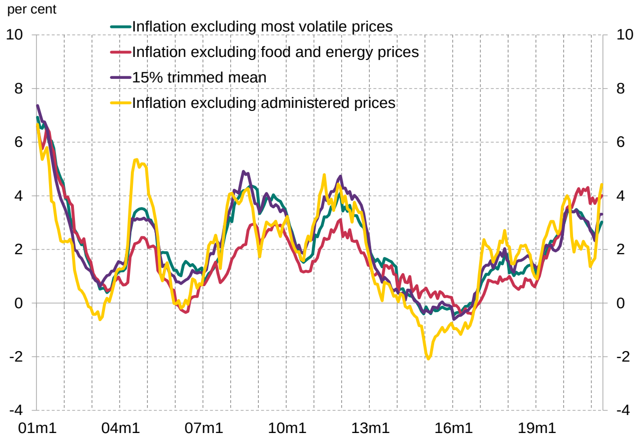
Figure 2.2 Energy price growth and its components (y/y)



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

Inflation excluding food and energy prices remained relatively stable in the first months of 2021 and amounted to 4.0% y/y in May (Figure 2.3). Higher core inflation was driven by some acceleration of growth in non-food prices, while a decline in service price growth acted in the opposite direction. Growth in the prices of non-food goods picked up to 2.0% y/y in May 2021, mainly on account of a stronger seasonal increase in the prices of clothing and footwear than a year earlier, i.e. when sanitary restrictions were less severe than in the first months of the COVID-19 pandemic. After rising in April 2021, the elevated growth in the prices of goods related to culture and

Figure 2.3 Core inflation indices (y/y)



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

[11] The decline in price growth mainly concerned fruit due to high fruit harvest in 2020 and the statistical base effect.
[12] The decrease in poultry prices resulted from the limited demand from the sector of restaurants and hotels and a rise in domestic supply amid falling exports.

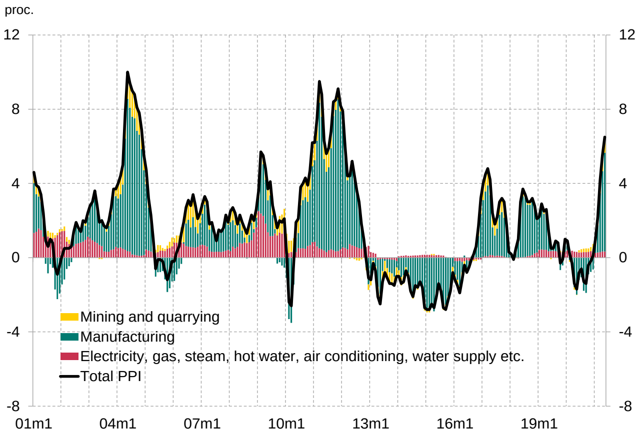
recreation continued in May, largely reflecting the last year's low base effects.[13] In turn, services price inflation was lower than in January (and stood at 6.8% y/y in May 2021), mainly due to the decelerating growth in prices of administered services (to 10.9% y/y).[14]

Other core inflation measures were in the range of 3.0% - 4.4% in May 2021.

Amid strong increase in producer prices abroad, the PPI in Poland rose by 6.5% y/y in April (compared to 1.0 y/y in January 2021; Figure 2.4; see Chapter 1.2 *Inflation developments abroad*). Higher producer prices in the crude oil industry and in the mining of iron ores, following a rise in the prices of these commodities in the global market, made the largest contribution to producer price growth .

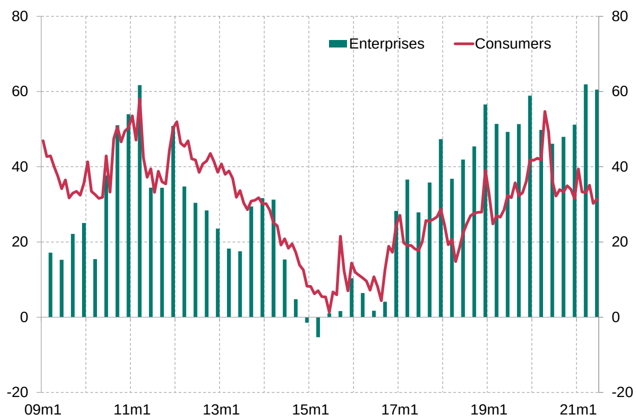
Inflation expectations of financial sector analysts surveyed by Refinitiv over the four quarters horizon rose to 3.4% in 2021 Q2 (Table 2.1), with the median survey forecast still pointing to a decline in average annual inflation in the years to come. At the same time, the median forecast of participants to the NBP Macroeconomic Survey over the horizon of eight quarters was 3.0%. Survey opinions of enterprises – after the shift towards higher inflation in 2021 Q1 – declined somewhat in 2021 Q2. Consumer survey opinions also shifted towards lower inflation in 2021 Q2 (Figure 2.5).

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.

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

	Survey conducted in:				
	20q2	20q3	20q4	21q1	21q2
Refinitiv Survey, inflation expected in 4 quarters	1.9	1.8	2.8	2.7	3.4
NBP Survey, inflation expected in 4 quarters	2.3 (1.3-3.3)	2.3 (1.6-2.8)	2.6 (2.1-3.1)	3.1 (2.4-3.7)	-
NBP Survey, inflation expected in 8 quarters	2.6 (1.6-3.3)	2.4 (1.7-3.2)	2.7 (2.1-3.5)	3.0 (2.2-3.6)	-

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.

[13] In May 2021, growth in the prices of goods related to household appliances, specifically furniture, also increased.
[14] The decline in waste disposal charges growth, which however remained high (26.9% y/y in April 2021 compared to 41.9% in January 2021) was the most important factor behind the decelerated growth in prices of administered services.

Box 1: Statistical and model-based identification of factors affecting inflation in Poland

Like in many other economies, consumer price inflation in Poland has risen substantially since the beginning of 2021 (see Chapter 2.1 *Inflation developments* and Chapter 1.2 *Inflation developments abroad*). Both in Poland and worldwide, consumer prices have been under a considerable influence of shocks whose primary source was the outbreak of the COVID-19 pandemic. These shocks have affected domestic inflation via demand channel (mainly as a result of tightening or relaxing social and economic restrictions at home and abroad) and supply channel (related to changes in the availability of commodities, disruptions in global supply chains or changes in firms' operating costs; see Chapter 1.2 *Inflation developments abroad* and Chapter 1.3 *Global commodity markets*). Such disturbances may cause a temporary deviation of CPI inflation from the target. It should be noted at this point that in line with the *Monetary Policy Guidelines for 2021*, monetary policy response to shocks is flexible and depends on their causes and the assessment of the persistence of their consequences, including the impact on inflation developments. For this reason, it is important to identify the shocks accurately.

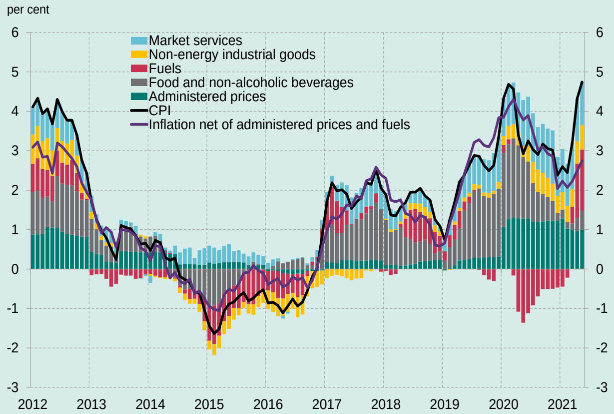
This Box identifies CPI inflation sources using two complementary frameworks. The first one – the statistical decomposition of the CPI inflation in year-on-year terms – specifies the main drivers of accelerated price growth in the past few months in static terms. Therefore, only the immediate (direct) effect of changes in the prices of goods and services included in the CPI basket is captured. For this reason, the model-based approach has also been employed: it enables an estimation of overall (long-term) effect of selected economic factors on CPI inflation and a decomposition of consumer price growth to account for both the direct and indirect channel of influence.

The findings of these analyses suggest that the rise in CPI inflation in the first half of 2021 was largely due to the specific shocks related to the COVID-19 pandemic, a sustained adjustment following the rise in administered prices, and price developments in the external environment of the Polish economy – i.e. factors beyond the control of domestic monetary policy. In turn, from 2020 Q2 on, domestic cyclical factors have consistently worked towards reducing inflation.

Statistical decomposition

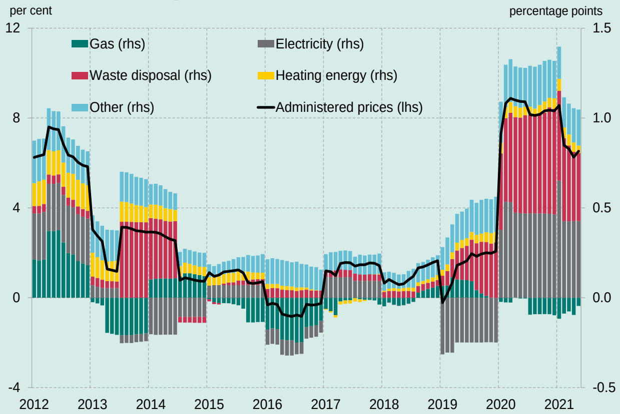
The statistical decomposition of the CPI indicates two main sources of the recent consumer price increases – changes in the prices of fuels for private means of transport and in administered prices (mainly of waste disposal and electricity).

Figure B.1.1 CPI inflation (y/y) and its statistical decomposition



Source: Statistics Poland data, NBP calculations.

Figure B.1.2 Administered price growth (y/y) and contributions of individual components to CPI



Source: Statistics Poland data, NBP calculations

Note: the Other category includes: water supply, sewerage services, charges due to owners and other administered prices.

Firstly, since December 2020, prices of fuels for private means of transport have been rising sharply following the increasing global oil prices (see Chapter 1.3 *Global commodity markets*). Therefore, and also due to a strong base effect related to a marked decline in oil prices a year earlier (see Box 2: *Base effect in CPI inflation – a statistical and* *economic approach*), annual fuel price growth in Poland picked up significantly (from -8.4% y/y in December 2020 to 33.0% y/y in May 2021). Considering the relatively high share of fuels in the consumer basket, the contribution of this category to CPI inflation increased by 2 percentage points (from -0.5 percentage points in December 2020 to 1.5 percentage points in May 2021).

Secondly, since January 2020, CPI inflation has been considerably boosted by the robust growth in administered prices. Whereas the direct contribution of administered price index to CPI growth in 2012-2019 amounted to 0.3 percentage points on average, between January 2020 and January 2021 it stood at 1.2 percentage points (Figure B.1.1, Figure B.1.2). Since February 2021, this contribution has declined somewhat (to about 1 percentage point), yet it persists above the long-term average.

The high growth in administered prices in the past few months is mainly due to the rise in prices of housing services (Figure B.1.2). Specifically, there has been a marked increase in waste disposal charges due to the regulations arising from EU directives.[15] Amid weak competition in the waste management market and increasing volumes of refuse, the higher costs of its collection and treatment have been passed on to consumers. As a result, waste disposal charges rose by 73.8% overall between January 2020 and May 2021.[16]

In 2020 and early 2021, there was also a significant increase in electricity prices. In January 2020, the President of the Energy Regulatory Office approved new, higher tariffs for electricity, which fed through to a sharp rise in an average household's bill (by a total of 11.7% in 2020). In January 2021, in turn, the monthly increase of 10.8% in energy prices resulted mainly from the introduction of capacity charge and a further rise in the tariffs.

Thus, the statistical disaggregation of the CPI shows that the annual growth in consumer prices is heavily influenced by prices of fuels for private means of transport, as well as administered prices of goods and services. In May 2021, the combined contribution of both categories to CPI inflation was 2.5 percentage points, and a counterfactual analysis shows that CPI inflation excluding administered and fuel prices stood at 2.7% y/y (Figure B.1.1).

Model-based decomposition

Statistical decomposition does not allow to isolate the strength of the effect of economic factors on CPI inflation. This is why a single-equation, dynamic econometric model has been constructed.[17] The model-based approach not only enables to identify the nature of the shocks observed in the sample but also to determine their short- and long-term effects by taking into account both the direct, and the indirect impact on the CPI.

The presented model accounts for price growth based on:

- the cyclical position of the Polish economy (approximated with the output gap)
- inflation expectations of firms (approximated by the change in the probabilistically quantified expectation measure[18])
- changes in administered prices,
- cost-push inflation (changes in producer prices),
- global price factors (changes in PLN-denominated prices of oil and agricultural commodities),

[15] The EU's environmental policy sets the standards for recycling and minimising the share of landfilled waste. Among others, it forces the introduction of the common system of waste segregation in the territory of Poland (the division of waste into 5 fractions), which has led to a considerable increase in the costs of waste management.

[16] A significant one-off rise – albeit substantially smaller – had previously taken place in July 2013 (46.7% m/m) following the implementation of the law changing the municipal waste management.

[17] The model was estimated with the instrumental variables method on a sample encompassing the period 2002 Q1 – 2021 Q2, and extensively verified with appropriate statistical tests. Data for chosen macroeconomic variables for 2021 Q2 are preliminary (they are based on Statistics Poland's and in-house estimates).

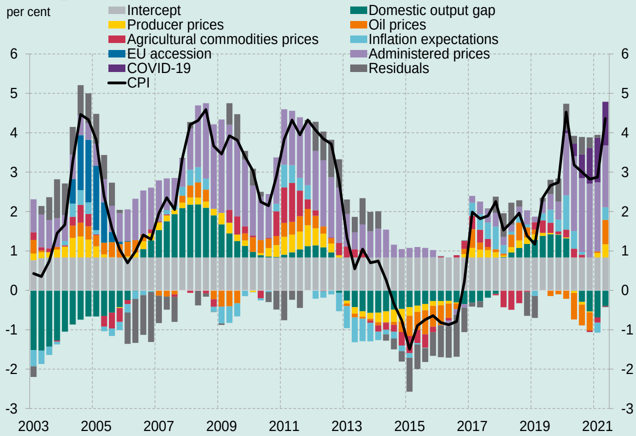
[18] The choice of the quantified measure of inflation allows to include longer time series than in the case of other available measures, such as balance statistics.

- temporary effects related to Poland's accession to the EU,
- specific effects resulting from the COVID-19 pandemic.[19]

Based on the model estimation, a historical decomposition of CPI inflation in Poland was performed (Figure B.1.3)[20].

The model decomposition shows that the shocks related to the changes in administered prices were an important source of inflation variability in Poland in 2003-2014. In the subsequent period, i.e. 2015-2019, prices in this category had a small impact on inflation. From 2020 onwards, administered prices boosted the CPI inflation considerably (temporarily by 1.8 percentage points in 2020 Q2 - 2021 Q2). Their higher contribution in this period compared to the statistical decomposition (1.2 percentage points) resulted from the inclusion of the indirect effects of administered price changes,[21] related to the persistence of price processes. Starting from 2020 Q1, a substantial upward pressure on inflation was also exerted by specific effects associated with the COVID-19 pandemic (including e.g. higher cost of business operation amid epidemic restrictions, particularly in 2020 Q2). Moreover, the disinflationary impact of oil prices had been sharply declining from 2020 Q3, whereas in 2021 Q2 oil prices contributed to a substantial rise in CPI inflation. In turn, factors dragging inflation down included, above all, the negative output gap.

Figure B.1.3 CPI inflation (y/y) and its model-based historical decomposition



Source: Statistics Poland, NBP, Bloomberg data, NBP calculations.

The results of the model-based analyses confirm that the increase in CPI inflation from 2020 results to a great extent from a strong adjustment of administered prices, and from 2020 Q4 also from specific shocks related to the COVID-19 pandemic as well as price developments in the external environment of the Polish economy (the base effect in global oil prices coupled with their significant increase in 2021 Q1 and Q2) – hence, factors beyond the control of domestic monetary policy – while domestic factors exerted a limited downward pressure on prices.

[19] In our analysis, the specific shocks related to the COVID-19 pandemic may be interpreted as, among others, elevated costs of business operation under epidemic restrictions or the temporary demand of a precautionary nature. They do not include changes in the output gap or commodity prices resulting from pandemic developments.
[20] By using the properties of the logarithmic growth rates, the decomposition of the index in annual terms was obtained by aggregating the decomposed variable in quarterly terms.
[21] The direct multiplier in the econometric model for administered prices was 0.179, and standard error was estimated at 0.038 percentage points. In turn, the average weight of the "administered prices" component in the sample stands at about 0.154. This indicates that the estimation is highly accurate. The long-term multiplier for administered prices stood at 0.238.

Box 2: Base effects in CPI inflation - statistical and economic approach

In recent months, the annual growth rate of many macroeconomic variables has been affected to a considerable degree by the statistical base effect related to a sharp decline in those variables, particularly in 2020 Q2, following the COVID-19 pandemic and the introduction of epidemic restrictions. The strength of the base effect can be computed either by applying a purely statistical or economic approach. This box uses the example of the inflation index to describe these approaches to the concept of "base effect" and presents methods for its measurement.

The base effect in statistical terms

In accordance with the statistical approach, what is usually labelled as base effect is the contribution of price growth (typically in monthly or quarterly terms) from the base period (i.e. 12 months or 4 quarters earlier, respectively) to the current change in the annual price index. For instance, let $\pi_t = 100\left(\frac{P_t}{P_{t-12}} - 1\right)$ be the year-on-year (y/y) rate of change in the consumer price index in month t, $m_t = 100\left(\frac{P_t}{P_{t-1}} - 1\right)$ is the month-on-month (m/m) rate of change in the consumer price index, and P_t is the chain-linked consumer price index, then the monthly change ($\Delta\pi_t$) in the annual CPI inflation rate can be decomposed into the effect of the current month's price change ($k \cdot m_t$) and the base effect ($-k \cdot m_{t-12}$), where $k = P_{t-1}/P_{t-12}$. In mathematical terms, the decomposition results from the following formula:

$$\Delta\pi_t = \pi_t - \pi_{t-1} = 100 \times \frac{P_{t-1}}{P_{t-12}}\left(\frac{P_t}{P_{t-1}} - \frac{P_{t-12}}{P_{t-13}}\right) = k \cdot m_t + (-k \cdot m_{t-12}).$$

The base effect in economic terms

According to the economic approach, only the effect of unusual changes in the annual inflation rate can be considered as the base effect.[22] The key assumption here is that the observed change in the consumer price index will not repeat in the following year. This definition requires a distinction between the extent to which price changes in the base period were expected, and the extent to which they resulted from one-off factors of an unpredictable nature. For example, two regular components can be singled out in the decomposition of the monthly inflation index: a seasonal component (s_t) and trend (τ_t), as well as one irregular component (u_t), so that $m_t = s_t + \tau_t + u_t$.[23] Simplifying this decomposition, it can be assumed that for $k \approx 1$ a change in the CPI inflation is approximated as $\Delta\pi_t \approx s_t + \tau_t + u_t - s_{t-12} - \tau_{t-12} - u_{t-12}$. Assuming that the seasonality and trend indices are stable over time ($s_t \approx s_{t-12}$, $\tau_t \approx \tau_{t-12}$), the change in the annual inflation rate is defined as $\Delta\pi_t \approx u_t + (-u_{t-12})$. Thus, it results from the unexpected change in the prices in the current month (u_t) and the base effect ($-u_{t-12}$), i.e. an unexpected change in prices twelve months ago. A similar reasoning can be made for quarterly data.

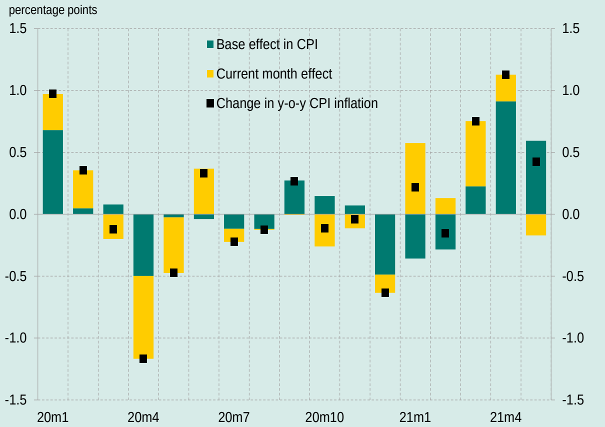
At the beginning of 2021, CPI inflation was first affected by negative, and later by positive base effects

Based on the method of computing the base effect in economic terms described above, this section points to the sources of recent changes in CPI inflation. Firstly, a large and positive component of the CPI inflation (m/m) from January 2020 helped to limit the scale of the change in the annual CPI inflation in January 2021 (Figure B.2.1). Thus, a negative base effect was observed in January 2021 (concerning all the key components of the CPI basket except for core inflation; Figure B.2.2). In March 2021, in turn, inflation was mostly determined by current irregular fluctuations (the largest m/m increase in fuel prices since the global financial crisis), and not the base effect. In April and May 2021, instead, positive base effects were observed, which account for the increase in the y/y CPI to

[22] See also ECB Monthly Bulletin, January 2005.
[23] Such decomposition can be performed, for example, using time series procedure of seasonal adjustment Tramo/Seats which is recommended by Eurostat.

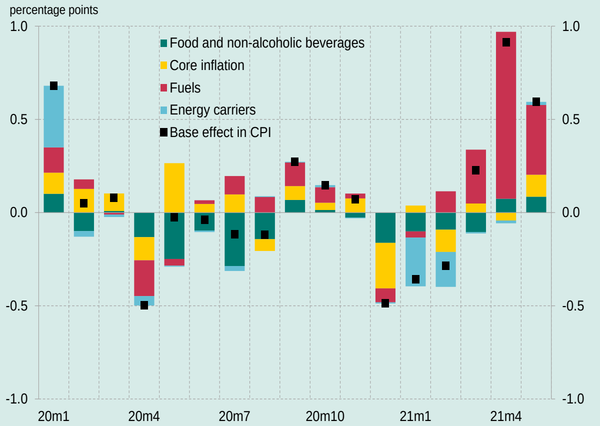
a great extent and are related to the significant fall in oil prices immediately after the onset of the COVID-19 epidemic, entailing a decline in fuel prices in April and May 2020 by 12.9% m/m and 4.5% m/m, respectively.

Figure B.2.1 Base and current month effects in economic terms in 2020 and 2021 and changes in CPI inflation on the previous month



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

Figure B.2.2 Decomposition of the CPI base effects in 2020 and 2021 into main components



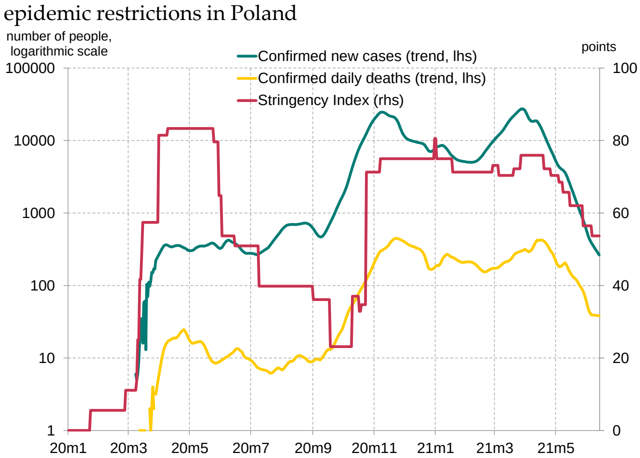
Source: Statistics Poland (GUS) data, NBP calculations.

2.2 Demand and output

In 2021 Q1, the annual GDP growth in Poland increased, yet remained negative (running at -0.9% y/y as compared with -2.7% y/y in 2020 Q4; Figure 2.7, Table 2.2, Figure 2.8).[24] The increase in GDP growth reflected, on the one hand, slightly higher consumption and investment than the year before and, on the other hand, a deterioration in the foreign trade balance.

Economic activity remained under a considerable influence of the epidemic situation, even though this impact was weaker than at the initial stage of the pandemic. Despite having fallen markedly compared to the end of 2020, the daily number of infections in January and February 2021 persisted at a significant level. In March 2021, the daily counts of COVID cases rose sharply, hitting the highest point since the beginning of the pandemic, and subsided to a relatively low level in June 2021. (Figure 2.6). This was accompanied by the partial easing of epidemic restrictions in February 2021 – mainly regarding retail trade, culture and accommodation – which was followed by the

Figure 2.6 COVID-19 cases, related deaths and stringency of epidemic restrictions in Poland



Source: Ministry of Health and University of Oxford Coronavirus Government Response Tracker data, NBP calculations.

[24] The increase in GDP growth in 2021 Q1 was partially due to the last year's low base effect related to the outbreak of the COVID-19 pandemic.

renewed tightening, initially on a regional, and, from mid-March, national scale. Since the end of April 2021, restrictions had been gradually eased.

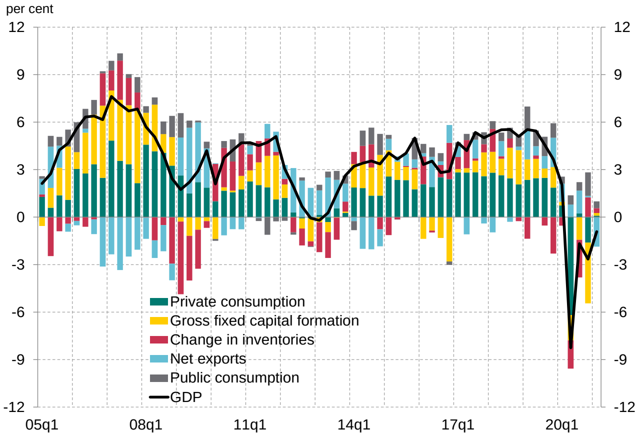
Private consumption picked up slightly in annual terms (by 0.2% y/y, after a fall of 3.2% y/y in 2020 Q4). The increase in consumption was supported by the partial lifting of the restrictions, including the opening of shops in shopping centres from the beginning of February to mid-March. In turn, the markedly weaker consumer sentiment in 2021 Q1 than before the pandemic worked in the opposite direction.

Gross fixed capital formation reached, also for the first time since the beginning of the pandemic, higher level than a year before (growth of +1.3% y/y in 2021 Q1 compared to -15.4% y/y in 2020 Q4). This was driven, above all, by higher corporate investment growth than in the previous quarter, and an increase in housing investment. The pickup in investment demand was probably partly due to an improvement in the economic outlook related to the launch of the COVID-19 vaccination programme, among other things.

As in previous quarters – albeit to a lesser extent – public consumption growth had a positive impact on annual GDP growth. At the same time, the contribution of net exports to GDP growth was negative as the increase in import growth exceeded that of export (the contribution of net exports to GDP growth dropped to -1.9 percentage points in 2021 Q1, from 0.1 percentage points in 2020 Q4; see also Chapter 2.2.4 *Foreign trade*).

As the pandemic and the restrictions affected the economy unevenly, business conditions in 2021 Q1 continued to differ across sectors. An increase in value added in year-on-years terms in industry was accompanied by its decline in some service sectors, especially those most heavily affected by the restrictions. Value added in construction also declined.

Figure 2.7 GDP growth and its components (y/y)



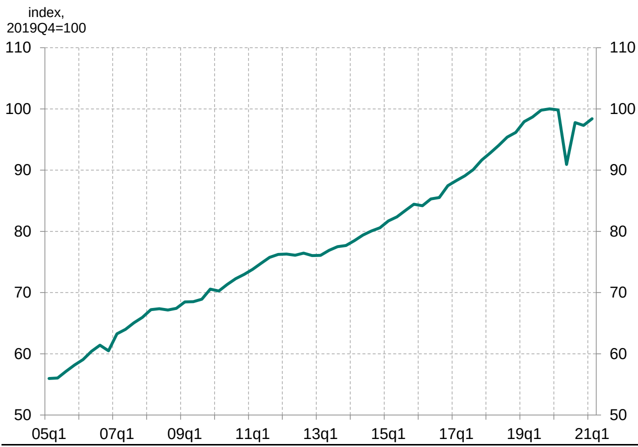
Source: Statistics Poland (GUS) data.

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

	2019				2020				2021
	q1	q2	q3	q4	q1	q2	q3	q4	q1
GDP	**5,5**	**5,4**	**4,6**	**3,7**	**2,0**	**-8,3**	**-1,7**	**-2,7**	**-0,9**
Private consumption	2,4	2,5	2,5	1,9	0,7	-6,2	0,2	-1,6	0,1
Public consumption	1,5	1,0	1,2	0,9	0,4	0,6	0,5	1,5	0,4
Gross fixed capital formation	1,3	1,2	0,6	1,3	0,2	-1,6	-1,4	-3,8	0,2
Change in inventories	-1,4	0,2	-0,5	-2,3	-0,5	-1,8	-2,4	1,3	0,3
Net exports	1,8	0,6	0,8	1,9	1,1	0,8	1,4	0,1	-1,9

Source: Statistics Poland (GUS) data.

Figure 2.8 GDP volume (seasonally adjusted)



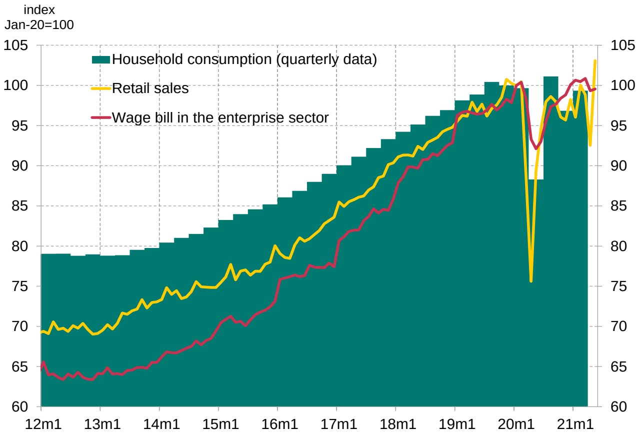
Source: Statistics Poland (GUS), Eurostat data, NBP calculations.

2.2.1 Consumption

In 2021 Q1, there was a partial recovery in consumption. The household consumption increased (it stood at +0.2% y/y in 2021 Q1 compared to -3.2% y/y in 2020 Q4; raw data), but the level of consumption remained somewhat lower than in 2019 Q4, i.e. before the pandemic (seasonally adjusted data; Figure 2.9). Some growth in consumption was supported by slightly positive annual wage growth in 2021 Q1. The evolution of consumption continued to be substantially – albeit to a lesser extent than in the first months of the pandemic – affected by the changing epidemic situation and the related relaxation of the epidemic restrictions in early February 2021, followed by their retightening – at first regionally and then across the country as of mid-March. Retail sales data suggest that the rise in consumption in 2021 Q1 was driven mainly by the sale of clothing and footwear – associated with the opening of shops in shopping centres from early February to mid-March 2021 – as well as of cars, furniture, and household appliances climbing higher than a year before, which resulted partly from the low base effect at the onset of the pandemic. At the same time, the decline in the sale of fuels – amid lower mobility of the population due to the pandemic – and in the sale of food and beverages as well as pharmaceuticals and cosmetics acted in the opposite direction.

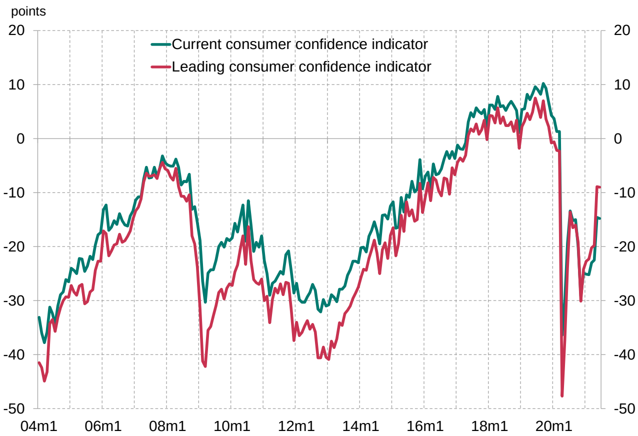
Monthly data suggest that the recovery in consumption continued in 2021 Q2. Retail sales – having declined in monthly terms in April due to the restricted activity of large retail outlets and shopping centre closures – rose markedly in May and exceeded their pre-pandemic level.[25] In May, the sale of clothing and footwear as well as furniture and household appliances increased in particular. The growth in retail sales was aided by the improvement in the epidemic situation, the

Figure 2.9 Volume of real consumption, retail sales and wage bill in the enterprise sector (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.
For household consumption index 2019 Q4 = 100.

Figure 2.10 Consumer confidence indicators



Source: Statistics Poland (GUS) data.

[25] In monthly terms, retail sales in constant prices declined in April 2021 by 6.4% and rose in May by 11.4% (data seasonally adjusted by NBP). In turn, the annual growth in retail sales in April 2021 and May 2021 was strongly influenced by the low base effect from the previous year and stood at 22.4% y/y in April and at 15.3% y/y in May.

gradual relaxation of the restrictions and the previously pent-up consumer demand. Household consumption growth in 2021 Q2 is also indicated by some improvement in consumer sentiment, which, however, was still significantly worse than before the pandemic (Figure 2.10).

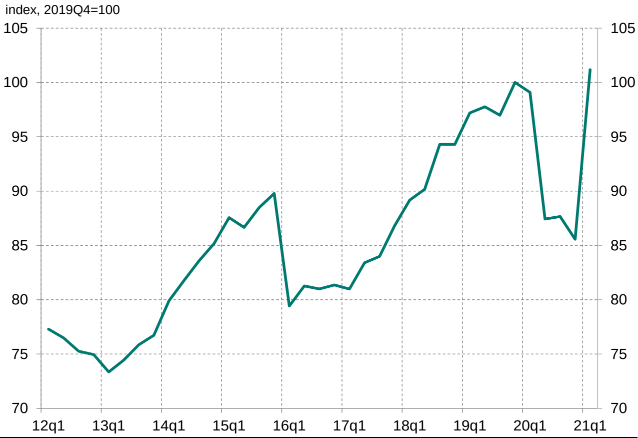
2.2.2 Investment

After the marked fall in 2020, 2021 Q1 saw a recovery in investment activity. Gross fixed capital formation increased by 1.3% y/y – after a fall by 15.4% in 2020 Q4[26] – and slightly exceeded the pre-pandemic level (Figure 2.11). According to NBP estimates, the increase in annual investment growth was primarily driven by higher corporate investment growth and an increase in residential investment (Figure 2.12). At the same time, public investment in 2021 Q1 was lower than a year ago.

According to data from corporate financial statements, investment in large and medium-sized companies in 2021 Q1 was higher than a year ago. An increase in investment in transport and storage and other services (Figure 2.13) mainly contributed to this rise. However, investment in manufacturing, energy, mining and water supply declined. Businesses increased outlays on means of transport and machinery and devices, while their investment in buildings and structures was lower than a year ago. The negative growth in investment by foreign-owned companies was balanced by the increase in investment by domestic companies, particularly state-owned ones.

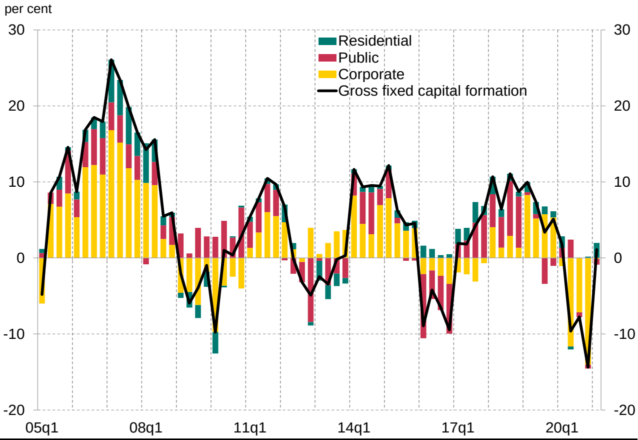
The improved economic outlook driven, among other things, by the implementation of the COVID-19 vaccination programme probably contributed to the increase in corporate investment activity in 2021 Q1. However, the epidemic restrictions still in force, the continuing uncertainty about the development of future demand and lower-than-before-the-pandemic capacity utilisation (Figure 2.14) may have had an opposite effect. In 2021 Q2,

Figure 2.11 Gross fixed capital formation (seasonally adjusted data)



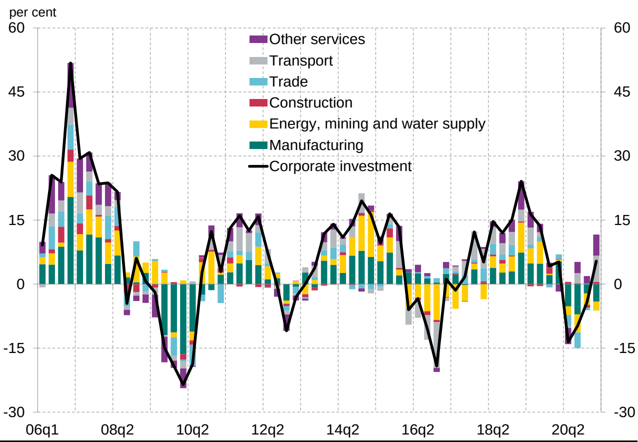
Source: Statistics Poland (GUS) data, NBP calculations.
Constant prices (reference year 2015).

Figure 2.12 Growth in investment and its main components (y/y)



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

Figure 2.13 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).

[26] The gross fixed capital formation growth is expressed in annual average prices of the previous year.

the enterprises surveyed by NBP signalled a higher propensity to launch new investments and increase investment outlays.

According to NBP estimates, the negative public investment growth in 2021 Q1 was mostly the effect of lower investment outlays of local governments.[27] This was accompanied by some decline in EU funds expended on investment.

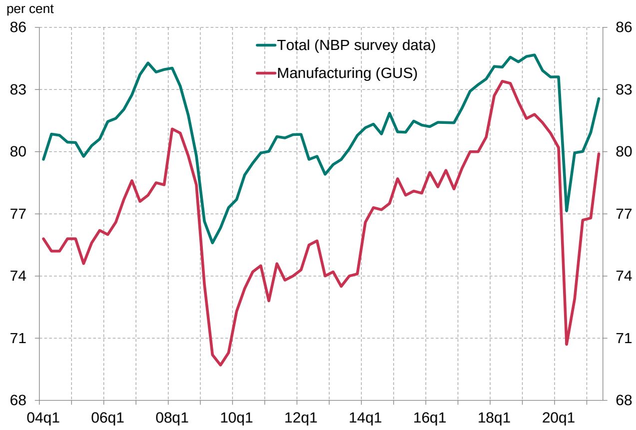
According to NBP estimates, 2021 Q1 saw an increase in residential investment growth, which was driven by a high households' demand for dwellings (see Chapter 2.5.2 *Real estate market*).

2.2.3 Public finance

In 2020, the general government deficit in ESA 2010 terms amounted to 7.0% of GDP (compared with 0.7% of GDP in 2019), of which, according to NBP estimates, 4.2% of GDP was the cost of anti-crisis measures provided by the government to households and businesses in response to the COVID-19 pandemic. The 2020 deficit was high in comparison with previous years, but at the same time lower than the levels observed in 2009-2010, i.e. after the outbreak of the global financial crisis (Figure 2.15).

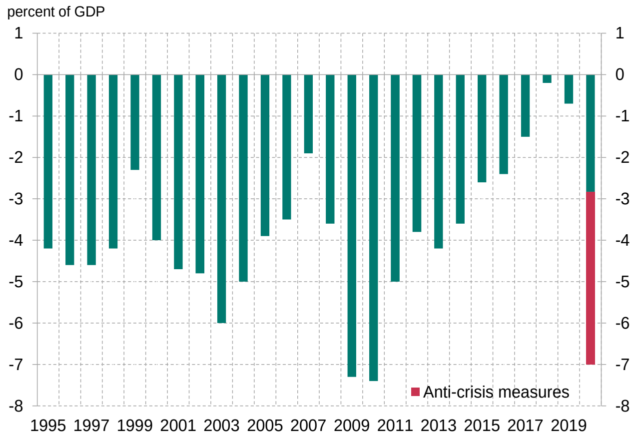
The financing of anti-crisis measures in 2020 translated into a marked acceleration of the sector's expenditure in comparison with previous years – in 2020 it rose by 18.0% y/y, against the 2015-2019 average of 5.6% y/y. A significant contribution to expenditure growth in 2020 came from the increase in subsidies to businesses (which accounted for 8.0 percentage points of the overall expenditure growth). This category encompassed funding of most anti-crisis measures, including the support to enterprises under the Financial Shields of the Polish Development Fund (Polski Fundusz Rozwoju, PFR), wage subsidies, exemption from

Figure 2.14 Corporate capacity utilisation (seasonally adjusted data)



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

Figure 2.15 General government balance (ESA2010)



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

The COVID-19 Anti-crisis related measures category includes i.a.: subsidies for enterprises (in particular, the PFR Financial Shields, wage subsidies from the Guaranteed Employee Benefits Fund and the Labour Fund, exemption from social security contributions, furlough work suspension benefits for the self-employed and persons working employed under a on the basis of civil law contractscontract), Polish Tourist Voucher, additional childcare allowance, increase of in the unemployment benefit and capital injection of to state-owned bank BGK.

[27] In the first quarter of each year public investment is generally at its lowest of the whole year due to the winter season in construction.

social security contributions and work suspension benefits.

Following the decline in economic activity in Poland observed since 2020 Q2, growth in the tax and social security contribution revenue of the general government slowed down relative to previous years (to 3.6% y/y in 2020, as compared to the 2015-2019 average of 7.8% y/y). However, it remained above the nominal GDP growth seen in 2020 (1.3%). Receipts from indirect taxes increased by 3.1% y/y, and from direct taxes by 1.8% y/y, despite the impact of the legislative changes in 2020 resulting in a fall in CIT and PIT revenue.[28] Given the economic situation, revenues from social security contributions posted a robust growth (of 5.1% y/y), which was related to continued relatively favourable situation in the labour market in 2020 (see also Chapter 2.4 *Labour market*).[29]

In response to the second wave of the pandemic at the end of 2020, the government extended most of the anti-crisis measures, but this time the support was targeted only at selected sectors of the economy, which have been most severely affected by the reintroduced sanitary restrictions. Due to the reduced list of business sectors eligible for the support and limited sanitary restrictions, the costs of financing anti-crisis measures in 2021 are likely to be significantly lower than in 2020. According to the current NBP estimates, their impact on the fiscal balance in ESA 2010 terms will amount to 1.1% of GDP. This factor in combination with the expected economic recovery favours an expectation of a significant improvement in the sector’s position in 2021 (economic recovery is also apparent in current state budget data, particularly on tax revenue, which rose by 19.6% y/y over the first five months of 2021).

[28] The changes included the reduction from 15% to 9% in CIT for small firms, lowering the rate of personal income tax in the lowest bracket from 18% to 17%, introduction of preferential taxation for persons under the age of 26, as well as an increase in deductible costs.
[29] Contribution revenue growth was not affected by the exemptions from social security contributions introduced as part of the anti-crisis measures (their impact was recorded in ESA terms on the expenditure side).

The general government debt (ESA 2010) had risen to 57.5% GDP by end-2020, up from 45.6% of GDP at the end of 2019. Last year's increase in debt was also markedly higher than what would have resulted from the deficit alone. The rest of the increase is mostly due to the rise in deposits held by the sector's units (3.1% of GDP) and the issuance of debt to finance loans (1.4% of GDP), in particular repayable part of support granted under the PFR Shields (Figure 2.16).

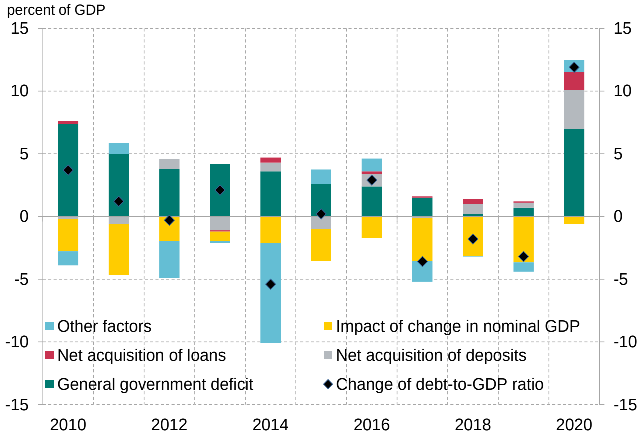
In the current and the subsequent years, the impact of these factors on debt growth should fade or could even be reversed, notably due to loan repayments by businesses. In combination with the assumed improvement in the economic situation, this provides grounds for expecting a gradual reduction of the general government debt in the coming years, starting already this year.

The public debt according to the domestic definition, in turn, had risen to 47.8% of GDP at the end of 2020, up from 43.2% of GDP at the end of 2019, thus running significantly below the 55% and 60% thresholds laid down in the Public Finance Act and the Constitution of the Republic of Poland.[30]

2.2.4 External trade[31]

2021 Q1 saw further recovery in Poland's external trade. Growth of value of exports increased slightly (to 15.8% y/y relative to 13.4% y/y in 2020 Q4), whereas growth of value of imports picked up significantly (to 14.0% y/y from 7.3% y/y in 2020 Q4). In April 2021, both import and export growth accelerated considerably (to 64.4% y/y and 53.4% y/y, respectively) as a result of the statistical base effect connected with a sharp drop in external trade in April 2020.

Figure 2.16 Decomposition of changes of general government debt-to-GDP ratio (ESA 2010)



Source: Eurostat data, NBP calculations.

[30] A significantly smaller increase in the public debt in national terms relative to ESA 2010 terms is mainly related to the classification of securities issued by the PFR and the COVID-19 Counteracting Fund, from which most of the anti-crisis measures are financed. In line with the provisions of the Public Finance Act, these entities are not units of the public sector, and so their liabilities do not constitute public debt under domestic definition. In 2020, PFR and Bank Gospodarstwa Krajowego on behalf of COVID-19 Counteracting Fund issued bonds with a total nominal value of PLN 166.1 billion.

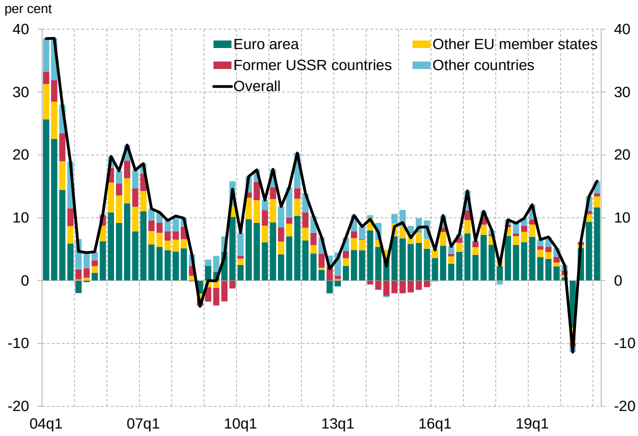
[31] In this chapter, the analysed data are primarily Statistics Poland (GUS) data on the nominal value of exports and imports of goods in PLN terms. Trends in the trade of services are not described, as no detailed data are available on their breakdown.

In 2021 Q1, the growth of Polish exports to the euro area increased, mainly to its largest economies and other EU member states (Figure 2.17). In turn, the growth of exports to the countries of the former Soviet Union was close to the one observed in 2020 Q4, while exports to other countries slowed down somewhat. In terms of goods, the increase in exports growth was seen in all main categories, although in the case of "Other goods" exports growth remained negative.[32] The strongest growth was seen in the exports of investment goods, although intermediate goods continued to have the largest contribution to total exports growth, mainly supply goods for the manufacturing sector amid rebounding activity in this sector in the euro area.

In 2021 Q1, the largest annual growth in the value of imports was recorded in the category of investment goods, which was related to a partial recovery of domestic investment demand (Figure 2.18; see Chapter 2.2.2 *Investment*). A marked acceleration was also seen in the growth in the value of imports of intermediate goods, mainly supply goods for the manufacturing sector and fuels – on account of both increased volume of imports of fuels and a rise in their prices (see Chapter 1.3 *Global commodity markets*). At the same time, the growth in the imports of consumer goods remained relatively high, which was supported by some rebound in domestic consumption (see Chapter 2.2.1 *Consumption*). Alongside that, the past few quarters have seen the negative annual growth in the value of imports of other goods, mainly passenger cars.

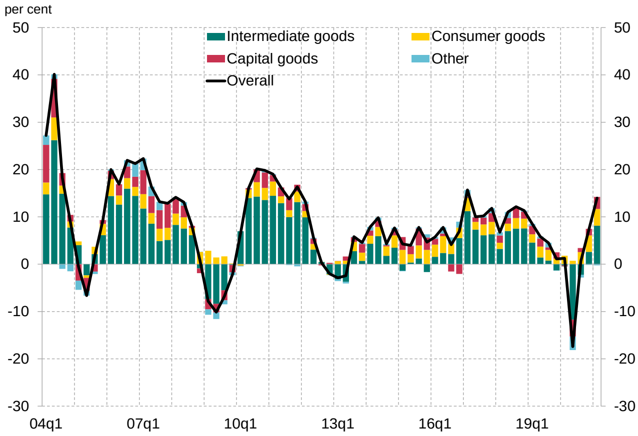
Following a slight depreciation observed in the first months of 2021, April and May witnessed the appreciation of the nominal and real effective exchange rate of the zloty, to the levels observed at the beginning of the year (Figure 2.19). The share of exporters reporting unprofitable exports in 2021

Figure 2.17 Contribution to export growth by destination (y/y)



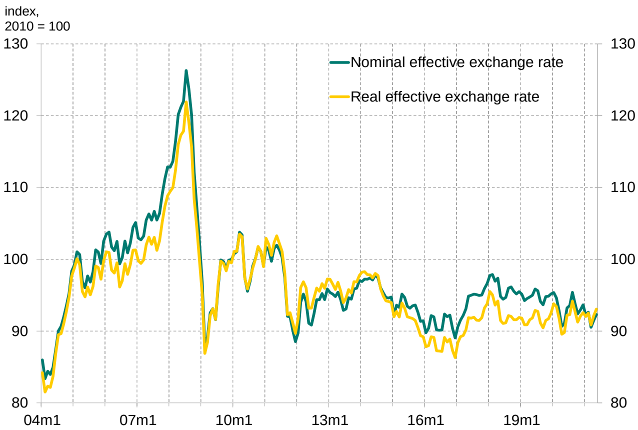
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.18 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.

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



Source: BIS data.

[32] The negative growth in exports of "Other goods" was mainly driven by lower exports of goods not classified elsewhere, amid a slightly positive growth in exports of passenger cars.

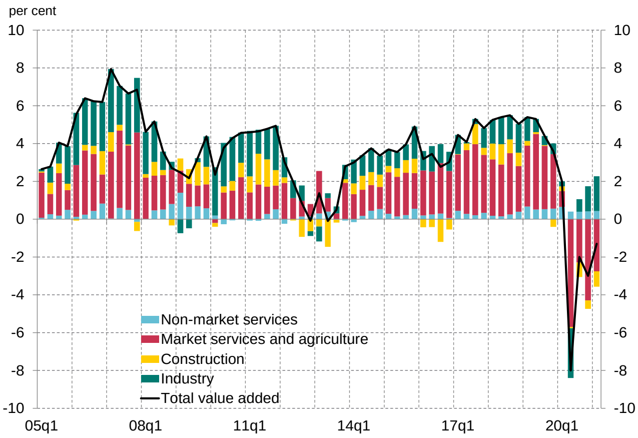
Q1 was relatively stable and close to the past few years' average.[33]

2.2.5 Output

In the first months of 2021, activity across individual sectors of the economy continued to vary (Figure 2.20). Industrial output remained on an upward trend, running markedly above its pre-pandemic level (Figure 2.21). At the same time, construction and assembly output was still considerably lower than before the pandemic. In 2021 Q1, amidst the epidemic restrictions still in force activity in the services sector was markedly subdued, although the available data indicate its partial recovery in 2021 Q2, on the back of improved epidemic situation and the easing of restrictions.

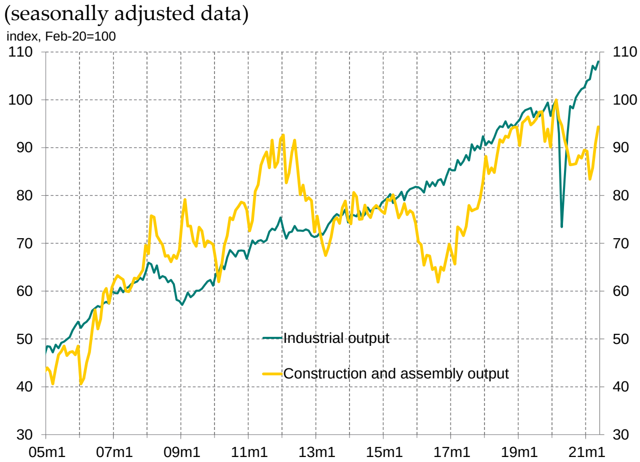
Sold production of industry rose by 7.8% y/y in 2021 Q1, and then by 44.5% y/y in April 2021 and 29.8% y/y in May 2021. A very large output growth in these months was mainly a result of a statistical base effect related to the strong output drop a year earlier, i.e. during the first wave of the pandemic. Industrial output growth was mainly driven by an increase in production of intermediate goods supported by, among other things, a continued high export demand for supply goods amid rising activity in the euro area industrial sector (see Chapter 2.2.5 *Foreign trade*). Starting from March 2021, growth in production of investment goods also significantly accelerated (Figure 2.22), which may have been related to the higher export demand for these goods and a rebound in the investment activity of enterprises, including higher outlays on machinery and devices as well as means of transport (see Chapter 2.2.2 *Investment*). Against the backdrop of high consumer demand for durable goods and favourable export conditions, production of durable consumer goods was also stronger than a year before.

Figure 2.20 Growth of gross value added by sectors (y/y)



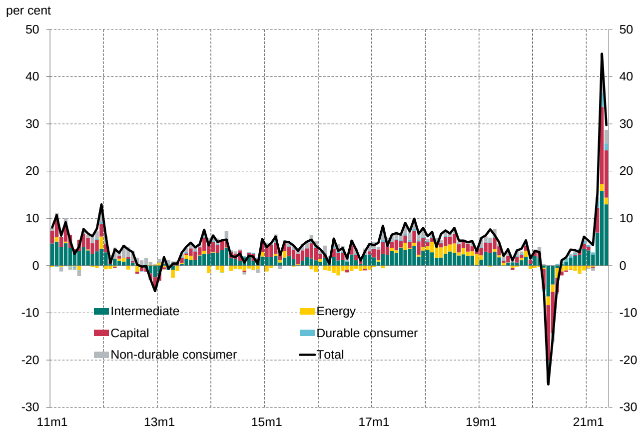
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.21 Industrial and construction and assembly output (seasonally adjusted data)



Source: Eurostat 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.

Industrial output growth rate (total and group of goods) – Eurostat data (seasonally adjusted data).

Contributions of groups of goods to total industrial output growth are calculated proportionally to the output value in current prices (Statistics Poland data).

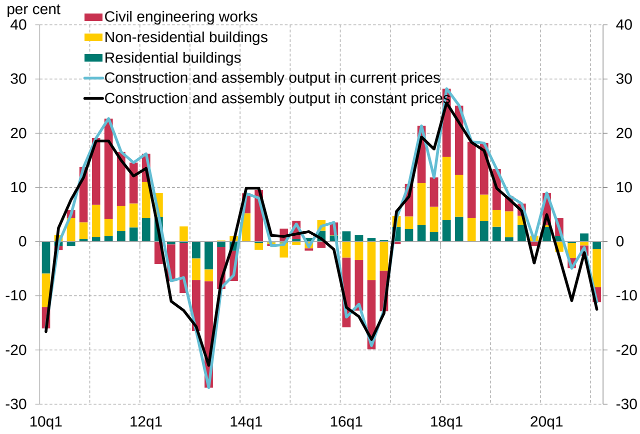
[33] *NBP Quick Monitoring Survey Economic climate in the enterprise sector*, NBP, April 2021.

Annual growth of construction and assembly output in the first months of 2021 remained negative, and in May 2021 it rose above zero (in 2021 Q1 it amounted to -12.5% y/y, in April 2021 -4.2% y/y, and in May 2021 +4.7% y/y; Figure 2.23). In 2021 Q1, a negative growth was seen in residential, non-residential, and infrastructure construction alike. Construction activity in 2021 Q1 could be dragged down by worse-than-a-year-earlier weather conditions, the statistical base effect related to a relatively high activity in 2020 Q1 as well as the negative growth of both enterprises' outlays on buildings and structures and the public investment in the analysed period (see Chapter 2.2.2 *Investment*). Alongside that, higher propensity of enterprises to start new investment and increase investment outlays (see Chapter 2.2.2 *Investment*) could be conducive to the pick-up of construction activity in May 2021. In turn, output growth in infrastructure construction in May 2021 could be related to a higher investment activity of the public sector in the area of road investments.

Unfavourable epidemic situation and the related restrictions still in force constrained economic activity in the services sector in 2021 Q1. Value added in market services in that period was lower than a year earlier by 5.3% (Figure 2.24). The largest fall in value added was recorded in activities particularly vulnerable to adverse effects of the pandemic and the related sanitary restrictions: accommodation and food service (-77.2% y/y) as well as arts, entertainment and recreation (-64.0%). Value added growth in financial and insurance activities was also significantly lower than a year earlier, while in the remaining market services it was close to zero in 2021 Q1.

The available data indicate that in 2021 Q2 amid improved epidemic situation and the easing of sanitary restrictions a partial rebound in economic activity took place in the services sector. General business climate indicators in the services sector gradually improved (Figure 2.25). This improvement concerned also activities particularly

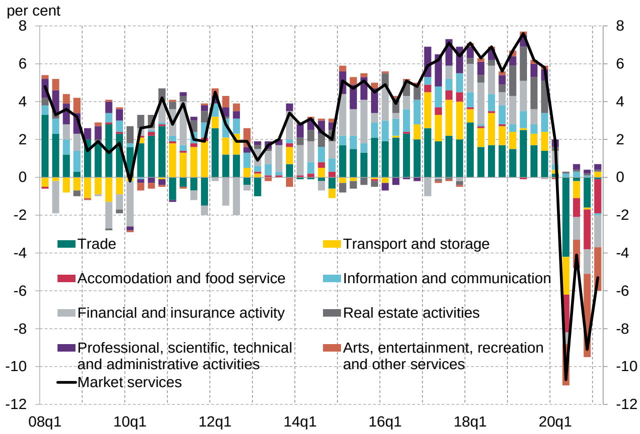
Figure 2.23 Construction and assembly output growth by construction objects (y/y)



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

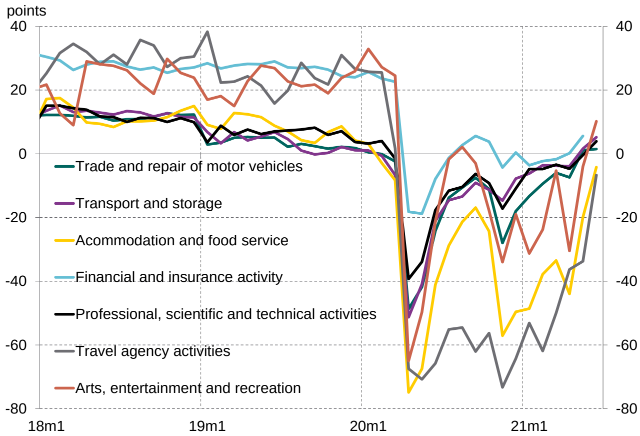
Decomposition of output growth by construction objects is in current prices.

Figure 2.24 Growth of gross value added in market services by branches (y/y)



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

Figure 2.25 General business climate indicators in services (seasonally adjusted data)



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

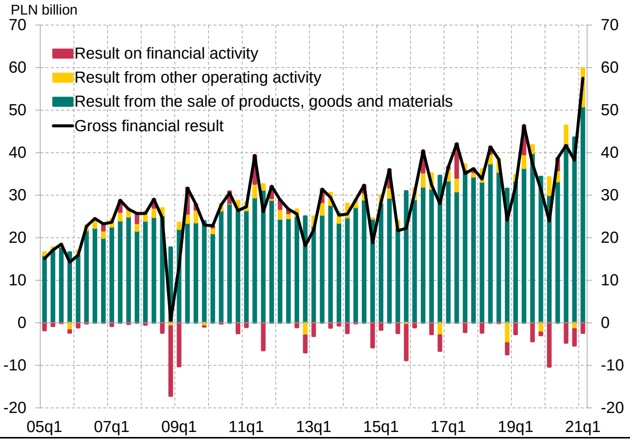
vulnerable to the economic effects of the epidemic (travel agency activity, accommodation and food service, arts, entertainment and recreation). However, business climate indicators in these activities were still worse than before the pandemic.

2.3 Financial situation of enterprises

In 2021 Q1, the financial result of enterprises increased strongly compared to the corresponding period last year (Figure 2.26).[34] First of all, the result from the sales was markedly higher driven by a strong growth in exports and a recovery in domestic demand (see Chapter 2.2 *Demand and output*).[35] Improvement in the financial result in annual terms was also due to a smaller loss on financial activity,[36] as well as better performance in other operating activity, mainly reflecting the sale of fixed assets of a single company. NBP survey data indicate further improvement in the current performance of enterprises in 2021 Q2, although varying substantially among sections of the economy.

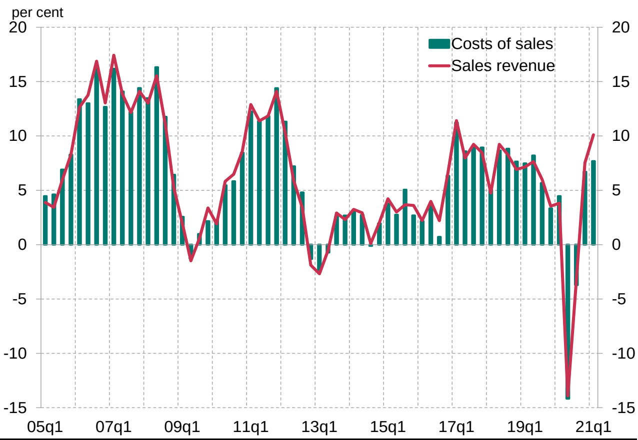
The growth in sales revenue increased to 10.1% y/y in 2021 Q1 (from 7.5% y/y in 2020 Q4; Figure 2.27), yet with some differences between the sections. The rise in the volume of sales was visible in trade (due to some recovery in consumption, see chapter 2.2.1 *Consumption*) and in manufacturing (driven by good economic conditions in this sector and strong export demand; see chapter 2.2 *Demand and output*). A significant decline in sales in annual terms persisted in sections particularly affected by the pandemic-related restrictions, such as "accommodation and food service" and "education".

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 revenues 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).
Costs of sales - costs of products, goods and materials sold.
Sales revenue – net revenues from sale of products, goods and materials.

[34] In 2021 Q1, the gross financial result stood at PLN 57.5 bn against PLN 23.9 bn in 2020 Q1.
[35] In 2021 Q1, the financial result from the sale of products, goods and materials stood at PLN 50.9 bn against PLN 30.1 bn in 2020 Q1.
[36] The growth of the financial result in annual terms was boosted by the low base effect with respect to result on financial operations, as in 2020 Q1 the financial operations performance was strongly negative, particularly in the oil and gas industry, due to negative exchange rate differentials and losses on sales and revaluation of financial assets.

The growth of costs of products, goods and materials sold also accelerated, although to a smaller extent (a rise to 7.7% y/y from 6.7% y/y in 2020 Q4). Besides the rising turnover, the increase in costs was triggered, among other things, by higher global commodity prices (see chapter 1.3 *Global commodity markets*). This was accompanied by a relatively stable growth in labour costs (5.6% y/y in 2021 Q1 against 5.9% y/y in 2020 Q4).

In view of the strong improvement of financial result, all the main profitability indicators of the enterprise sector in 2021 Q1 were markedly higher than a year ago (Table 2.3). The share of profitable firms in the sector also increased, with particular improvement in the case of companies with profitability exceeding 5%. However, the changes in profitability varied between enterprises. In particular, the profitability of companies with the lowest readings of the indicator (i.e. falling in the first decile of the distribution) deteriorated. At the same time, the liquidity of the enterprise sector in 2021 Q1 was still high, probably due to the government support programmes for enterprises.

Enterprises surveyed by NBP in 2021 Q2 indicated a further improvement in their current performance, although – mainly on account of epidemic-related restrictions – this remained highly diverse across the sections. Declarations of enterprises also show that sector liquidity remained high, just as did their ability to meet credit and trade obligations.

2.4 Labour market

The available data show that, following a partial rebound in the demand for labour in the second half of 2020, at the beginning of 2021 the demand remained slightly lower than before the COVID-19 pandemic.

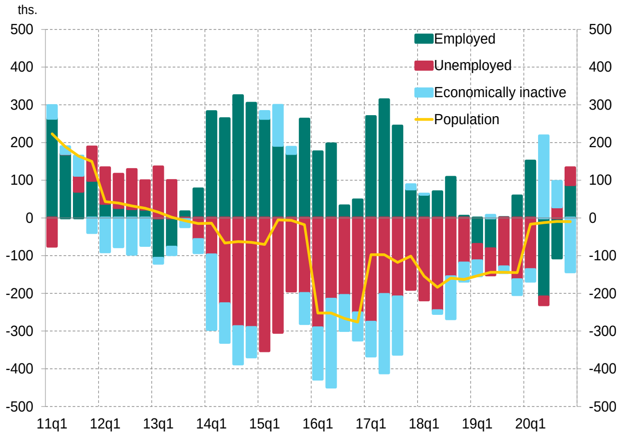
In 2020 Q4, the number of employed persons according to the LFS increased by 0.5% y/y (having declined by 0.6% y/y in 2020 Q3; Figure 2.28), while in line with the results of the same survey the

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

	Average 2010-2018	2019 q1	2019 q2	2019 q3	2019 q4	2020 q1	2020 q2	2020 q3	2020 q4	2021 q1
Sales profitability ratio	4.7	4.5	4.6	5.0	4.1	3.9	4.9	5.5	4.9	6.0
Net turnover profitability	4.0	3.4	4.8	3.8	2.9	2.4	4.5	4.4	3.3	5.4
Share of profitable enterprises	73.1	76.1	75.9	76.0	75.9	74.2	73.4	76.0	74.5	76.0
Share of enterprises with profitability above 5%	33.9	37.0	36.3	36.5	36.8	37.5	39.1	41.5	42.0	42.2
1st degree liquidity ratio	36.3	34.7	34.6	35.4	38.1	38.9	42.6	42.9	43.9	43.0
Return on Assets	1.2	1.0	1.4	1.1	0.9	0.7	1.1	1.2	1.0	1.5
Share of bank credits and loans in the balance sheet total	15.2	15.2	15.3	15.6	15.5	15.9	15.9	15.2	15.1	14.7

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 and share of enterprises with profitability above 5% – seasonally-adjusted data.
In case of share of bank credits and loans in the balance sheet total average was calculated over 2015-2018.

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



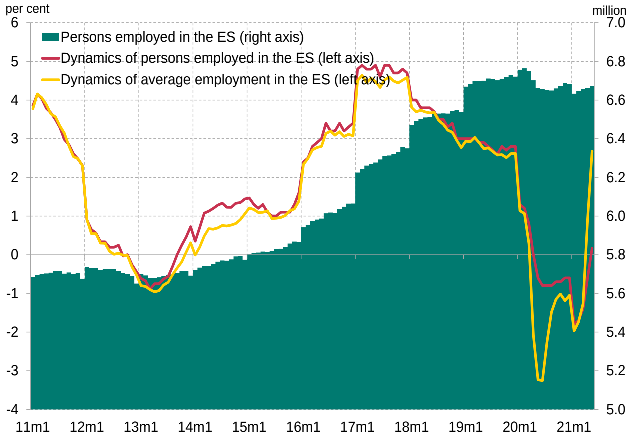
Source: Statistics Poland (GUS) data.
Population as defined by the LFS, i.e. Poland's population at the age of 15 years or over living in households.

unemployment rate decreased to 3.1% (as compared with 3.3% in 2020 Q3; unadjusted data), and the labour force participation rate – despite the influence of adverse seasonal factors – grew to 56.5% (compared to 56.4% in 2020 Q3).[37] In spite of a higher number of employed persons, the total labour input in the economy in 2020 Q4, as measured by hours worked, declined. Cumulative hours worked in 2020 Q4 fell by 1.7% y/y (-0.3% y/y in 2020 Q3), which was mainly due to a still markedly higher than a year ago number of persons formally employed but temporarily not performing their duties (an increase of 18.2% y/y).

In 2021 Q1, significant changes were introduced to the LFS methodology, as a result of which – according to Statistics Poland information – these data are not comparable with same data for previous periods.[38] According to the results of the survey, in 2021 Q1 the number of employed persons was 16.4 million, the labour force participation rate was 57.3% and the unemployment rate stood at 4.0% (unadjusted data).

Reporting data from the national economy (NE) and the enterprise sector (ES) for 2021 Q1 point to a stabilisation of demand for labour below its pre-pandemic level (Figure 2.29). This is corroborated by a negative growth of average employment in NE in 2021 Q1 (-1.3% y/y, with the same annual growth rate in 2020 Q4) and in ES (-1.7% y/y, against -1.2% y/y in 2020 Q4).[39] Monthly data for April and May 2021 – despite a positive annual growth rate, which was strongly affected by low base effect from the early stage of the pandemic – also point to employment in ES running below the

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.

[37] The results of the LFS could have been partly affected by the change in the methodology of the survey induced by the pandemic situation. The change mainly involved substituting face-to-face interviews with interviews by phone and the change in the time of introducing new respondents to the statistical sample of the survey.

[38] The changes in the LFS methodology since 2021 are related to the implementation of the European Parliament regulation and concern all EU countries. The changes covered mainly (1) excluding from the „employed" category farmers who allocate the effects of their work exclusively or mainly for own consumption, (2) including into the „employed" category persons staying on childcare leave for over 3 months and (3) limiting the population subject to the survey to persons aged 15-89. At the same time the form and order of the questions asked were changed.

[39] The annual review of the sample of surveyed enterprises had a negative impact on the annual growth of the number of persons employed in NE and employment rate in ES.

pre-pandemic level.[40] On the other hand, the results of economic activity surveys conducted by Statistics Poland and NBP, according to which the employment forecast in the surveyed enterprises has been revised upward, indicate some improvement in the labour demand outlook.

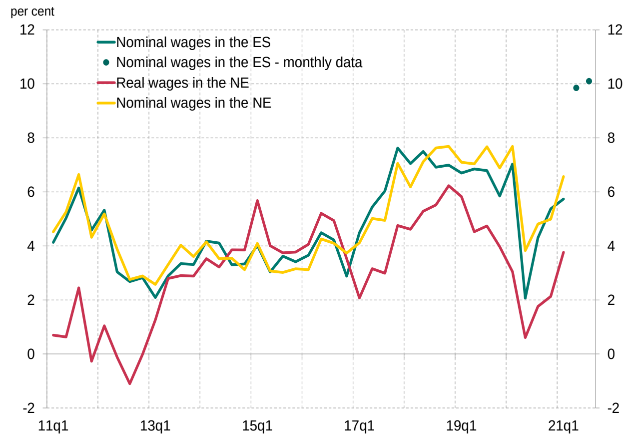
The registered unemployment rate after seasonal adjustment remained relatively stable in recent months, and in April and May 2021 amounted to 6.2%, i.e. slightly more than immediately before the outbreak of the pandemic, but decidedly less than in previous years (Figure 2.30). The number of both registrations and deregistrations from the unemployment register continued markedly lower than a year earlier. This was due to the increase in the share of people remaining without work for longer than 6 months among all the registered unemployed.[41]

The average wage in the national economy grew by 6.6% y/y in 2021 Q1, compared to 5.0% y/y in the previous quarter (Figure 2.31). A somewhat higher wage growth was mainly a result of a faster wage growth outside the enterprise sector (wage growth in ES was relatively stable – it amounted to 5.7% y/y in 2021 Q1, compared to 5.4% y/y in 2020 Q4). Wage growth picked up particularly significantly in the health care sector, owing to a markedly larger labour input in this sector during the third wave of the pandemic.[42] Data for April and May 2021 indicate that wage growth in ES – after adjustment for statistical effect of 2020 low base – remained relatively stable and slightly lower than before the pandemic.[43]

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.
According to Statistics Poland information, the LFS rate of unemployment from 2021 Q1 cannot be compared with the previous periods due to changes in the LFS methodology.

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, and they cover all PKD (NACE) sections of the economy.
The figure presents quarterly data (lines) and monthly data for April and May 2021 (dots).

[40] The average employment in ES rose by 0.9% y/y in April 2021, and in May 2021 by 2.7%, however the growth rate was strongly affected by the base effect, which was estimated at around 1.5 percentage point in May 2021. After seasonal adjustment, the month-on-month rate of employment in ES did not change in April 2021 and grew by 0.4% in May 2021. As compared to the pre-pandemic level, i.e. to the February 2020 level, employment in ES in May 2021 was 1.7% lower.
[41] The share of persons remaining without work for longer than 6 months increased from 53% in 2020 Q1 to 62% in 2021 Q1, while the share of persons remaining without work for over a year went up from 36% to 43%.
[42] In 2021 Q1, wage drops in micro-enterprises might have decelerated.
[43] Even though in annual terms the average wage growth in ES accelerated markedly (to 9.9% in April 2021 and 10.1% in May), it was driven by the low base effect of 2020, when amid the economic activity freezing in part of the sectors at the beginning of the pandemic, wages temporarily dropped. According to NBP estimates, the annual wage growth in SE in April, adjusted for the low base effect, was around 6.5% y/y.

Following the outflow of foreigners from the Polish labour market at the initial stage of the pandemic, in recent months the number of immigrants in the domestic labour market began to rise again.[44] At the same time the number of foreign employees insured in the Social Insurance Institution (ZUS) increased.[45]

2.5 Monetary policy and asset markets

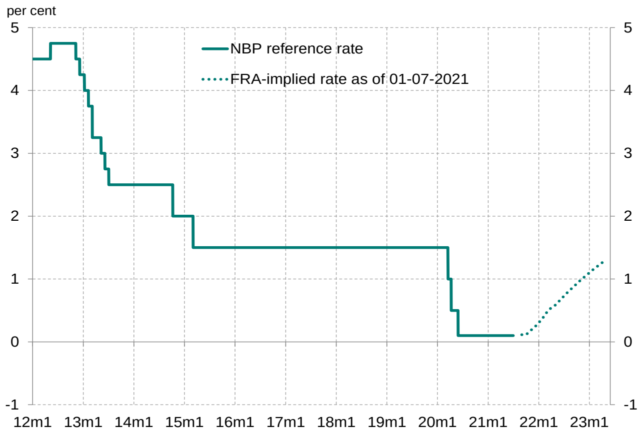
After a significant easing of NBP monetary policy in the first half of 2020,[46] in subsequent quarters NBP has kept its interest rates unchanged and continued to pursue other measures adopted in response to the pandemic.

Specifically, the NBP reference rate was kept at the level of 0.1% (Figure 2.32). At the same time, NBP has continued to purchase government securities and government-guaranteed debt securities in the secondary market. In total (till the end of June 2021), NBP purchased securities at a nominal value of PLN 135.8 billion, i.e. PLN 142.2 billion at the purchase price (Figure 2.33). NBP has also continued to offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

2.5.1 Financial market

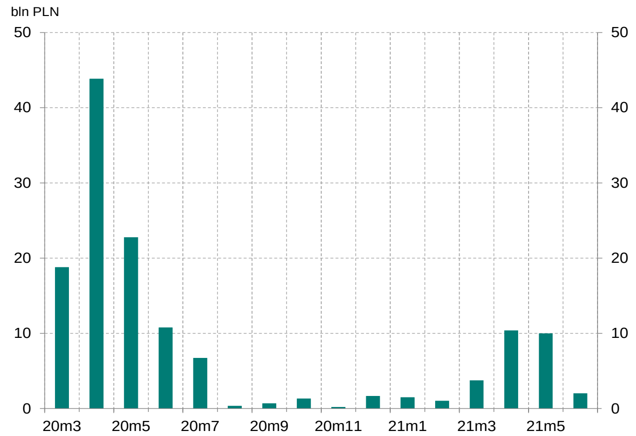
The yields on Polish government bonds are much lower than in previous years. In recent months, the yields on 10-year bonds – similarly as in many other economies globally – were relatively stable, while yields on the bonds of a shorter maturity rose somewhat (Figure 2.34; see Chapter 1.5 *International financial markets*).[47] The ongoing economic recovery, higher inflation rate than at the beginning of the year and expectations of some market participants regarding an increase in

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



Source: NBP and Bloomberg data, NBP calculations.

Figure 2.33 Stuctural open market operations conducted by NBP (nominal value, monthly)



Source: NBP data.

[44] Data on the number of people crossing the border with Ukraine indicate that the number of foreigners staying in Poland in 2020 declined by 46 thousand, while only part of this outflow concerned people connected with the domestic labour market (the remainder were, for example, family members). The period from January to April 2021, saw an inflow of 254.1 thousand people, whereas the average inflow of immigrants from Ukraine in the corresponding period in the years 2013-2019 amounted to 149.9 thousand.
[45] At the end of April 2021, the number of foreign employees insured in the Social Insurance Institution (ZUS), adjusted for seasonal factors, was 103 thousand (14.8%) higher compared to February 2020, i.e. the pre-pandemic period. This increase was partly driven by the steadily growing percentage of foreigners paying contributions to the Polish social insurance system.
[46] See Box 2: *Monetary policy of Narodowy Bank Polski in response to the COVID-19 pandemic* in: *Inflation Report – July 2020*, NBP.
[47] In June 2021, the average yields on 10-year Polish Treasury bonds was 1.8%, and 0.4% on 2-year bonds.

interest rates in the coming years have all exerted upward pressure on Polish bond yields (Figure 2.32; see Chapter 2.1 *Prices of goods and services* and Chapter 2.2 *Demand and output*). At the same time, working in the opposite direction were low current NBP interest rates, the continued purchase of securities by NBP, a highly accommodative monetary policy worldwide and low bond yields globally (see Chapter 1.4 *Monetary policy abroad*).

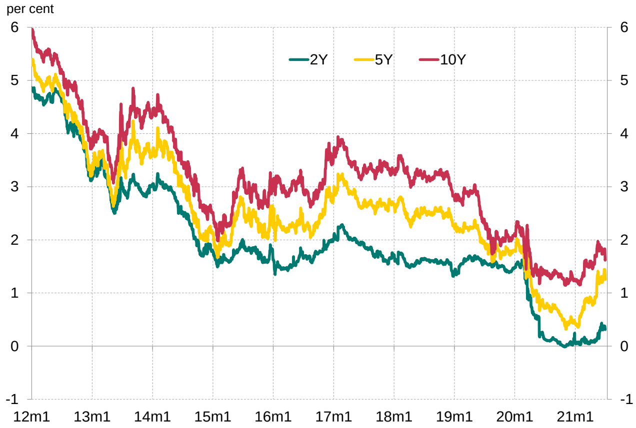
In June 2021, the average exchange rate of the zloty – both against the euro and the US dollar – was close to that seen in February (Figure 2.35).[48] The relatively favourable economic situation of Poland compared to that of many other economies, including a continued surplus on the current account, contributed to the appreciation of the zloty (see Chapter 2.7 *Balance of payments*). In turn, the global appreciation of the US dollar associated with the rising number of Fed representatives expecting interest rates to increase in the coming years, has worked in the opposite direction recently.

In 2021 Q2, equity prices on the Warsaw Stock Exchange rose markedly (Figure 2.36). The equites rose on the back of improved sentiment in global financial markets, the favourable financial condition of domestic enterprises and expectations about continued recovery in the economy (see Chapter 2.3 *Financial situation of enterprises*). As a result, at the end of June 2021, the WIG index achieved a record high.

2.5.2 Real estate market[49]

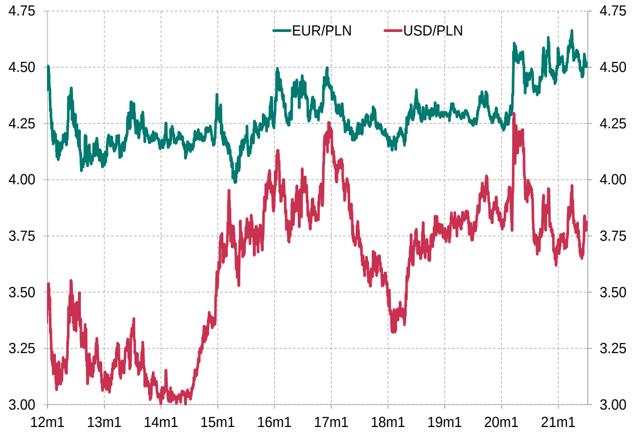
In 2021 Q1, the activity in the real estate housing market rebounded after a temporary decline in 2020 driven by the outbreak of the COVID-19 pandemic. In particular, in 2021 Q1 the number of new dwellings sold increased significantly. This was accompanied by a further growth in home

Figure 2.34 Yields on Polish government bonds



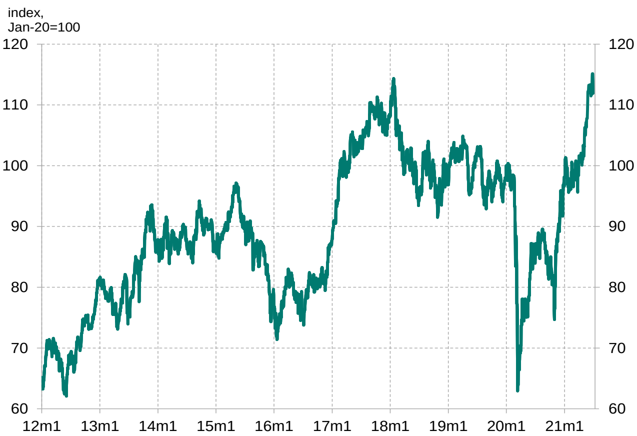
Source: Bloomberg data.

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



Source: Bloomberg data.

Figure 2.36 WIG stock market index



Source: Bloomberg data.

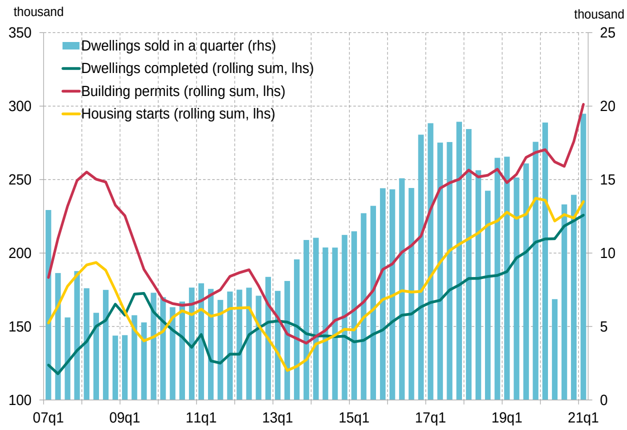
[48] In turn, since the outbreak of the COVID 19 pandemic, the zloty has appreciated against the US dollar by a total of around 3% and depreciated against the euro by around 4% (as compared to the end of February 2020).

[49] 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 2021 Q1*, NBP, June 2021.

transaction prices in annual terms, although this growth slowed down in the secondary market.

Following a sharp decline at the onset of the pandemic, in 2021 Q1 the number of new dwellings sold increased markedly and was close to the 2020 Q1 level (Figure 2.37). Despite the epidemic-related problems, the number of dwellings completed and made ready for occupancy continued to rise. After a temporary decline in 2020, in 2021 Q1 the number of construction starts also rose. At the same time, the number of home building permits issued increased. The recovery in the activity in the housing market was supported by relatively high rates of return on housing projects and the continuing high consumer and investment demand. Under these conditions, the prices of land, materials and labour were rising, which translated into a further increase - albeit slightly slower than in the previous quarters - of home construction costs.

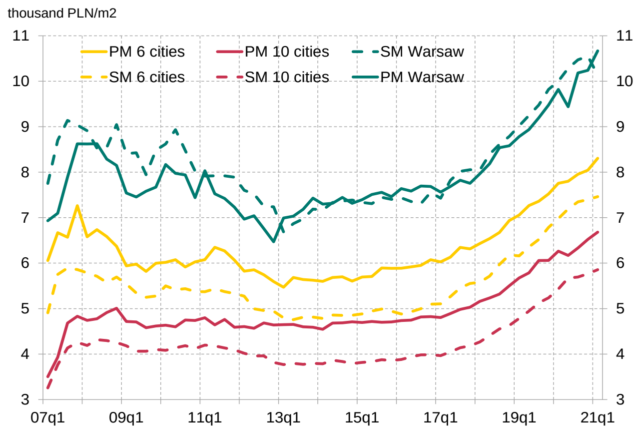
Figure 2.37 Residential construction in Poland (4-quarter rolling sum) and new dwellings sold in a quarter



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).

High demand for housing and increasing construction costs were boosting home prices. According to NBP data, in 2021 Q1 the annual growth in average transaction prices[50] in the primary market was relatively stable (it amounted to 7.4% y/y compared to 7.5% y/y in 2020 Q4; Figure 2.38), and slowed down in the secondary market to 5.2% y/y (compared to 8.6% y/y in 2020 Q4).[51]

Figure 2.38 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.

In Q1 2021, in the office real estate market, the supply of new office space and office space under construction remained relatively high, which was due to the implementation of construction projects launched before the pandemic. The decline in demand – related to the change in the nature of office work caused by pandemic restrictions – combined with the growing supply resulted in the rise in the vacancy rate in large cities (to 12.1% in

[50] The discussed data cover transactions concluded in the period December 2020 – February 2021; consequently, 2021 Q1 analysed in the chapter does not fully correspond to the calendar year quarter.
[51] The data concern the average home transaction price (PLN/m2) in 17 cities (in 16 voivodeship capitals and in Gdynia) weighted by the housing stock. In quarter-on-quarter terms, so defined price growth in 2021 Q1 stood at 3.3% in the primary market (compared to 1.4% in 2020 Q4), and in the secondary market at -0.6% (relative to +0.8% in 2020 Q4).

2021 Q1 from 11.3% in 2020 Q4). The relatively higher vacancy rate concerned mainly older buildings of lower standard.

As in the previous periods, in the segment of retail and service real estate 2021 Q1 saw only a small rise in new space, mainly in smaller cities and towns. For several years, retail tenants have been shifting their businesses to on-line trade, which weakens demand for commercial space rental. At the same time, due to the pandemic lease contracts were renegotiated.

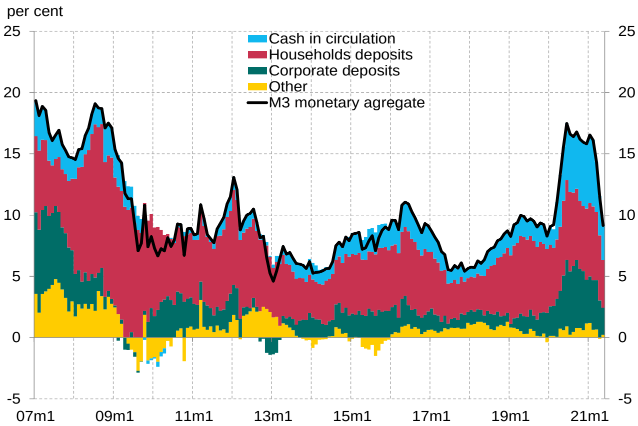
The warehouse space sector continues the phase of dynamic development, recording both an increase in supply (with a significant amount of space under construction) and demand. Demand in this segment is generated mostly by logistics and trade companies, including those active in e-commerce.

2.6 Money and credit[52]

Annual broad money (M3) growth in the first months of 2021 declined and in May was close to the 2019 average (in May 2021 it was 9.1% y/y, in April 11.4% y/y, in 2021 Q1 15.7% y/y, and in 2020 Q4 it was 16.0% y/y; Figure 2.39). The slower pace of M3 growth was mainly driven by a drop in the growth rate of cash in circulation and lower growth of corporate deposits.[53]

Among the counterparts of broad money in 2021 Q1, an increase in both net foreign assets and the outstanding value of other financial institutions' debt securities (among others, securities issued by the PFR to finance the anti-crisis measures; Figure 2.40) had the highest contributions to the M3 aggregate growth.[54] At the same time, broad money growth was contained by the slowdown in

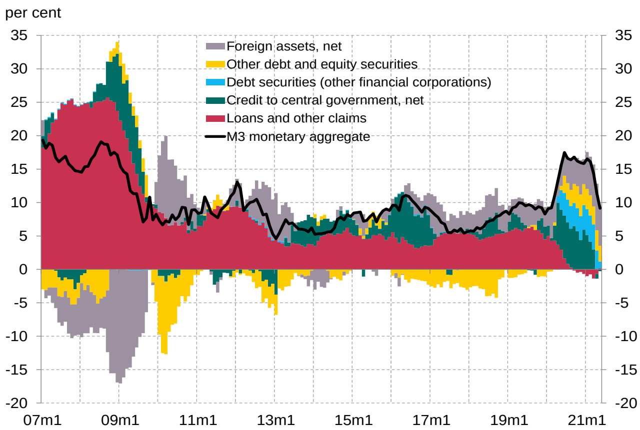
Figure 2.39 Composition of M3 growth (y/y)



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 2.40 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.

[52] 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.

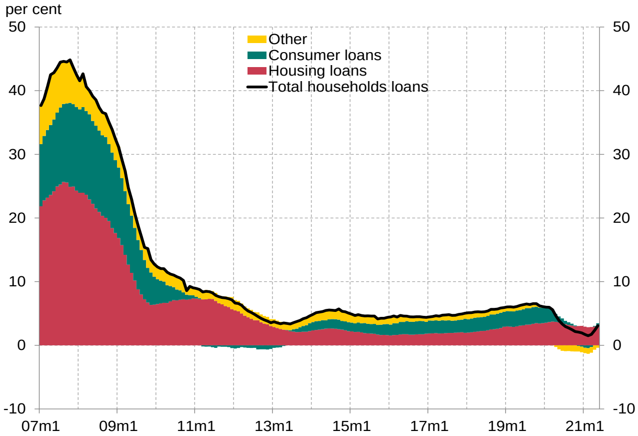
[53] The decline of the annual broad money growth in the first months of 2021 resulted partially from the statistical effect of a high base. The size of support provided under the government anti-crisis measures, which was lower than during the first wave of the COVID-19 pandemic, exerted downward pressure on corporate deposits (see Chapter 2.2.3 *Public finance*).

[54] In April and May 2021, the growth rate of debt securities of other financial institutions slowed, which was related to the lower-than-a-year-earlier size of support provided by the government under its anti-crisis measures (see chapter 2.2.3 *Public finance*).

growth of net debt of the central government and a fall in the value of corporate loans.

The growth rate of household loans in 2021 Q1 declined to 1.6% y/y from 2.1% y/y in 2020 Q4 (Figure 2.41). The relatively low consumer loan growth (-1.4% y/y in 2021 Q1 compared to -0.2% y/y in 2020 Q4) exerted downward pressure on household loan growth amid still subdued consumer demand at the beginning of 2021 (see Chapter 2.2.1 *Consumption*). At the same time, the pace of housing loan growth stabilised at a moderate level (5.0% y/y in 2021 Q1 compared to 5.3% y/y in 2020 Q4).[55] Lending growth was supported by a gradual easing of lending standards on housing and consumer loans from 2020 Q3 – following their earlier tightening – and in 2021 Q1 it was additionally backed by an easing of most of significant lending terms (among others, a lower credit spread and a higher LtV ratio for housing loan borrowers).[56]

Figure 2.41 Composition of growth in household loans (y/y)

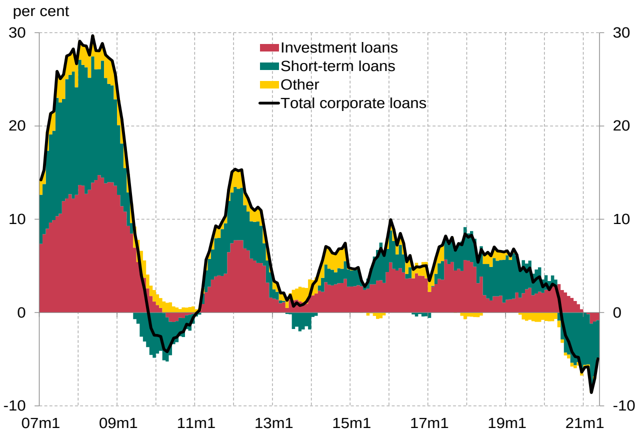


Source: NBP data.

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

In 2021 Q1, the growth rate of corporate loans was negative at -6.8% y/y compared to -5.3% y/y in 2020 Q4, which was the result of a sharp fall of working capital loans (-15.1% y/y in 2021 Q1 compared to -14.2% y/y in 2020 Q4) and slightly negative investment loan growth (-0.9% y/y in 2021 Q1 compared to 1.6% y/y in 2020 Q4; Figure 2.42)[57]. The decline in corporate loans resulted largely from the lower-than-in-the-pre-pandemic-period corporate demand for bank financing related to, among others, the financial support under the government anti-crisis measures. Lending standards in this market segment did not change considerably in 2021 Q1 and remained more restrictive than before the pandemic. At the same

Figure 2.42 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.

[55] In April and May 2021, the growth rate of loans to households accelerated to 2.4% y/y and 3.1% y/y, respectively. This was mainly related to a certain increase – after a fall in 2021 Q1 – in consumer loans (by 0.4% y/y in April 2021 and by 1.6% y/y in May 2021) amid stable housing loan growth (5.0% y/y in April 2021 and 5.1% y/y in May 2021).
[56] *Senior loan officer opinion survey on bank lending practices and credit conditions. 2nd quarter 2021*, NBP, May 2021 (and earlier editions of the survey).
[57] In April 2021, corporate loan growth amounted to -7.1% y/y, including growth of working capital loans – to -14.7% y/y, and investment loan growth – to -1,8% y/y. In May 2021, corporate loan growth amounted to -5.0% y/y, including growth of working capital loans – to -10.5% y/y, and investment loan growth – to -1.5% y/y.

time, banks eased somewhat price terms on loans (credit spread and non-interest loan costs).[58]

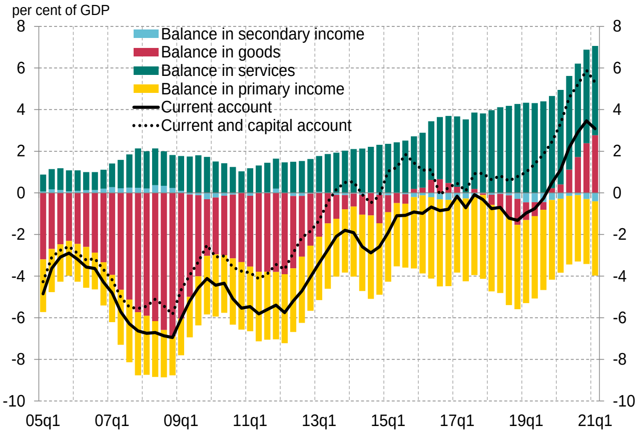
2.7 Balance of payments

In 2021 Q1, the positive current account balance stood at a high level (3.1% of GDP compared to 3.5% of GDP in 2020 Q4; Figure 2.43).[59] This was the effect of the continued surplus in the trade in goods (2.8% of GDP in 2021 Q1) and services (4.3% of GDP in 2021 Q1). At the same time, the primary income balance stood at -3.6% of GDP. The deficit in the primary income balance continued to reflect mainly the relatively high income earned by foreign direct investors in Poland.

The surplus on the capital account resulting from the inflow of EU funds in 2021 Q1 reached 2.2% of GDP, compared to 2.4% of GDP in 2020 Q4. Combined with the positive current account balance, the joint current and capital account balance remained high in 2021 Q1 (5.3% of GDP in 2021 Q1 compared to 5.9% of GDP in 2020 Q4).

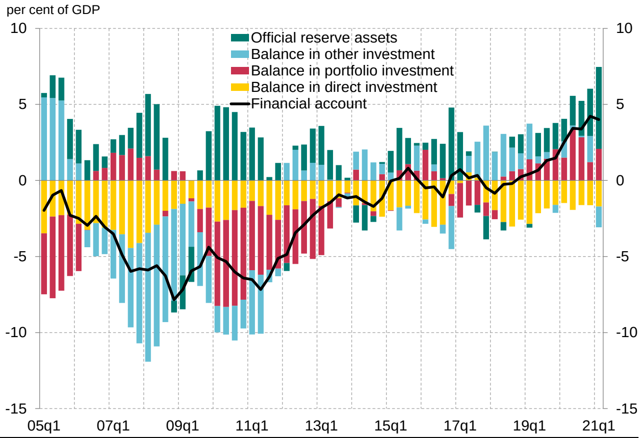
In 2021 Q1 the financial account balance stood at 4.0% of GDP compared with 4.2% of GDP in 2020 Q4 (Figure 2.44). The financial account balance in 2021 Q1 was largely impacted by the loan granted to the Polish government by the European Commission under the instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE). This, on the one hand, boosted the balance of transactions registered in official reserve assets, and, on the other hand, contributed to lowering the balance of other investment. The financial account balance was positively affected by an increase in assets resulting from portfolio investments made by Polish entities and reduced non-residents' holdings of debt securities.[60]

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



Source: NBP data.

Figure 2.44 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).

[58] *Senior loan officer opinion survey on bank lending practices and credit conditions. 2nd quarter 2021*, NBP, May 2021 (and earlier editions of the survey).

[59] In this chapter, data on the balance of payments in relation to GDP are presented in terms of a four-quarter rolling sum.

[60] Reduced non-residents' holdings of debt-securities resulted from the redemption by the State Treasury, at maturity, of bonds issued in the foreign markets and – albeit to a lesser extent – sale of Treasury securities by non-residents.

The external imbalance indicators evidence that the Polish economy is well balanced (Table 2.4). At the end of 2021 Q1, the relation of the negative net international investment position to GDP improved again. At the same time, the official reserve assets ratio increased as measured in monthly imports of goods and services and in relation to short-term foreign debt.

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

	2019				2020				2021
	q1	q2	q3	q4	q1	q2	q3	q4	q1
Current account balance/GDP	-1.0	-0.8	-0.3	0.5	1.1	2.2	2.9	3.5	3.1
Current and capital account balance/GDP	1.0	1.4	1.9	2.5	3.3	4.6	5.2	5.9	5.3
Trade balance/GDP	3.5	3.6	4.0	4.7	4.9	5.6	6.2	6.9	7.1
Official reserve assets (in monthly imports of goods and services)	4.6	4.6	5.0	5.0	5.2	5.5	5.8	6.1	6.4
Foreign debt/GDP	62	61	61	59	59	58	59	60	61
Net international investment position/GDP	-55	-54	-51	-49	-47	-46	-45	-44	-43
Official reserve assets/short-term foreign debt minus forecast current account balance	115	119	131	146	143	142	134	136	177
Official reserve assets/short-term foreign debt	108	105	111	118	117	121	120	127	167

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

3. Monetary policy in March – July 2021

This chapter includes the previously published *Minutes of the Monetary Policy Council decision-making meetings* held between March and June 2021 as well as the *Information from the meeting of the Monetary Policy Council* in July 2021.

Minutes of the Monetary Policy Council decision-making meeting held on 3 March 2021

During the discussion the Council members pointed out that the surge of the pandemic and the related restrictions had had a negative impact on global economic activity in 2020 Q4 and at the beginning of 2021. Attention was drawn to the fact that the euro area had slipped into recession again in 2020 Q4. It was observed that available data on the economic situation at the beginning of 2021 pointed to a continued downturn in the services sector, with a further rise in industrial output. At the same time it was underlined that the negative impact of weakened activity in services on the overall economic situation was so significant that 2021 Q1 would most likely see a fall in GDP in quarterly terms. Moreover, the majority of the Council members underlined that even under the assumption of an improvement in the pandemic situation in the second half of the current year, the forecasts indicated only a moderate economic growth in the euro area for the whole of 2021.

The Council members pointed out that despite slight rise in some countries in January, inflation in the global economy was low. The majority of the Council members emphasised that in January and February inflation in the euro area had increased, but the rise had taken place after half a year of deflation, and the increase in price growth was largely the result of regulatory factors, including the hike in the VAT rates in Germany (after their temporary lowering in the second half of 2020). Inflation had also been boosted by the rise in commodity prices in the global markets in recent months, including in particular the rise in oil prices. Certain Council members judged that the rising prices of this commodity reflected an optimistic assessment of the outlook for global demand by investors, supported by the progress of the COVID-19 vaccination programmes and the highly expansionary economic policy in many countries. They pointed out that oil prices would also be boosted by the implementation of the policy of limiting oil production by the countries associated in OPEC+ and the temporary increase in demand for oil as a result of unfavourable meteorological conditions in Europe and in some areas of the United States. Certain Council members expected that a further increase in oil prices was likely in the nearest future.

The Council members underlined that the major central banks were continuing their highly expansionary monetary policy, including maintaining low interest rates and continuing asset purchases. The majority of Council members drew attention to the fact that the ECB had announced the continued monetary support even after the end of the pandemic and the economic crisis. The ECB had also announced that it would not adjust its monetary policy in response to the current, temporary rise in inflation. Also, the Federal Reserve of the United States reiterated that it would conduct an accommodative monetary policy until an improvement was seen in the achievement of the bank's objectives.

When referring to the Polish economy, it was pointed out that preliminary data on national accounts for 2020 Q4 confirmed that GDP had fallen in this period. Activity had declined under the influence of a fall in consumption and lower investment than a year ago However, the scale of the fall in GDP had been limited by the positive impact of net exports.

The majority of the Council members judged that at the beginning of 2021 the economic conditions in Poland remained weakened, with the situation varying between sectors. It was observed that incoming data pointed to the continued, relatively good situation in industry, particularly in sectors oriented to exports. At the same time, it was underlined that industrial output growth had declined in January, while production oriented to the domestic market had risen much slower than export production. It was judged that along with the fall in retail sales, this suggested a weakening of domestic demand, which was limited by the restrictions in force. It was pointed out that this was accompanied by a fall in construction and assembly output in January.

The Council members judged that the situation in the labour market remained favourable. However, it was observed that in January it had deteriorated somewhat, as was indicated by the fall in average employment in the enterprise sector in this period.

The Council members observed that a rise in economic activity was expected in 2021, although the scale and speed of the recovery were uncertain. The further course of the pandemic and its impact on the economic situation in Poland and abroad continued to be the main source of uncertainty. It was underlined that according to NBP's March projection, following the fall in GDP in 2021 Q1, the following quarters would see growth in economic activity supported by rising exports and a strengthening of domestic demand. It was observed that the economic policy measures implemented so far, including the easing of NBP's monetary policy and the expected recovery in the global economy, would have a positive impact on the economic situation. In 2022 GDP growth would be additionally supported by the inflow of European Union funds, and – in line with NBP's March projection – economic growth would be higher than in 2021.

The majority of Council members judged that the risk for the realisation of the forecast scenario of GDP growth was currently high. They underlined that the pace of the improvement in the domestic economy would depend not only on the further course of the pandemic, but also on the response of economic entities to the normalisation of the epidemic situation, particularly in regard to savings and investment. Moreover, these Council members observed that the pace of the economic recovery in Poland might be reduced by the lack of a visible and more durable zloty exchange rate adjustment to the global pandemic shock and to the monetary policy easing introduced by NBP.

When discussing price developments, the Council members pointed out that according to the Statistics Poland flash estimate, inflation stood at 2.7% y/y in January. It was observed that the slight increase in price growth compared to December 2020 was almost entirely the result of faster growth in energy prices, related to an increase in administered tariffs for electrical energy and higher global oil prices. It was underlined that these factors were negative supply shocks and were beyond the control of domestic monetary policy.

Council members observed that in the coming months, with price growth being boosted by the base effect in fuel prices and the current increase in global oil prices, inflation might pick up. The majority of Council members pointed out that in the whole 2021 regulatory factors, such as the rise in the price of electricity and in waste disposal charges, would continue to drive inflation up. Those members also stressed that those were factors beyond the scope of monetary policy control. They also observed that despite the expected improvement in economic conditions, the output gap in 2021 would remain negative, constraining inflation growth.

Referring to the prospects for inflation in the subsequent years, it was pointed out that they were surrounded with considerable uncertainty. It was pointed out that according to the central path of the March projection, inflation was expected to be slightly lower in 2022 than this year and run at 2.8%, while in 2023 it might increase to 3.2%, as the previous recovery in activity gradually fed into prices.

The majority of Council members observed that, should epidemic developments take an undesirable course, activity might take longer to rebound than currently expected, which would also postpone the anticipated rise in the demand pressure. At the same time, those members expressed the view that as economic activity recovered and the impact of the pandemic faded, factors that had acted to limit price growth in earlier years would resurface, including the increasing globalisation of services and mounting competition in the global economy. In the opinion of the majority of the Council members, inflation might be additionally curbed by the increase in the automation and digitalisation of production of goods and some services related to the pandemic crisis.

Certain Council members, on the other hand, assessed that inflation might prove higher than forecast, due to, among other things, the realisation of pent-up demand after the restrictions had been lifted. Certain Council members also argued that price growth might be boosted by constraints on the supply of commodities and raw materials amid a rise in demand for semi-products during the economic recovery. These members also judged that the changes in the global value chains might be permanent, and hence their operation after the pandemic would not be a factor dampening price growth.

Council members assessed that the activities of NBP taken so far, aimed at reducing the economic cost of the pandemic, had been effective. They highlighted the relatively strong GDP data for 2020, according to which the decline in GDP in Poland was less than half the average of EU countries. They also underlined that despite the considerable scale of the shock, the situation in the labour market remained good, as indicated by the still low unemployment rate and continued relatively rapid wage growth, also in real terms. Furthermore, they observed that the fairly favourable financial situation of Polish firms and households was demonstrated by the substantial increase in the funds held on their bank accounts.

While discussing monetary policy, Council members were of the opinion that at the current meeting interest rates should be kept unchanged and the remaining measures of NBP should be continued.

The majority of the Council members judged that if economic recovery progressed in 2021 and price growth in medium term was in line with the inflation target, it would also be advisable to keep interest rates unchanged in the subsequent quarters. At the same time, in the opinion of these Council members, if the economic conditions and outlook were to deteriorate significantly, e.g. due to a new surge in the pandemic, further monetary policy easing might be justified, including by a reduction in the interest rate.

Certain Council members believed that, should further easing of monetary conditions be necessary, a further cut in the NBP interest rates would not be advisable and instead additional measures aimed at supporting corporate lending should be implemented. In the opinion of these Council members NBP should exert greater impact on the longer end of yield curve in order to improve the effectiveness of monetary policy in limiting the increase in yields on government bonds and government-guaranteed debt securities.

Certain Council members argued that should a sharp rise in inflationary pressure appear in the coming quarters, it might be advisable to consider raising NBP interest rates in the second half of 2021. At the same time, the majority of Council members emphasised that the experience of other central banks pointed to a strong negative economic impact of tightening monetary policy too quickly.

It was observed that NBP's monetary policy mitigated the negative economic impact of the pandemic, supported economic activity and stabilised inflation at the level consistent with NBP's medium-term inflation target. Due to its positive impact on the financial situation of debtors, it was also conducive to the strengthening of financial system stability.

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 7 April 2021

During the discussion, the Council members pointed out that the surge in the pandemic, including the spread of new variants of the virus, had recently translated in many countries into tighter restrictions, affecting economic sentiment negatively, although this impact was weaker than during the previous waves of the pandemic. In particular, this concerned European countries, while the situation in the United States and the United Kingdom, where the vaccination process was more advanced, was slightly better.

It was judged that the surge of the pandemic had delayed the expected recovery in the global economy, although the successive waves of infections had had a limited impact on industrial activity. Some Council members emphasised that in the slightly longer term, business conditions in industry might depend on the duration and scale of the tightened restrictions and on the elimination of the currently experienced problems with supply of some materials and components. In this context, attention was also drawn to the persistent downturn in the service sector, especially against the background of renewed restrictions on mobility and the lockdown of certain industries in many countries. Considering the share of services in GDP, the downturn in this sector was translating into further weakness of economic activity in Europe. At the same time, it was pointed out that uncertainty about future developments was on its own a factor dampening investment and consumption.

When referring to the economic situation in the euro area, the Council members observed that higher activity in the industrial sector was accompanied by persistently weak activity in services and retail trade. The Council members expressed the view that the short-term outlook for activity in the euro area had deteriorated somewhat, as restrictions were now expected to be lifted more slowly, and activity in services would pick up later in comparison with the March projection. The Council members observed that the impact of the pandemic on the European economies in 2021 Q2 might be mitigated by the expected acceleration of the vaccination process, provided that the vaccines were also effective against the new mutations of the virus. When referring to the situation in the United States, it was observed that the adoption of the new fiscal package by the US administration, the improved epidemic situation and the fast pace of vaccinations in this country had contributed to an upward revision of forecasts for GDP growth.

The Council members pointed out that the prices of many commodities, including oil, were currently markedly higher than a year ago, which had an upward impact on global inflation. It was emphasised that rising costs of maritime transport and supply shortages in certain markets also contributed to higher inflation. At the same time, the majority of the Council members stressed that the external forecasts pointed only to a temporary rise in inflation in 2021, since price growth would be curbed by the persistently negative output gap and slow wage growth, particularly in the euro area, where, according to the forecasts, the unemployment rate would remain elevated.

In this context, it was pointed out that due to the persistent weakness of economic conditions and the uncertainty about the economic outlook, monetary policy of major central banks would remain highly accommodative. In particular, these central banks were keeping interest rates low, while conducting asset purchases and signalling the maintenance of loose monetary policy in the future. At its March meeting, the ECB announced an acceleration of the asset purchases, responding to an observed increase in bond yields. Also, the Fed is maintaining a highly expansionary monetary policy stance.

When referring to the Polish economy, it was pointed out that similarly to many other countries, the epidemic situation in March had deteriorated and the sanitary restrictions had been tightened. However, the Council members observed that high frequency data indicated that the impact of the epidemic situation on the economy was considerably smaller than before, although GDP forecasts for 2021 Q1 still suggested a decline in GDP year-on-year. It was observed that activity in some sectors in the first months of the year was closely dependent on the restrictions in place, which translated into a significant curbing of activity in some services, while industrial output continued to grow, supported in particular by sectors with a high share of exports. At the same time, it was stressed that the decline in construction and assembly output had deepened recently, and annual retail sales growth – despite some improvement in consumer sentiment – had remained negative in February. Furthermore, attention was drawn to the fact that this had been accompanied by an increase in average employment in the enterprise sector in month-on-month terms, and slower annual average wage growth in this sector.

The Council members observed that economic activity was expected to recover in the following months. Also, due to the low base in March 2020 – when the outbreak of the epidemic had led to a collapse of economic activity – data for March 2021 might show a strong rise in annual growth of many macroeconomic categories. Looking at the quarters further ahead, the scenario of continued recovery in the second half of 2021 largely depended on the assumed pace of lifting of the restrictions. This, in turn, depended on the course of the pandemic and the progress of the vaccination process. In the opinion of the Council, the main source of uncertainty as regards the scale and pace of recovery continued to be the further course of the pandemic and its impact on economic conditions at home and abroad. The Council members reiterated the opinion that the macroeconomic policy measures, including the easing of monetary policy by NBP in 2020, and the expected recovery in the global economy would have a positive impact on the domestic economic situation. In their opinion, the pace of the economic recovery in Poland would also depend on developments in the zloty exchange rate.

When discussing price developments, the Council members pointed out that inflation in March had picked up to 3.2% y/y. It was observed that inflation was primarily driven by the further increase in fuel prices related to the rising oil prices in the global markets. At the same time, it was emphasised that annual price growth was being boosted by the rise in energy costs that had taken place at the beginning of the year, and the earlier rises in waste disposal charges, i.e. factors beyond the scope of domestic monetary policy. Moreover, it was stressed that the increased operating costs of enterprises due to the pandemic, including higher transport costs and temporary disruptions in global supply chains, also continued to boost inflation.

While analysing the short-term inflation prospects, the Council members observed that the statistical base effects relating to fuel price developments, along with the expected further rise in waste disposal charges, would probably contribute in the coming months to a further increase in annual inflation which could exceed the upper band for deviations from the target. Some Council members emphasised in this context that the factors temporarily boosting inflation at the moment were to a great extent of a negative supply-shock nature, and remain beyond the influence of domestic monetary policy. In the opinion of these Council members, as the output gap was persistently negative, there was no excessive demand pressure in the whole economy, and available forecasts indicated a drop in inflation to a level close to 2.5% in 2022. These members indicated that inflation was also expected to rise in the nearest future in other countries.

Certain Council members argued that mainly the European Union's climate policy, which among others had caused a considerable rise in the prices of CO_2 emission allowances, might translate into higher energy prices also in 2022, thus having a more persistent impact on CPI developments in Poland. Moreover, certain Council members pointed to constraints in the supply of commodities and intermediate goods, which contributed to an increase in the prices of some products, and to wage pressure reported by the majority of the companies surveyed by NBP, which, in these members' opinion, might also boost inflation in the slightly longer term. In this context, these members highlighted the risk of an increase in inflation expectations. However, the majority of the Council members judged that as the vaccination process progressed and the scale of the epidemic diminished, the impact of global supply factors currently driving up firms' operating costs would fade. They also emphasised that wage growth had been weaker so far than before the onset of the pandemic, which would also have a curbing effect on inflation.

The Council members judged that the NBP measures introduced to limit the economic costs of the pandemic had been effective and, along with the fiscal policy measures – which had been supported by the monetary policy easing – they had alleviated the impact of the pandemic on the Polish economy. While discussing monetary policy, the Council members were of the opinion that at the current meeting interest rates should be kept unchanged and the purchases of securities as part of the structural open market operations should be continued.

The majority of the Council members judged that if economic recovery progressed in 2021 and price growth in the medium term was in line with the inflation target, it would also be advisable to keep interest rates unchanged in the subsequent quarters. In their opinion, the tightening of monetary conditions in response to a temporary rise in inflation, caused largely by negative supply shocks that remains beyond the direct influence of monetary policy, would not limit price growth in 2021, while translating into a slower economic recovery after the pandemic-related slump. At the same time, in the opinion of these Council members, if the economic conditions and outlook were to deteriorate significantly, e.g. due to a new surge in the pandemic, further monetary policy easing might be justified, including by a reduction in the interest rates.

Certain Council members argued that should a sharp rise in inflationary pressure appear in the coming quarters, it might be advisable to consider raising NBP interest rates in the second half of 2021. At the same time, the majority of the Council members emphasised that the experience of other central banks pointed to a strong negative economic impact of tightening monetary policy too quickly.

It was observed that NBP's monetary policy mitigated the negative economic impact of the pandemic, supported economic activity and stabilised inflation at the level consistent with NBP's inflation target in the medium term. Due to its positive impact on the financial situation of debtors, it was also conducive to the strengthening of financial system stability.

The Council rejected the motion to raise the required reserve ratio to 3.5% as well as a motion to reduce the remuneration of the required reserves from the level of the reference rate (currently 0.1%) to 0.01%.

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 5 May 2021

During the discussion, the Council members pointed out that in the recent period the pandemic situation varied across the world. It was emphasised that Asia had seen a considerable deterioration in the epidemic situation, mainly due to a rapid rise in the number of COVID infections in India. The number of COVID cases was also heightened in many European countries, although it had started to drop slightly at the end of April. It was pointed out that heightened uncertainty about the further course of the pandemic persisted with the appearance of new virus mutations. The majority of Council members judged that further, periodical increases in COVID-19 cases could not be ruled out along with the resulting strengthening of the sanitary regime. At the same time, these members pointed out that thanks to the progress of the vaccination process, any new waves of the pandemic in Europe would be likely to see fewer COVID cases and a less severe course of the disease.

It was emphasized that the incoming data suggested that world industry had adjusted to functioning under the pandemic and that activity in this sector had increased significantly. However, it was pointed out that the output of goods in some branches of industry was limited by disruptions in international transport and temporary shortages of intermediate goods and materials. The majority of the Council members judged that the impact of those factors on activity in world industry over the longer run would fade.

The favourable situation in world industry also translated into growing activity of this sector in the euro area. At the same time, the situation in the services sector of this economy remained significantly less favourable. As a result, GDP in 2021 Q1 had declined again. Referring to the outlook for the euro area, it was pointed out that the forecasts indicated a recovery in this economy in the second half of 2021. Yet, the majority of the Council members judged that such a scenario was subject to considerable uncertainty and depended on the further development of the pandemic situation.

At the same time, it was pointed out that even in the case of a favourable development of the economic situation, the forecasts pointed to a drop in price growth in the euro area in 2022. In this context it was emphasised that the currently observed rise in inflation in Europe was temporary and was mainly caused by the impact of supply-side factors and a considerable rise in prices of many commodities, including crude oil, compared to the corresponding period of 2021. Certain Council members judged that the growth in oil prices in the recent period had been driven by the current and projected rise in demand for oil and one-off events having a temporary curbing effect on oil supply. These members also pointed to the growth in copper prices.

The major central banks – including the ECB and the Fed – continue their highly accommodative monetary policy and emphasise in their communications the considerable uncertainty about the prospects for the economy and the temporary nature of the factors boosting inflation in 2021. In particular, these banks are keeping interest rates low and conducting assets purchases, as well as signalling the maintenance of loose monetary policy in the future.

When referring to the situation in Poland, it was pointed out that the recent period had seen a gradual decline in the number of COVID-19 cases, which was indicative of the fading of the third wave of the pandemic. The improvement in the epidemic situation had made it possible to gradually ease the sanitary restrictions. At the same, it was emphasised that the restrictions which had been in place in the earlier period had exerted a negative impact on activity in parts of the trade and services sectors. This was reflected in a month-over-month decline in retail sales observed in March. This was accompanied by a further, considerable annual decline in the construction and assembly output.

In turn, in March the situation in industry remained favourable, with a further rise in production both in sectors dominated by exports as well as in more domestically-oriented sectors. At the same time, the considerable rise in industrial output in year-on-year terms observed in March was largely the result of the base effect caused by the previous year's economic downturn at the outbreak of the pandemic.

The majority of Council members judged that despite the favourable situation in industry, annual GDP growth in 2021 Q1 had remained negative. They expressed the opinion that subdued investment demand, driven by the persisting uncertainty about the economic outlook, had had a negative impact on economic growth. They pointed out that the investment rebound would probably occur only after the epidemic had been brought under control.

While analysing the labour market situation, the Council members pointed out that in March 2021 average employment in the enterprise sector had declined and that the registered unemployment rate had been slightly above the level recorded at the end of 2020. At the same time, the majority of the Council members judged that in 2021 Q1 the rise in the average wage in the entire economy had probably remained below the pre-pandemic level. In turn, in the opinion of these Council members, the pick-up in wage growth in the enterprise sector in March had partly been the result of base effects and the delayed payment of holiday bonuses.

While referring to the economic outlook, the Council members pointed out that the available forecasts suggested that the subsequent quarters would bring economic recovery. They underlined that the scale and pace of recovery remained uncertain, mainly due to uncertain further course of the pandemic. The majority of the Council members expressed the opinion that despite the progress of the vaccination process, subsequent waves of the pandemic in Poland could not be ruled out. However, they judged that any subsequent waves of the pandemic might bring fewer number of COVID cases, less severe sanitary restrictions and – as a result – less negative impact on the economic situation. Certain Council members judged that the pandemic would probably no longer have a significant impact on economic activity.

Members of the Council upheld their opinion that economic policy measures, including the last year's easing of NBP monetary policy, as well as the anticipated recovery in the global economy would have a positive impact on domestic activity. In their opinion, the pace of the domestic economic recovery would also be dependent upon further developments of the zloty exchange rate.

While discussing the price developments, members of the Council pointed out that in line with the GUS flash estimate inflation in April rose to 4.3% y/y. It was pointed out that the rise in inflation was primarily driven by a further rise in fuel prices – which was connected with crude oil prices in the global markets considerably exceeding the previous year's level – as well as higher food prices. At the same time, the annual inflation rate continued to be boosted by increase in electricity prices at the beginning of the year and rising waste disposal charges, namely factors which – similarly to the rise in commodity prices – are beyond the control of the domestic monetary policy. Attention was also paid to the fact that inflation was also boosted by growing costs of international transport and temporary disruptions in global value chains. The majority of the Council members assessed that although the relatively favourable income situation of households also contributed to price increases, its impact on inflation was not excessive and – on its own – had not resulted in price growth exceeding the inflation target.

With reference to inflation in the remaining part of the year, members of the Council assessed that the said supply and administrative factors were likely to cause the annual inflation rate to remain above the upper limit of deviations from the inflation target in the coming months. Certain Council members expressed the opinion that inflation might be additionally boosted by the postponed household spending after the lockdown restrictions had been lifted. Yet, the majority of the Council members pointed out that the impact of this factor would be short-lived.

When analysing the outlook for inflation in the longer run it was pointed out that in 2022, after factors having a temporary boosting effect on price growth had faded away, inflation is expected to decline. At the same time it was pointed out that price developments in 2022 would depend on the sustainability of the economic recovery, including on the future situation in the labour market after COVID relief programmes had been terminated. Certain Council members judged that inflation might remain heightened in 2022.

Certain Council members pointed out that price growth observed in the recent period translated into a decline of interest rates further below zero. Those members assessed that the negative real interest rate of bank deposits was deterring households from keeping bank deposits and urging them to seek alternative way of investing savings, thus boosting prices of certain assets. Yet, other members of the Council indicated that household deposits were posting a considerable growth in year-on-year terms. This was coupled with limited household liabilities resulting from consumer loans and a drop in corporate debt resulting from bank loans.

While discussing monetary policy, the majority of the Council members decided that interest rates should be kept unchanged at the current MPC meeting and the other measures undertaken by NBP should be further pursued. Those members assessed that the heightened inflation level was the result of supply and external factors, namely factors which are beyond the control of the monetary policy, whose impact on price growth would probably be temporary. At the same time those members pointed out that the Polish economy had just embarked on a path to make up for the losses caused by the pandemic and sustainability of the currently observed recovery in the longer term was subject to uncertainty. Therefore – in the opinion of the majority of the Council members – NBP should support sustainability of the economic recovery, by ensuring favourable financing conditions to all economic agents.

The majority of the Council members assessed that, if the uncertainty about the further course of the pandemic, and – as a result – the future economic conditions continue, with the rise in inflation above the target being the result of the factors beyond the control of the monetary policy, it would be advisable to keep interest rates unchanged also in the months to come. In their opinion, the tightening of monetary conditions in response to inflation running above the inflation target as result of negative supply shocks would not curb price growth in 2021, while it could halt economic recovery after a considerable economic downturn caused by the pandemic.

Certain Council members argued that if inflationary pressure intensify markedly in the coming months, it might be justified to consider an increase in the NBP interest rates. At the same time, the majority of the Council members emphasised that such an adjustment would be justified only after the pandemic had come to an end, the economic recovery had consolidated and there was a risk of an excessive rise in inflation driven by demand factors.

The Council rejected the motion to raise the required reserve ratio to 3.5% and the motion to lower the interest rate of required reserve holdings from the NBP reference rate (currently at 0.1%) to 0.01%

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 9 June 2021

At the Council meeting it was pointed out that May had seen an improvement in the pandemic situation around the world. Nevertheless, significant uncertainty about the further development of the global pandemic persisted. In many countries, particularly in developing ones, the vaccination process was slow and the epidemic situation remained difficult. In many countries vaccination of a sufficient proportion of the population, which would allow to contain the epidemic without the need to introduce restrictions in the future, will be challenging.

The gradual easing of sanitary restrictions in the recent period had led to an improvement in business conditions in the services sector in many economies, including in the euro area. At the same time, economic indicators in industry suggested a further recovery in activity in this sector, and in certain markets supply-side constraints were emerging. However, much of incoming data is heavily distorted by statistical base effects and the realisation of pent-up demand by some households and firms, which temporarily boosted expenditure on certain goods and services.

The Council members drew attention to the fact that the rebound in economic activity currently under way in many economies was taking place following the sharpest fall in GDP in decades. In this context certain Council members underlined that in the euro area GDP was significantly lower than before the pandemic and that employment was still falling in 2021 Q1.

It was judged that the recovery was contributing to the rise in commodity prices in the global markets, including in oil prices, which were significantly higher than a year earlier. Along with base effects, a rise in international transport costs, and supply-side disruptions related to the pandemic, which were taking place amid the opening of economies following the last wave of the pandemic, this was boosting global inflation. Some Council members underlined that in the United States the annual inflation rate had exceeded 4% and was the highest for a dozen or so years, while core inflation was the highest for three decades. These Council members underlined that inflation in the euro area had also risen significantly in recent months.

During the discussion it was pointed out that despite a significant rise in inflation in the United States, the Federal Reserve was keeping interest rates close to zero, was conducting asset purchases, and had not signalled a tightening of monetary policy, while pointing out that heightened inflation was transitory. At the same time, the European Central Bank declared that it would continue its pandemic emergency purchase programme until at least March 2022. As a result, the financial markets expected that the ECB's deposit rate would remain negative at least for the following 3 years.

When assessing the situation in Poland, the Council members pointed out that 2021 Q1 had seen a 0.9% fall in GDP in annual terms. However, it was underlined that annual growth in consumption and investment was slightly positive. It was pointed out that investment had been boosted by enterprises investing in means of transport and machinery and equipment. At the same time, it was noted that consumer demand had not yet returned to the pre-pandemic level, which confirmed that the elevated inflation was not related to excessive growth in demand.

The Council members judged that the easing of the epidemic restrictions had had a positive impact on the economic situation in the recent period. However, it was underlined that the incoming monthly data should be interpreted with caution, since in March and April most annual macroeconomic indicators had been heavily distorted by statistical base effects.

In recent months the incoming data had indicated a further improvement in economic conditions, with persisting differences between sectors. In April 2021, annual industrial output growth and retail sales growth had risen significantly. However, it was underlined that while industrial output in April had been higher than before the pandemic, retail sales had still not reached the pre-pandemic level. At the same time, annual growth in construction and assembly output had remained clearly negative. Attention was drawn to the improvement in consumer sentiment, which, however, remained less optimistic than before the pandemic, and to the improved financial results of enterprises.

While analysing the labour market situation, the Council members underlined that although annual employment growth in the enterprise sector had been positive in April 2021, in monthly terms employment had fallen and remained lower than before the outbreak of the pandemic. Moreover, a large number of jobs continued to be subsidised by public funds. The unemployment rate remained higher than before the pandemic.

During the Council meeting it was pointed out that in 2021 Q1 wage growth in the economy had remained lower than before the pandemic. Although annual wage growth in enterprises had picked up in April, after excluding base effects it remained close to that observed in 2021 Q1 in the whole economy. At the same time, some Council members emphasised that corporate revenue had risen much faster than wages in 2021 Q1. As a result, they judged that there was no cost pressure in the economy that would result from excessive wage growth. These Council members also pointed to the further rise in the number of immigrants last year, which might curb any potential tensions in the labour market related to a shortage of employees. On the other hand, certain Council members drew attention to the fact that a significant number of surveyed firms reported upward pressure on wages from employees.

The majority of the Council members were of the opinion that lending growth remained low and was not contributing to inflation rising above the NBP inflation target. It was pointed out that in May 2021 annual credit growth in the economy had stood at 2.5%. Credit growth had been supported by a further increase in housing loans; however, in the case of enterprises annual lending growth had remained markedly negative while consumer credit growth had been close to zero. However, the majority of the Council members judged that housing loan growth remained moderate and lower than wage growth. Against this backdrop certain Council members underlined that annual growth in prices of residential real estate was significantly positive; however, in recent quarters it had declined and demand in this market was partly related to the activity of foreign investors due to the persistence of low interest rates abroad. On the other hand, while discussing monetary aggregates, certain Council members pointed out that money supply had risen significantly in recent quarters and public debt was a significant factor contributing to its creation.

At the Council meeting it was pointed out that according to the GUS preliminary data, May saw an increase in annual CPI to 4.8% (in monthly terms CPI stood at 0.3% and decreased as compared with the previous month). In particular, rapid growth in fuel prices in annual terms was observed, which was the result of growth in global oil prices and strong base effects. At the same time, annual food price growth picked up. The majority of the Council members underlined that annual inflation also continued to be elevated by other factors beyond the influence of domestic monetary policy, including the increase in electricity prices which took place at the beginning of the year and the increase in waste disposal charges. In this context, these Council members drew attention to the fact that according to the full data for April, the increase in fuel prices and prices of goods and administered services accounted for almost half of the CPI inflation rate. As a result, the majority of the Council members judged that although demand factors also supported price growth, they were not causing inflation to exceed the inflation target.

While discussing inflation expectations, some Council members pointed out that, although in surveys consumers noticed price growth, the balance statistics describing trends in consumer opinions on future changes in prices had shifted towards lower inflation in recent months and had reached the lowest level for 2 years. These Council members also underlined that although inflation forecasts of financial sector analysts had recently remained elevated, they continued to indicate a gradual decline in inflation in the coming years. On the other hand, certain Council members pointed out that a significant number of entrepreneurs expected faster price growth in the future. These Council members also judged that although inflation expectations of households were not rising, the majority of them expected inflation in the future to be close to the level that is observed currently.

The majority of the Council members judged that as a result of factors beyond the influence of domestic monetary policy, annual inflation in the coming months was likely to remain above the upper limit of deviations from the inflation target. However, the majority of the Council members were of the opinion that next year, after the factors temporarily boosting price growth fade, a decline in inflation was expected. These Council members also pointed out that the development of inflation in 2022 would depend on the robustness of the economic recovery, including the labour market situation following the phasing out of the anti-crisis measures. The Council members also drew attention to the fact that the level of inflation next year would depend on the fiscal policy stance.

Certain Council members were of the opinion that forecasts pointing to a decline in inflation in the coming quarters were subject to uncertainty. They pointed out that amid the ongoing economic recovery, the observed rise in inflation above the NBP inflation target might lead to an increase in inflation expectations and the consolidation of inflation at a level above the NBP inflation target in the coming quarters. Certain Council members judged that the growth in money supply might also boost inflation.

The majority of the Council members were of the opinion that the present meeting should keep interest rates unchanged and continue to pursue the NBP's remaining measures. These Council members judged that the monetary policy conducted by NBP supported the consolidation of economic recovery following the pandemic-induced recession and stabilised inflation at the level consistent with the NBP's inflation target in the medium term. They drew attention to the fact that keeping the NBP interest rates unchanged was currently justified due to the sources and the expected temporary nature of inflation exceeding the NBP's target, as well as the uncertainty about the persistence and scale of the economic recovery. The Council members underlined that as indicated in Monetary Policy Guidelines for 2021, due to the macroeconomic and financial shocks, inflation may temporarily deviate from the target and even run outside the band for deviations from the target. The response of monetary policy to the shocks is flexible and depends on their causes and the assessment of persistence of their effects, including their impact on inflation developments.

The majority of the Council members judged that if the uncertainty about the further course of the pandemic, and – as a result – the future economic conditions continued, and if the rise in inflation above the target was the result of factors beyond the control of monetary policy, it would be advisable to keep interest rates unchanged also in the near future. In their opinion, the tightening of monetary conditions in response to inflation running above the inflation target due to negative supply shocks and regulatory factors, would not curb price growth in 2021, while it could halt economic recovery following a considerable economic downturn caused by the pandemic.

Some Council members judged that future incoming data and forecasts, including the July NBP projection, would be helpful in assessing the robustness of the economic recovery and the outlook for inflation. These Council members judged that if forecasts indicated robust economic growth in the coming years, with inflation remaining permanently above the NBP inflation target due to increased demand and persistently favourable situation in the labour market, amid fading uncertainty about pandemic it would be possible to adjust monetary policy.

However, certain Council members were of the opinion that the NBP reference rate should be raised at the current meeting. They assessed that inflation would remain above 3.5% in the following four quarters. In the opinion of these Council members, the increase in the reference rate could reduce the risk of an increase in inflation expectations and strengthening of wage pressure and thus it would mitigate the risk of inflation running above the NBP inflation target in the medium term.

The Council rejected the motion to raise the reference rate by 15 basis points.

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 8 July 2021

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%.

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 conducted measures will depend on the market conditions. Furthermore, NBP will also offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

The recent period has seen a reduction in scope of pandemic around the world. However, the spread of new variants of virus has been driving up the uncertainty regarding the further course of the pandemic. The gradual easing of sanitary restrictions has led to an improvement in business conditions in the services sector in many economies. At the same time the activity in industry sector has continued to increase, alongside supply restrictions in certain markets. In the euro area 2021 Q2 brought a recovery in economic activity, after a fall in GDP in 2021 Q1.

The prices of many commodities, in particular oil, has increased recently and are currently significantly higher than a year ago. Along with the supply-side disruptions related to the pandemic, this is exerting an upward pressure on global inflation, including in advanced economies. However, due to temporary nature of factors driving up inflation and uncertainty about the economic outlook, major central banks are keeping interest rates low, conducting asset purchases as well as signalling that loose monetary policy will be maintained in the future.

In Poland, recent months have seen a significant recovery in economic activity. In May 2021, retail sales grew significantly, supported by realisation of previously postponed purchases. At the same time, business conditions in industry remained very favourable. The construction and assembly output increased in annual terms, but its level remained significantly lower then before pandemic. This was accompanied by an increase in average employment in the enterprise sector and stabilization in annual average wage growth in this sector.

According to the Statistics Poland flash estimate, inflation in Poland decreased to 4.4% y/y in June 2021 (in monthly terms it amounted to 0.1%). At the same time core inflation excluding food and energy prices declined – according to the preliminary estimation – to the lowest level in over a year. The annual inflation rate continued to be pushed up by high fuel price growth – related to the significantly higher global oil prices than a year ago – as well as the increase in electricity prices at the beginning of 2021 and the increases in waste disposal charges, i.e. by the factors that are beyond the control of domestic monetary policy. The growing costs of running business amidst the pandemic, higher international transport charges and temporary disruptions in supply chains, also continue to add to inflation.

The above-mentioned factors will probably translate into annual price growth staying above the upper band for deviations from the inflation target in the coming months. At the same time, next year – after the factors temporarily increasing price growth fade – inflation is expected to decrease. Price developments next year will depend on the robustness of economic recovery, including the situation in the labour market following phasing-out of the anti-crisis measures.

Available forecasts indicate that the coming quarters will see a further recovery in economic activity, although its scale and pace are highly uncertain. The further course of the pandemic and its impact on economic situation in Poland and abroad continues to be the main source of uncertainty. The economic policy measures, including the easing of NBP's monetary policy introduced last year, and the expected recovery in the global economy will have a positive impact on the domestic economic situation. The pace of the economic recovery in Poland will also depend on further developments of the zloty exchange rate.

The Council became acquainted with the results of the July 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 22 June 2021 there is a 50-percent probability that the annual price growth will be in the range of 3.8–4.4% in 2021 (against 2.7–3.6% in the March 2021 projection), 2.5-4.1% in 2022 (compared to 2.0–3.6%) and 2.4–4.3 in 2023 (compared to 2.2–4.2%). At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of 4.1–5.8% in 2021 (against 2.6–5.3% in the March

2021 projection), 4.2-6.5% in 2022 (compared to 4.0–6.9%) and 4.1–6.5% in 2023 (compared to 4.0–6.8%).

As indicated in *Monetary Policy Guidelines for 2021*, due to the macroeconomic and financial shocks, inflation may temporarily deviate from the target and even run outside the band for deviations from the target. The response of monetary policy to the shocks is flexible and depends on their causes and the assessment of persistence of their effects, including their impact on inflation developments. NBP's monetary policy supports the consolidation of economic recovery following the pandemic-induced recession and stabilises inflation at the level consistent with the NBP's inflation target in the medium term.

Taking into account the sources and the expected temporary nature of inflation exceeding the NBP's target, as well as the uncertainty about the robustness and scale of the economic recovery, NBP is keeping interest rates unchanged. At the same time, 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's interest rate cuts on the economy, i.e. strengthening the monetary policy transmission mechanism. In order to strengthen the impact of the NBP's monetary policy easing on the economy, NBP may also intervene in the foreign exchange market. The timing and scale of the measures taken by NBP will depend on the market conditions. Furthermore, NBP will also continue to offer bill discount credit aimed at refinancing loans granted to enterprises by banks.

The Council adopted the *Inflation Report – July 2021*.

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 July projection based on the NECMOD model covers the period from 2021 Q2 to 2023 Q4. The starting point for the projection is 2021 Q1.

The cut-off date for the data used in this projection is 22 June 2021.

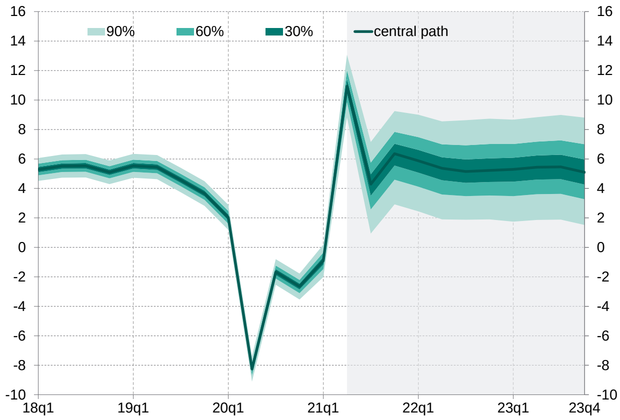
4.1 Summary

Since the publication of the previous projection, the epidemic situation in the major developed economies and in Poland has improved significantly. This was due to the progress of the on-going vaccination programme and tightening of restrictions in the winter-spring season. In line with the declining number of COVID cases, many countries eased the restrictions previously imposed on economic and social life – in Poland this processes commenced at the end of April 2021.

The relatively favourable performance of the domestic economy in April and May 2021, amid a persistently difficult epidemic situation indicates that economic agents have largely adjusted to operating in the pandemic. Owing to assumed in the projection containment of the epidemic and economic recovery abroad, average GDP growth in Poland will exceed 5% y/y in the projection horizon. This will be supported by realisation of pent-up demand possible due to the relatively high level of households' savings. Private investment will also make an important contribution to GDP growth. Dynamics of consumer and investment demand will be boosted by the assumption of the unchanged, record low NBP interest rates assumed in the projection and by launching a new EU instrument – Next Generation EU.

Inflation is currently running above 4% in annual terms. In 2021 the CPI index is elevated by a marked growth in energy commodity prices in the global markets affecting domestic energy prices. At the same time, prices in certain sectors, mostly services, are increasing as a consequence of lifting pandemic restrictions and realisation of pent-up demand in these industries. In some sectors, faster price growth is driven by rising commodity prices and tensions in supply chains. Furthermore, waste disposal fees are running much higher than a year ago. However, some of these factors are of temporary nature. In 2022 their impact on inflation

Figure 4.1 GDP (y/y, %)



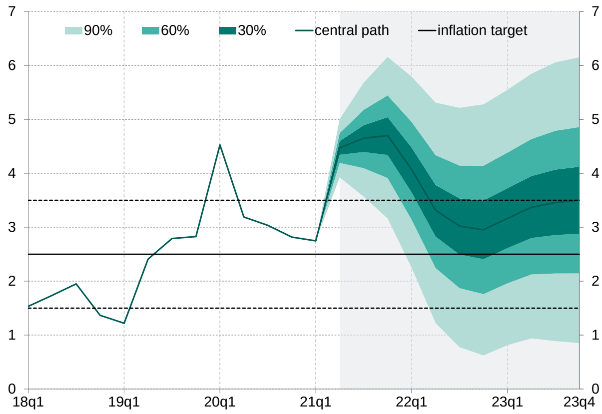
Source: Statistics Poland (GUS) data, NBP calculations.

Fan charts depict the probability distribution of possible outcomes of GDP growth (Figure 4.1) and inflation rate (Figure 4.2). The part of the chart in the grey background illustrates forecast uncertainty of these variables over the projection horizon. 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.).

will fade away and inflation will return to the band of deviations from the NBP target set at 2.5% +/- 1 percentage point. Yet, the decrease of consumer prices' dynamics will be limited by the gradually rising demand pressure as economic growth is becoming more sustained. The year 2023 will see CPI inflation increase again, which will be supported by further economic recovery and rising demand, reflected in enlarging positive output gap. At the same time, costs of enterprises will be heightened by elevated wage growth as a result of a further rise in labour demand amid limited labour supply.

Poland's economic outlook strongly depends on the vaccination efficacy, which affect the future path of the COVID-19 pandemic and the scale of administrative restrictions as well as the freedom to conduct business. The balance of uncertainty factors indicates that GDP growth in the coming quarters is more likely to run below the central projection scenario. At the same time, it points to an almost symmetric risk distribution for CPI inflation. (Figure 4.1, Figure 4.2).

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.

4.2 External environment

Economic growth

Since the publication of the previous projection, the epidemic situation in the major developed economies has improved significantly. This was the result of the progress of the ongoing vaccination programme, the tightening of restrictions in the winter-spring season and the cyclical change in weather conditions to those which are less favourable to the transmission of SARS-CoV-2 virus. Following the decline in the number of COVID-19 cases, there was a gradual easing of the social and economic restrictions. The current forecasting round assumes that the percentage of the population fully vaccinated in the major developed economies in 2021 Q3 will reach a level that will significantly reduce the size of future pandemic waves. In particular, the number of hospitalizations related to COVID-19 is expected to be low during the subsequent increases in the number of COVID-19 cases, which will allow developed economies to avoid reimposing significantly tighter restrictions. However, due to lower availability of the vaccine, in most emerging and developing economies a significant reduction in local transmission of the virus will be delayed, preventing economic activity in these countries from returning to their pre-pandemic trend. The uncertainty about the further course of the pandemic is currently related primarily to the risk of another significant increase in the number of hospitalizations caused by the emergence of dangerous mutations of the coronavirus, which would create pressure on individual governments to reintroduce measures limiting the functioning of certain sectors (see Chapter 4.5 *Forecast uncertainty sources)*.

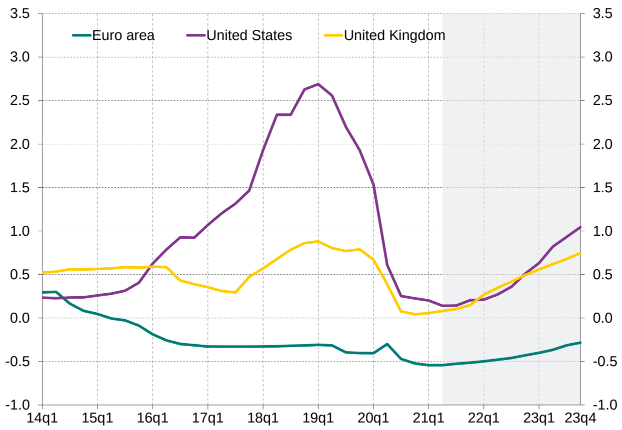
With the increased level of restrictions in 2021 Q1, the euro area and the United Kingdom saw a decline in economic activity in quarter-on-quarter terms. At the same time, the recovery phase continued in the United States. Strong growth in consumption and private investment in the United States translated into a rapid return of its GDP to the pre-pandemic level, which most likely took place already in 2020 Q2. The high growth rate of economic activity in the United States in 2021 is supported by higher fiscal support than expected in the March projection (related to the implementation of the American Rescue Plan Act of 2021, which includes, among others, additional significant transfers to households) as well as a marked decline in epidemic risk (Table 4.1). The growth outlook for the euro area is less favourable – in the case of this economy it is assumed that GDP will not return to the pre-pandemic level until 2022 Q1. The slower pace of economic recovery in the euro area results from the slower easing of restrictions linked to the later launch of the vaccination programmes. Compared to the United States, a smaller scale of fiscal support is assumed for the euro area, despite additional funds under the Next Generation EU instrument. At the same

Table 4.1 GDP abroad – July projection versus March projection

	2021	2022	2023
GDP in Euro Area (y/y, %)			
July 2021	4.5	4.2	1.8
March 2021	3.9	3.9	2.0
GDP in United States (y/y, %)			
July 2021	6.5	3.6	1.8
March 2021	4.6	3.2	1.9
GDP in United Kingdom (y/y, %)			
July 2021	7.1	4.7	1.8
March 2021	3.6	5.5	2.0

Source: NBP calculations.

Figure 4.3 Interest rates abroad (%)



Source: Bloomberg data, NBP calculations.

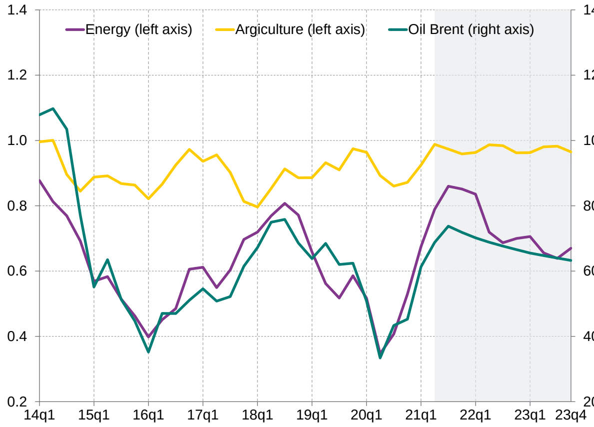
time, it is assumed that the negative impact of the pandemic on future economic activity will continue to vary widely across euro area countries. The economic situation of Germany should be the most favourable among the major economies of the euro area due to the greater scale of fiscal support and the structure of the German economy. Meanwhile, it is assumed that the southern countries of the euro area, including Spain, where foreign tourism plays a greater role, will see their GDP return to pre-pandemic levels later.

Inflation and commodity markets

Recent months have seen a further increase in oil prices due to rising expectations of a faster global economic recovery and the ongoing rebound in demand for this commodity. The marked increases in oil prices were also supported by the OPEC+ countries continuing the policy of oil output reduction and the severe attack of winter in Texas, which disrupted production of this commodity in that region. Natural gas and hard coal prices followed a similar pattern, with sharp increases in their prices in global markets additionally caused by strong seasonal demand due to an exceptionally cold winter period in Asia, the United States and Europe.

It is expected that despite a further improvement in the global epidemic and economic situation, in the years 2022-2023 oil prices will gradually return to levels similar to those observed before the outbreak of the pandemic (Figure 4.4). This scenario is supported by the expected adjustment of oil production by the major oil producers, which will to a large extend balance the growing demand for this commodity assumed in the projection. Natural gas and hard coal prices are assumed to follow similar trends and gradually decline from the currently elevated levels over the projection horizon. However, this forecast is subject to heightened uncertainty due to both the developments in demand for energy commodities in the coming years and the future decisions of

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.

OPEC+ countries and other oil producers regarding output.

Recent months have also seen a significant increase in the prices of most agricultural commodities (Figure 4.4), which was driven by rising production and freight costs. In the years 2022-2023, gradually declining oil prices, which will have an impact on transport costs and the prices of artificial fertilizers, will contribute to the stabilisation of the agricultural commodity prices (Figure 4.4). The main risk to the adopted forecast, apart from the future demand and costs developments, are posed by the emergence of new outbreaks of animal diseases and future weather conditions.

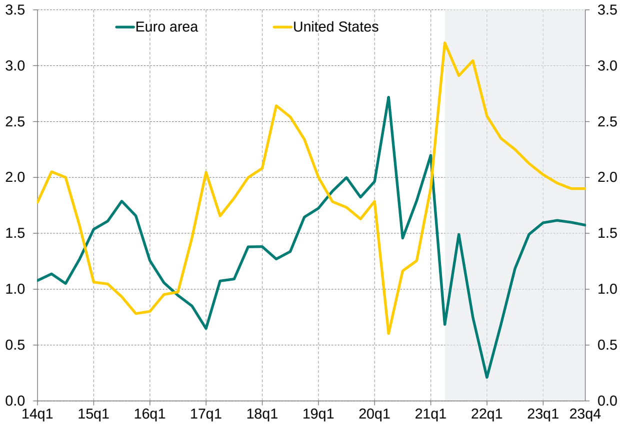
Price growth in the euro area (measured by changes in the gross value added deflator) is expected to run at a subdued level in the coming quarters, remaining under the influence of the delayed disinflationary impact of the COVID-19 pandemic (see Figure 4.5). Later in the projection horizon, inflation in the euro area economy is expected to rise following a gradual rebound in the wage bill, which, however, in the initial phase of the recovery may be constrained by the low propensity of companies to create new jobs. In the United States, after a marked fall in the gross value added deflator in 2020, inflation measured by this indicator will run above its long-term levels in the years 2021-2022. This will be supported by both a rebound in employment and by temporarily strong demand growth associated with the loosening of restrictions and income support to consumers from the new fiscal package.

4.3 Polish economy in 2021-2023

Assumptions about the development of the pandemic and the scope of government restrictions

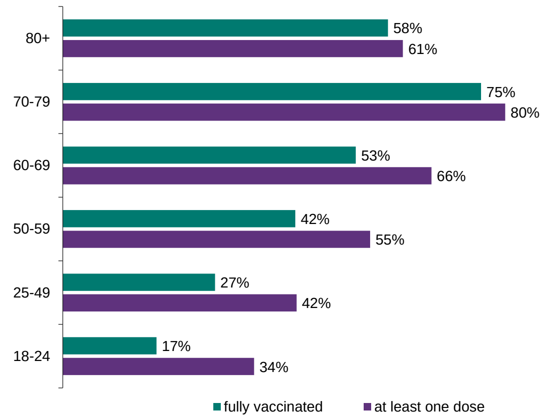
Following the improvement in the epidemic situation in Poland (Figure 4.7), which was caused by significant progress in the vaccination campaign (Figure 4.6), the government once again began to

Figure 4.5 Change in gross value added deflator (y/y, %)



Source: Bloomberg, Eurostat data, NBP calculations.

Figure 4.6 Percentage of people aged 18 and over who are vaccinated (by age group)



Source: Ministry of Health data.

reduce the scale of restrictions imposed on economic and social activity. The sanitary restrictions still in force primarily limit the activity of enterprises in the services sector: catering, culture, sport and recreation. In particular, in sports, cultural and hotel facilities there is a limit on the number of people per square metre or the number of available seats that can be occupied. However, in many cases these limits do not apply to people who are fully vaccinated.

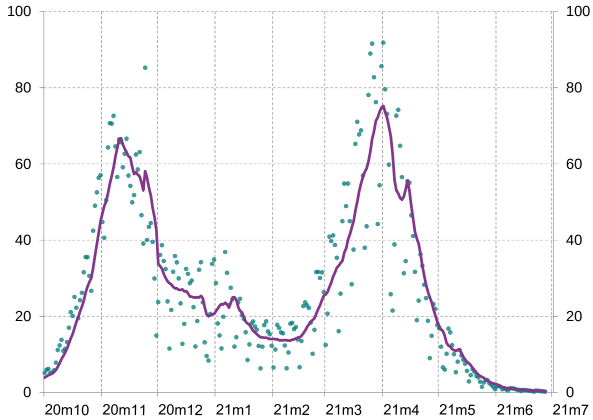
In the projection it was assumed that in the autumn of 2021 there will be another, seasonal increase in COVID-19 cases, however, thanks to the immunity acquired by the majority of the population, it will be significantly weaker than a year earlier and in the spring this year. As a result, the potential restrictions will no longer disrupt the functioning of the domestic economy in a significant way. However, the future pace of vaccinations, the duration of post-vaccination immunity and the effectivness of the currently available vaccines against new mutations of the virus are subject to uncertainty. A different scale of restrictions from the assumptions adopted constitutes the main source of risk for future economic growth.

Anti-crisis measures in support of post-pandemic development

The negative impact of the pandemic on the economy is mitigated by the anti-crisis programmes implemented by the government – financed in part by EU funds – and the significant monetary policy easing by NBP (Figure 4.8, Figure 4.9). The positive impact of these measures will also persist after the financial support has ended due to the reduction in the share of people at risk of long-term unemployment and the reduction in the number of bankruptcies of enterprises which would not have survived a period of a sharp fall in their revenue.

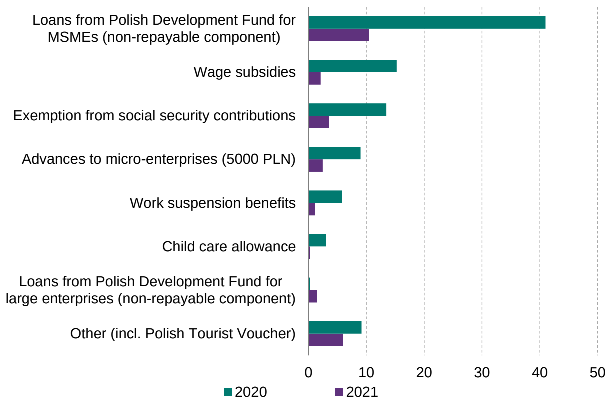
The anti-crisis measures were implemented on a large scale in 2020 Q2, when the strong negative impact of the pandemic and the related restrictions

Figure 4.7 New cases of COVID-19 in Poland per 100.000 population (7-day moving average)



Source: Ministry of Health data.

Figure 4.8 Anti-crisis measures - non-repayable support financed from the national sources (PLN billion)



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

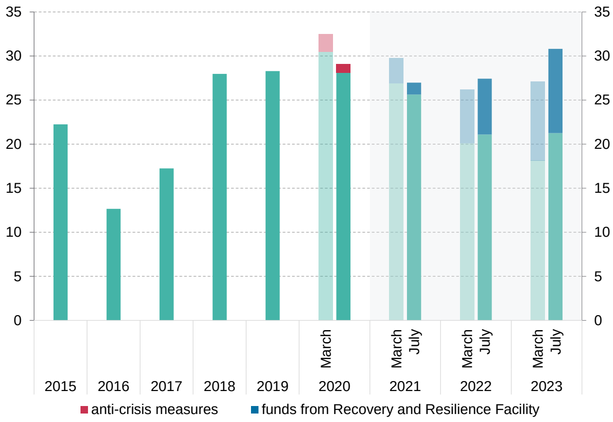
on economic activity materialised. Faced with successive pandemic waves and the related periodic tightening of restrictions, the government announced further packages of anti-crisis measures aimed at providing financial support for enterprises and protecting jobs, among others. A total of over PLN 99 billion, or 4.3% of GDP, was spent under these measures in 2020. However, as the vaccination programme has progressed, pandemic threats are receding and the resilience of the domestic economy to the pandemic shock has strengthened, the vast majority of the support will most likely end in second quarter of this year. In 2021 its total amount will be more than three times lower than the year before.

In the current year a new EU financial assistance instrument will be implemented – Next Generation EU, whose aim is to support the development of European economies following the crisis triggered by the COVID-19 pandemic. Its main element is the Recovery and Resilience Facility, from which Poland is to receive almost EUR 24 billion in grants. Among others, these funds will be allocated to finance projects in the field of energy and digital transformation, robotisation, as well as improving the conditions of competition and protection of producers and consumers in the agricultural sector. The funds can be spent until 2026. At the end of April 2021 the government adopted the National Recovery Plan, which specifies how these funds will be spent. Based on its provisions, it was assumed that in the years 2021-2023 Poland will use approximately 40% of the whole allocation of subsidies available under the Recovery and Resilience Facility (Figure 4.9).

Economic activity

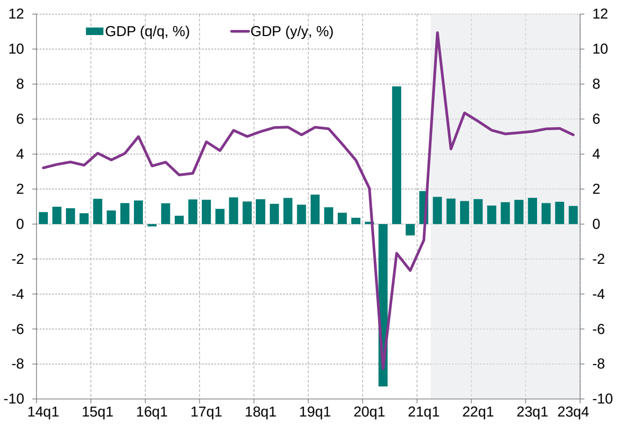
According to the projection, in 2021 Q2 GDP in Poland will return to the pre-pandemic level. Due to the assumed successful resolution of the health crisis and the rebound in activity abroad, in the subsequent quarters the economy will grow at an average pace exceeding 5% y/y (see Figure 4.10, Figure 4.11). The main source of the rapid GDP

Figure 4.9 Use of EU funds for public investment (PLN billion)



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

Figure 4.10 Economic growth



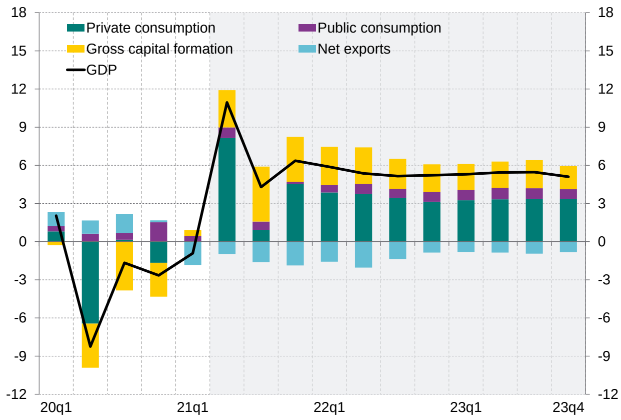
Source: Statistics Poland (GUS) data, NBP calculations.

growth will be household consumption, but private investment will also be an important component. Economic activity is supported by the measures implemented during the crisis by the government and Narodowy Bank Polski (see the subchapter Anti-crisis measures), including the cutting of interest rates to record low levels and the introduction of structural open market operations. The return of the economy to the medium-term growth path expected before the COVID-19 pandemic will also be supported by the National Reconstruction Plan.

Consumers have to a large extent adapted to functioning in a pandemic period and in 2021 Q1, despite the tightened restrictions in force, household consumption rose slightly in annual terms. The easing of administrative restrictions at the end of April 2021 allowed consumers to realise a significant part of demand for goods and services, the purchase of which was restricted during the period of the restrictions. However, the rebound in demand for certain services is still delayed by changes in peoples' behaviour due to the fear of coronavirus infection, lower consumer sentiment and the sanitary regime in force. Due to the above conditions, although it decreased compared to 2020, the household saving rate still remains high. The persistence of a heightened saving rate during the pandemic and the accumulation of funds amid the declining risk of COVID-19 and a further improvement in consumer sentiment creates the space for relatively rapid growth in private consumption in the coming quarters (Figure 4.12).

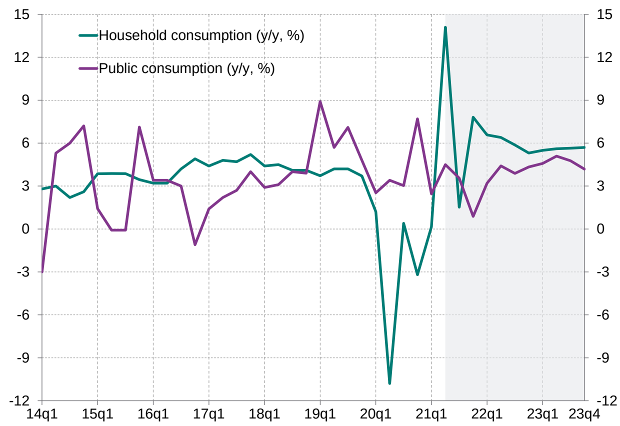
In 2021 Q1 there was a partial rebound in gross fixed capital formation of enterprises (Figure 4.13), as a result of an improvement in investment sentiment of firms, which is comparable to the pre-pandemic level, although still below the long-term average.[61] Enterprises are continuing their investments halted by the pandemic, but more and more firms are also commencing new investments.

Figure 4.11 GDP growth (y/y,%) – breakdown)



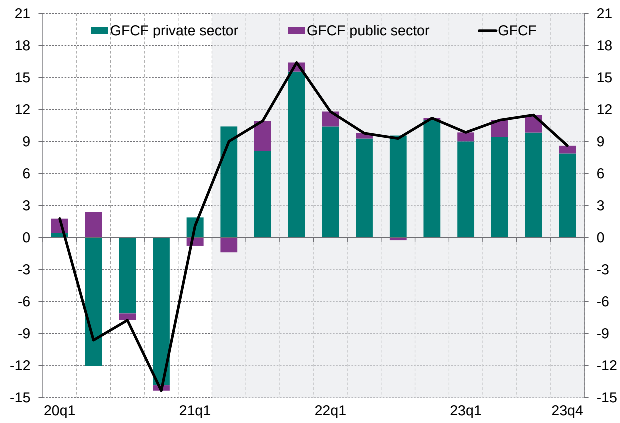
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.12 Household and public consumption



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

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



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.

[61] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, April 2021.

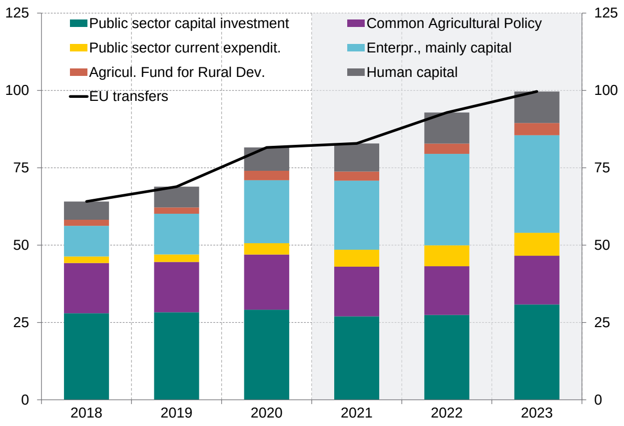
At the same time, the expected increase in gross fixed capital formation is highly dependent on the scope of restrictions experienced by individual companies.[62] The increase in capital outlays should also be supported by the low degree of automation and robotisation of Polish industry and rising labour costs. Growth in corporate investment will also be supported by the implementation of the National Reconstruction Plan. Given the sharp drop in gross fixed capital formation a year ago, the business investment rate will not return to the pre-pandemic level until 2022.

Last year's slowdown in growth in demand for housing due to the pandemic proved to be temporary. The renewed acceleration in housing investment is supported by a higher level of savings of some households and record low interest rates.

Over the projection horizon it is also assumed that there will be an increase in investment outlays of the public sector, although at a slower pace than investment spending of private sector. Growth in public investment will be supported by the inflow of funds earmarked under the National Reconstruction Plan, mitigating the decrease in cohesion funds as a result of the end phase of their utilisation under the 2014-2020 framework (Figure 4.14).

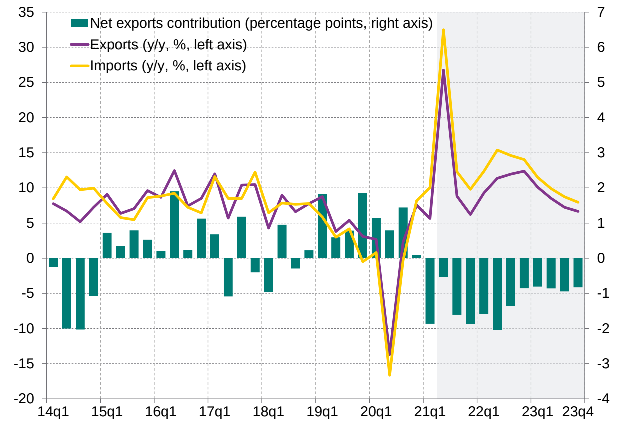
The improving economic conditions abroad over the projection horizon will further boost the volume of exports, which exceeded the pre-pandemic level as early as 2020 Q3 (Figure 4.15). Exporters continue to expect higher demand than enterprises selling only in the domestic market.[63] However, at the same time, due to a significant acceleration in domestic demand and a stronger cyclical response of imports than exports, the contribution of net exports to GDP growth will be negative in the years 2021-2023.

Figure 4.14 Expenditure financed by EU funds (in PLN billion) – breakdown



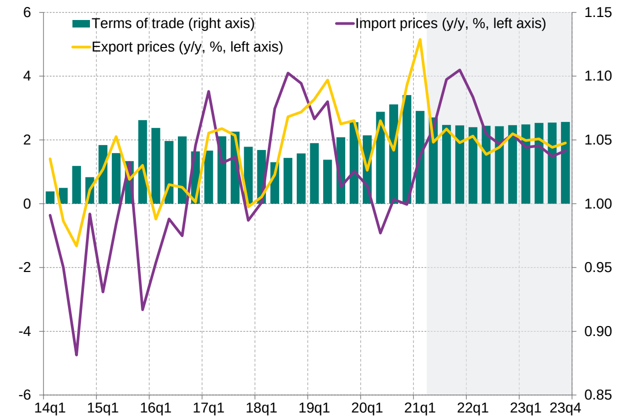
Source: NBP calculations.

Figure 4.15 Foreign trade



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

Figure 4.16 Export and import prices



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

[62] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, April 2021.
[63] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, April 2021.

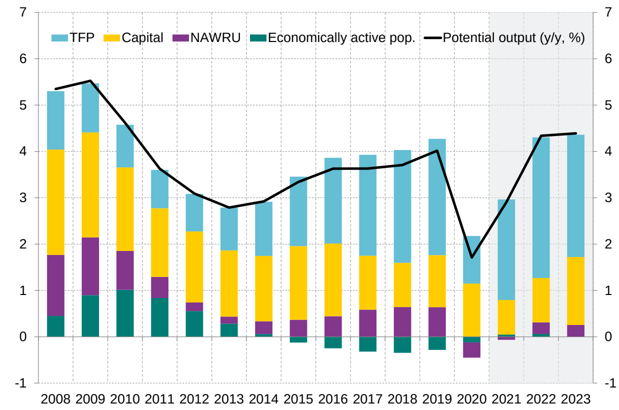
Potential output and the output gap

Following a significant decline in 2020, potential GDP growth will increase over the projection horizon to levels close to those observed before the COVID-19 pandemic (Figure 4.17). This improvement will be the result of the return of total factor productivity (TFP) growth to the average value of previous years and the gradual acceleration of accumulation of productive capital. The increased available pool of labour will also act in the same direction, although the impact of this factor will be smaller.

The acceleration in total factor productivity growth will be due to a reversal of changes in the labour productivity which have occurred in the Polish economy during the COVID-19 pandemic. Along with the improvement in the epidemic situation, the degree of employee absenteeism dropped significantly,[64] and the majority of people returned to the pre-pandemic mode of work. At the same time, a large number of people working remotely have already gained the skills needed to perform such work efficiently. Subsequent stages of lifting the economic restrictions will contribute to a further increase in the utilisation rate of fixed assets and a decline in companies' operating costs related to the need to maintain the sanitary regime. The rebound in investment activity, which will increase the stock of productive capital, will also have a positive impact on the potential of the Polish economy; however, due to the gradual transformation of investment in fixed assets, this process will be spread over time.

The fall in the potential pool of labour following the outbreak of the COVID-19 pandemic was the result of an increased labour market mismatch, reflected in the rise of the equilibrium unemployment rate (NAWRU) and a decline in the number of economically active people (Figure 4.18, Figure

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



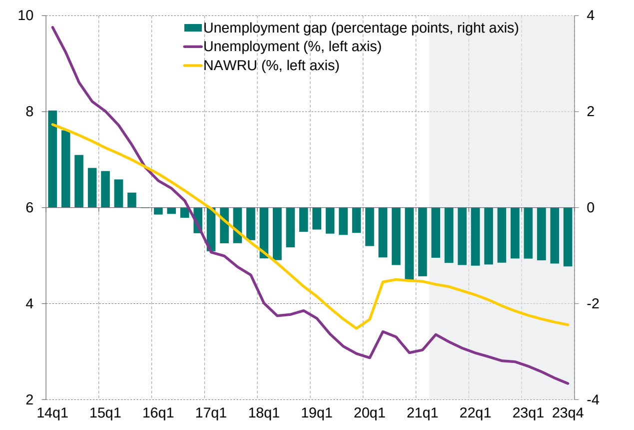
Source: NBP calculations.

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

$$PKB_t^{pot} = TFP_t^{trend} \cdot \left[LF_t^{trend} \cdot (1 - NAWRU_t)\right]^{0.67} \cdot K_t^{1-0.67},$$

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

Figure 4.18 Unemployment



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

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

[64] This process is reflected in the decrease in the difference between the average paid employment and the number of employed persons in enterprise sector. Unlike the statistics of average paid employment, the growth in the number of employed persons is not expressed as full-time equivalents and includes employees who are on sick or childcare leave.

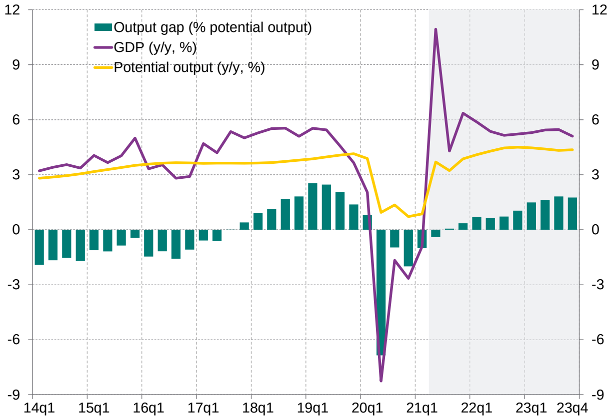
4.20). On the one hand, people lost their jobs in sectors affected by the crisis, and on the other hand, other sectors of the economy, which as a result of the pandemic and its after effects observed increased demand for their products and services, experienced problems with the availability of skilled workers. This was because it was impossible for people who lost their jobs to quickly acquire the required qualifications to undertake other work. Along with the easing of the restrictions, the ongoing improvement in economic conditions and the wider range of job offers, the structural mismatch of supply and demand in the labour market will disappear, and groups which during the pandemic became temporarily inactive (e.g. students) will return to the labour market.

Since demand growth declined much deeper than potential output growth in 2020, the output gap was running at a negative level (Figure 4.19). By the end of 2021, as the economic recovery progresses, the negative output gap is expected to close. In 2022-2023, further rapid growth in GDP will translate into a steadily growing positive output gap, which will boost CPI inflation.

Labour market

The scale of the drop in employment in 2020 was mitigated by the government shielding measures as well as the labour hoarding in firms, which was caused by the shortage of employees in many segments of the market observed before the outbreak of the pandemic (Figure 4.20). As a result, the adjustment in the labour market took place largely via a reduction in the average number of hours worked. The increase in demand for labour due to the lifting of the restrictions and the marked improvement in economic conditions will therefore be satisfied to a large extent by more intensive use of the labour force which is already employed, particularly since the growth in the number of working people will be curbed by the limited supply of labour.

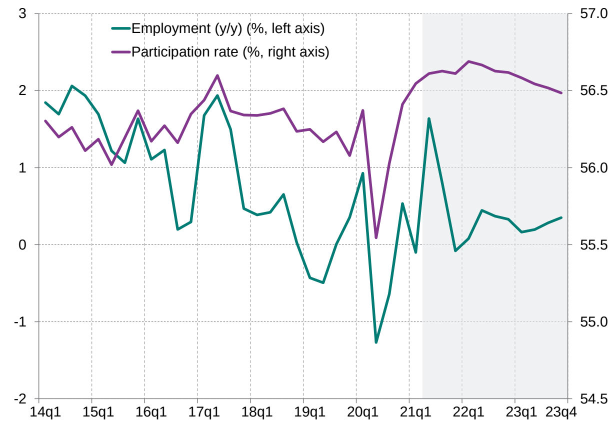
Figure 4.19 Output gap



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.

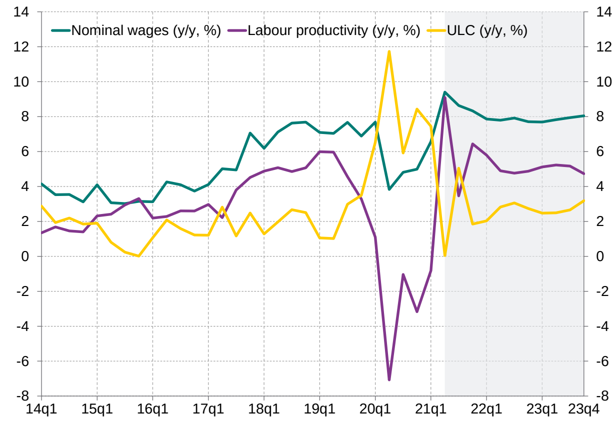
Figure 4.20 Employment and labour force participation



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

Following the slowdown observed in 2020, wage growth over the projection horizon will once again pick up (Figure 4.21). In 2021 wage growth will be boosted by the rebound of labour intensity due to the lifting of restrictions on the functioning of more sectors of the economy. On the other hand, the bargaining power of employees is limited by the persistently reduced number of job offers in some sectors and the high number of migrant workers. This is confirmed by business surveys, which indicate that the number of firms reporting upward pressure on wages from employees and planning wage rises is still lower than before the pandemic.[65] Wage growth in the national economy in 2021 is also reduced by a pay freeze and significant reduction in the payment of awards and bonuses in certain public sector entities, although in the health care sector the wage bill is increased by changes in the basic salaries of medical staff and funds allocated to fighting the pandemic. In 2022-2023, wage growth will remain elevated due to the growing demand for labour with a low stock people who could take up employment. The increase in the minimum wage in 2022, if carried out on a scale proposed by the government, is likely to have a neutral impact on the rate of wage growth in the whole economy as it does not change the relationship between the lowest and average wages.

Figure 4.21 Unit labour costs



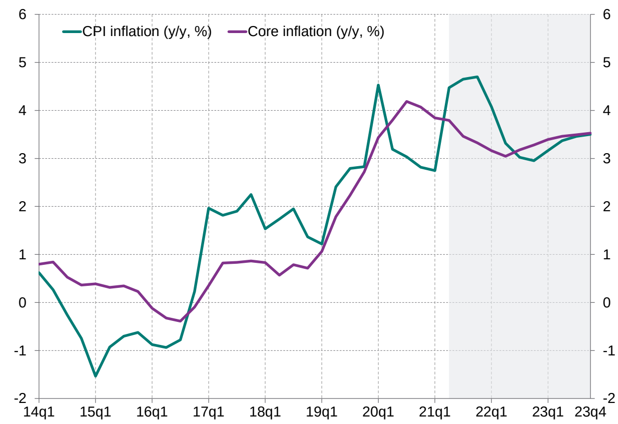
Source: Statistics Poland (GUS) data, NBP calculations.

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.

CPI inflation

In 2022, CPI inflation will decrease from its current elevated level and return to the band for deviations from the NBP inflation target, defined as 2.5% +/- 1 percentage point. In 2023 consumer price growth will pick up; however, it will still not exceed 3.5% y/y (Figure 4.22, Figure 4.23, Figure 4.24).

Figure 4.22 CPI and core inflation



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

Inflation in 2021 is boosted by significant growth in energy prices. The strong growth in global oil prices, which picked up at the end of 2020 and beginning of 2021, translated into rising domestic

[65] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, April 2021.

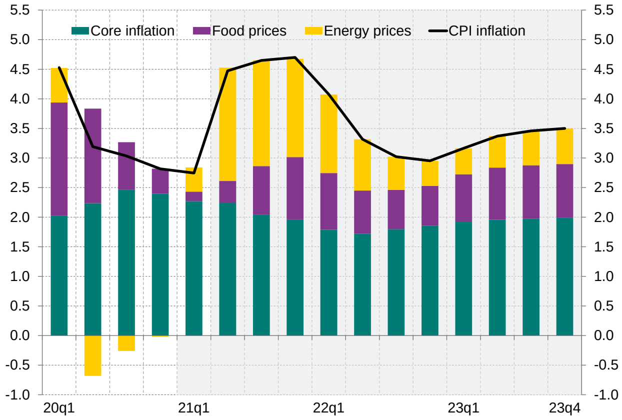
fuel prices. At the same time, January 2021 saw a rise in electricity bills, which was caused by the newly introduced capacity charge covered by the households, the increase in the RES fees and the growth in prices of CO2 emission allowances. It was also assumed that 2021 could see increases in households' bills for natural gas as a result of the observed growth in its price in the global markets.

Core inflation in 2021, although lower relative to 2020, will continue to run at an elevated level. This is caused by price growth in sectors, mainly services, in which restrictions introduced during the pandemic are being eased and in which deferred demand is being realised. In turn, in those sectors of the economy in which elevated demand during the pandemic is gradually weakening, prices adjust with a time lag and a slowdown in their dynamics is also expected in the coming quarters. In some sectors, rising commodity prices and disruptions in supply chains are also contributing to price increases. Strong increases in administered prices, including waste disposal fees, also have an important impact on higher core inflation, although their increases will most likely be lower than a year ago.

The tense supply-side situation in the meat market, both pork and poultry, resulting in particular from the emergence of animal diseases (ASF and avian flu) will accelerate food price inflation in Poland over the current year. This trend will be strengthened by rising costs of meat production with significantly more expensive feed grains, as well as the unblocking of demand for poultry at home and abroad on the part of the HoReCa industry. However, with fairly high yields of plant production in 2020, as well as relatively favourable weather conditions in 2021, food price growth in 2021 will not differ greatly from the long-term average (2.7% in the last 10 years).

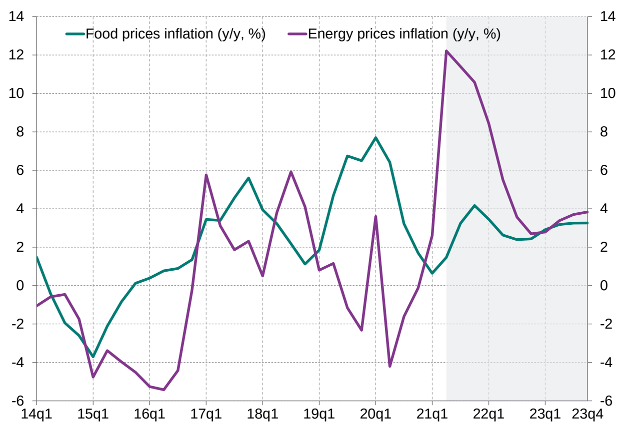
The decline in consumer price growth in 2022 will be caused by slower growth in energy prices and lower core inflation, although to a lesser extent. According to the assumptions in the projection, in

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



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

Figure 4.24 Food and energy price inflation



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

2022 global energy commodity prices will stabilise following the steep rises observed in 2021, which in particular will translate into far lower fuel price growth. The slowdown in growth in electricity and natural gas prices might be limited by the impact of the EU's climate policies and the lag in the adjustment to the earlier increases in commodity prices. The decline in core inflation in 2022 is related to the fading of factors that boosted it in annual terms in 2021, including price increases in sectors open during the easing of restriction on social and economic activity (tourism, hotels, restaurants) and increases resulting from higher commodity prices and disrutpions in supply chains. It is also expected that in 2022 increases in waste disposal fees will not be as high as in previous years. On the other hand, the scale of the decline in inflation will be limited by gradually increasing demand pressure as economic growth strengthens.

In 2023 CPI inflation will rise again following the increased impact on prices from demand factors related to a further improvement in the domestic economic conditions, which is reflected in the steady growth in the positive output gap. At the same time, the costs of enterprises will be boosted by higher wage growth, resulting from a further increase in demand for labour while its supply is limited.

4.4 Current versus previous projection

Data released after the cut-off date of the March projection have contributed to an upward revision of the GDP growth and CPI inflation forecast, with the largest revision in 2021 (Table 4.2, Figure 4.25, Figure 4.26, Figure 4.27, Figure 4.28).

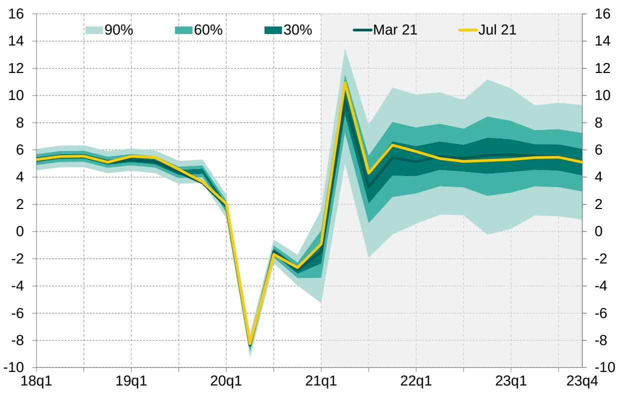
The upward revision of the GDP path in 2021 is due to a faster than assumed in the previous projection rebound of domestic economic activity in 2021 Q1. This data, along with relatively favourable economic results for April and May 2021, amid persisting difficult epidemic situation in this period, indicate a higher than assumed level of

Table 4.2 July projection versus March projection

	2021	2022	2023
GDP (y/y, %)			
July 2021	5.0	5.4	5.3
March 2021	4.1	5.4	5.4
CPI inflation (y/y, %)			
July 2021	4.2	3.3	3.4
March 2021	3.1	2.8	3.2

Source: NBP calculations.

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



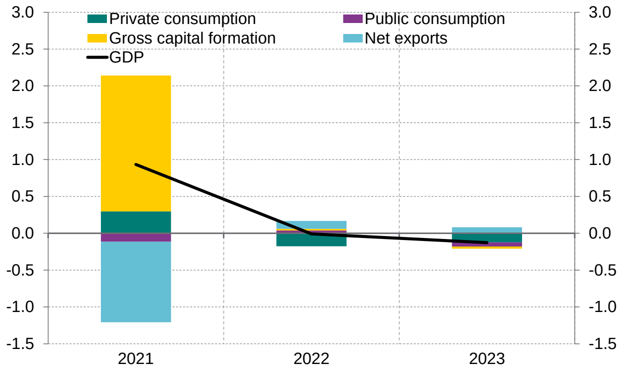
Source: Statistics Poland (GUS) data, NBP calculations.

adjustment of economic agents to operating during the pandemic. The GDP forecast in Poland and developed countries in 2021 is also supported by the rapid progress of the vaccination programme and easing of the pandemic restrictions. The stronger improvement in economic conditions in the United States results also from the implementation of another fiscal package (the American Rescue Plan), whose adoption was not certain before the cut-off date of the March projection. It covers, among others, additional significant transfers to households. In the years 2022-2023, the upward revision of domestic GDP growth is also due to the higher level of EU transfers under the Reconstruction Fund. Among others, these additional funds are to finance projects supporting the development of low-emission transport, investment in hydrogen technologies and the construction of transhipment centres.

The increased CPI inflation path in the projection horizon as compared to the March projection is due to the revision of all its main components.

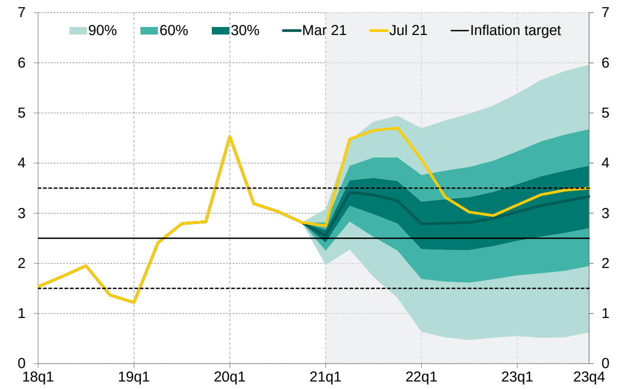
Higher inflation in 2021 is due to several factors of various nature. Firstly, the upward revision of consumer prices is the result of stronger than expected demand due to the significant easing of socio-economic restrictions in the country. This leads to increased prices of goods, purchases of which were previously constrained by restrictions, including home furnishing materials, clothes and shoes. A similar mechanism can be observed in services whose provision until now has been severely limited, such as organised tourism and air transport. Secondly, inflation is boosted by tensions in global supply chains leading to delays in production and distribution of some goods. Additionally, after the cut-off date of the March projection, some telephone service operators introduced significant price increases and announced further price hikes. The upward revision of energy prices was influenced by the rise in oil prices, and consequently, by the rise in the

Figure 4.26 Decomposition of deviations between July and March projection: GDP growth (percentage points)



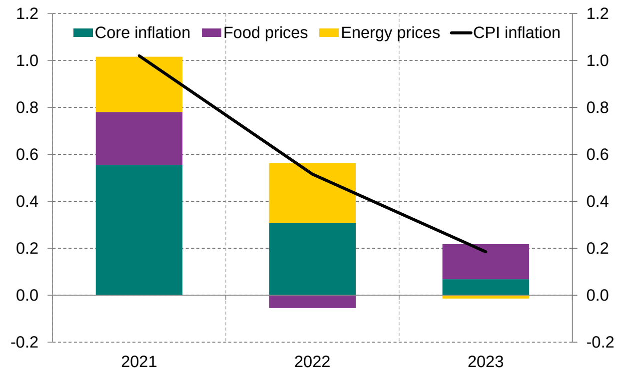
Source: NBP calculations.

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



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

Figure 4.28 Decomposition of deviations between July and March 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.

price of fuel for private means of transport. In turn, food prices are pushed up in 2021 by the limited meat supply due to the spread of avian flu and the worsened profitability of production resulting from more expensive feed.

In 2022-2023, the impact of factors boosting prices in 2021 will fade away, leading to diminishing difference between the inflation path from the July and March projections. However, this difference will remain positive, due to the stronger than expected improvement in economic conditions in Poland and abroad as well as an increase in the production costs, which will have a lagged effect on growth of consumer goods and services' prices. In 2022 inflation will be boosted also by stronger increase in energy prices due to the delayed impact of higher than expected energy commodity prices in global markets and prices of CO2 emission allowances.

Table 4.3 Probability of inflation running:

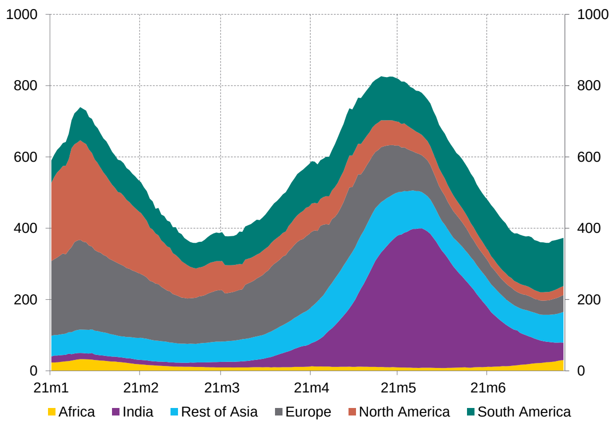
	Below 1.50%	Below 2.50%	Below 3.50%	Below the central projection	In the range (1.5-3.5%)
21q2	0.00	0.00	0.00	0.51	0.00
21q3	0.00	0.00	0.04	0.51	0.04
21q4	0.00	0.01	0.10	0.51	0.10
22q1	0.01	0.08	0.31	0.51	0.30
22q2	0.08	0.27	0.57	0.51	0.49
22q3	0.13	0.36	0.64	0.51	0.51
22q4	0.15	0.37	0.65	0.50	0.50
23q1	0.12	0.32	0.59	0.50	0.47
23q2	0.10	0.28	0.53	0.50	0.43
23q3	0.10	0.27	0.51	0.50	0.40
23q4	0.11	0.27	0.50	0.50	0.39

Source: NBP calculations.

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). The major source of risk for economic activity and, to a lesser extent, the path of inflation in Poland is the further course of the pandemic. The impact of the pandemic on changes in inflation is a product of changes in demand on the one hand and business operating costs on the other. The balance of uncertainty factors indicates a higher probability of GDP growth running below the central projection scenario and a close to symmetric distribution of risks for CPI inflation (Table 4.3).

Figure 4.29 Daily new cases of COVID-19 in the world (thous. of people, 7-day average)



Source: Johns Hopkins University data, NBP calculations.

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

In the current forecasting round, the main risk to the realisation of the central projection scenario is the smaller than expected effectiveness of the measures to contain the COVID-19 pandemic, especially in terms of new infection and illness prevention. The likelihood of the realisation of this scenario may depend on the emergence of new coronavirus mutations, which, compared with the current viral strains, would be characterised by higher transmission, increased human mortality or resistance to the vaccines used. This risk may materialise due to the insufficient scale of vaccination in developing and emerging countries. Consequently, the immunity acquired as a result of inoculation might prove shorter than expected, resulting in the need to repeat the vaccination. In the case of the realisation of the more pessimistic scenario, there will be a return of more severe waves of the pandemic, particularly in countries with low vaccination rates, and permanent containment of the pandemic in the projection horizon will not be possible.

Such a course of events might require the governments of certain countries to periodically tighten restrictions and reintroduce some of the administrative restrictions on economic activity. Recurring spikes in the pandemic will result in lower labour supply due to employee absenteeism caused by quarantine or the need to look after children in the case of a return to remote learning. Another 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 permanent reduction in demand for many types of services. An extended period of unfavourable conditions would increase the number of company bankruptcies, to which the service industries, in particular accommodation, recreation, culture and catering, would be most exposed. The limited possibility of further support measures on the part of economic policy may be another factor delaying the economic recovery.

These negative trends might be additionally compounded by mounting problems with solvency and stability of the financial systems in the economies with a high level of debt. Problems in containing the pandemic would also contribute to a rise in social and political instability in response to the economic and health repercussions of the pandemic, particularly in the countries where it caused income inequality to increase sharply. The adverse effect of the pandemic on economic activity might also escalate economic disputes between countries, resulting in increased barriers to world trade, lower foreign investment and slower technology transfer to less developed economies. With the persistence of restrictions on foreign travel, economies in which the tourism has a high share in GDP would be severely affected by the crisis. Disruptions in the supply chains of semiconductors, which are commonly used in electronic devices and have already caused cuts in production in the auto industry, could become a growing problem for global output.

A longer and more severe course of the coronavirus pandemic than assumed in the baseline scenario and the materialisation of some of the above risks would contribute to an extended period of deteriorated economic activity in the global economy and in Poland. Against the background of heightened uncertainty, corporate investment would also be substantially limited. Considering additionally the decline in labour supply and slower total factor productivity growth, this would lead to a permanent reduction in the potential output of the national economy.

A fast and permanent containment of the pandemic combined with more effective economic policy in Poland and abroad

On the other hand, a permanent containment of the pandemic in Poland and abroad is possible resulting in faster economic growth than expected in the baseline scenario. This could be caused by significant progress in suppressing the pandemic in emerging and developing countries and greater adaptation of the behaviour of economic entities to functioning amid a fading pandemic. The effectiveness and acceleration of the rate of vaccination or the introduction of a new, effective drug against coronavirus would contribute to the permanent suppression of the pandemic. This scenario may be realised by a significant increase in the supply of vaccines in emerging and developing economies resulting from the appearance of new suppliers and the development of new technology to create and modify jabs rapidly. At the same time, the willingness of the public in developed countries to get vaccinated might increase in response to optimistic reports about the effectiveness of the vaccination programmes in countries with the highest share of vaccinated people and social acceptance of so-called Covid passports. With some probability, the SARS-CoV-2 virus might also mutate into a milder course of infection and become a relatively harmless pathogen similar to seasonal viruses (corresponding to influenza).

In the case of such an optimistic course of events, the rules regarding conducting economic activity would return to the state similar before the pandemic, and household and business sentiment would improve. Consumers would be able to meet their deferred demand through increased income from work and funds saved during the lockdown and when fears of infection ran high. Stronger growth in household disposable income, resulting from an improvement in business conditions, would also boost housing expenditure, assuming continued low interest rates. The lower operating costs of companies related to an easing of the sanitary regime would also have a positive impact on economic activity.

Besides a faster than expected suppression of the pandemic, increased support from economic policy, for example the launch of the fiscal packages announced in the United States – the American Jobs Plan and the American Families Plan – could also contribute to a rebound in global economic activity. A more durable acceleration in productivity growth thanks to the investments in digitalisation and automation as well as changes in the organisation of work implemented as a result of the pandemic could also be a source of faster growth in global economic activity than assumed in the baseline scenario. In addition, a higher GDP growth path could materialise in the euro area if the negative effects of Brexit prove to be milder, and the stimulating impact of funds from the Next Generation EU instrument prove stronger than assumed.

The realisation of the optimistic scenario may be supported by the fiscal measures taken in Poland, including the launch of the Polish Deal announced by the government, what might have a positive impact on the situation of economic entities, allowing relatively fast economic activity growth and a recovery of potential output.

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 financial situation. In turn, the risk of a significant deviation of meteorological conditions compared to the long-term average in Poland and in countries that are significant food producers as well as the further spread of animal diseases are additional sources of uncertainty for food price developments over the projection horizon.

Table 4.4 Central path of inflation and GDP projection

	2020				2021				2022				2023				2020	2021	2022	2023
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Consumer Price Index CPI (%, y/y)	4.5	3.2	3.0	2.8	2.7	4.5	4.6	4.7	4.1	3.3	3.0	3.0	3.2	3.4	3.5	3.5	3.4	4.2	3.3	3.4
Core inflation (net of food and energy prices, %, y/y)	3.4	3.8	4.2	4.1	3.8	3.8	3.5	3.3	3.2	3.0	3.2	3.3	3.4	3.5	3.5	3.5	3.9	3.6	3.2	3.5
Food prices (%, y/y)	7.7	6.4	3.2	1.7	0.6	1.5	3.2	4.2	3.5	2.6	2.4	2.4	2.9	3.2	3.3	3.3	4.7	2.4	2.7	3.2
Energy prices (%, y/y)	3.6	-4.2	-1.6	-0.1	2.6	12.2	11.4	10.6	8.4	5.5	3.6	2.7	2.8	3.4	3.7	3.8	-0.6	9.1	5.0	3.4
GDP (%, y/y)	2.0	-8.3	-1.7	-2.7	-0.9	10.9	4.3	6.4	5.9	5.4	5.2	5.2	5.3	5.4	5.5	5.1	-2.7	5.0	5.4	5.3
Domestic demand (%, y/y)	0.9	-9.5	-3.2	-2.9	1.0	12.4	6.1	8.5	7.6	7.6	6.6	6.1	6.1	6.3	6.4	5.9	-3.7	6.6	7.0	6.2
Household consumption (%, y/y)	1.2	-10.8	0.4	-3.2	0.2	14.1	1.5	7.8	6.6	6.4	5.9	5.3	5.5	5.6	5.6	5.7	-3.0	5.5	6.0	5.6
Public consumption (%, y/y)	2.5	3.4	3.0	7.7	2.5	4.5	3.6	0.9	3.2	4.4	3.9	4.3	4.6	5.1	4.8	4.2	4.4	2.8	4.0	4.7
Gross fixed capital formation (%, y/y)	1.7	-9.8	-8.2	-15.4	1.3	8.8	10.9	16.4	11.8	9.8	9.3	11.2	9.9	11.0	11.5	8.6	-9.6	8.2	10.5	10.2
Contribution of net exports (percentage points, y/y)	1.1	0.8	1.4	0.1	-1.9	-0.5	-1.6	-1.9	-1.6	-2.0	-1.4	-0.9	-0.8	-0.9	-0.9	-0.8	0.8	-1.3	-1.5	-0.9
Exports (%, y/y)	2.7	-13.7	2.3	7.6	5.7	26.8	8.8	6.2	9.3	11.4	12.0	12.4	10.1	8.5	7.2	6.7	-0.2	11.5	11.3	8.1
Imports (%, y/y)	0.8	-16.6	-0.3	8.2	10.0	32.5	12.3	9.8	12.4	15.4	14.6	14.0	11.5	9.9	8.7	8.0	-1.9	14.7	14.1	9.5
Gross wages (%, y/y)	7.7	3.8	4.8	5.0	6.6	9.4	8.6	8.3	7.9	7.8	7.9	7.7	7.7	7.8	7.9	8.0	5.3	8.1	7.8	7.9
Total employment (%, y/y)	0.9	-1.3	-0.6	0.5	-0.1	1.6	0.8	-0.1	0.1	0.4	0.4	0.3	0.2	0.2	0.3	0.4	-0.1	0.6	0.3	0.2
Unemployment rate (%)	2.9	3.4	3.3	3.0	3.0	3.4	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.5	2.3	3.1	3.2	2.9	2.5
NAWRU (%)	3.7	4.5	4.5	4.5	4.5	4.4	4.4	4.3	4.2	4.1	4.0	3.8	3.8	3.7	3.6	3.6	4.3	4.4	4.0	3.7
Labour force participation rate (%, y/y)	56.4	55.5	56.0	56.4	56.5	56.6	56.6	56.6	56.7	56.7	56.6	56.6	56.6	56.5	56.5	56.5	56.1	56.6	56.7	56.5
Labour productivity (%, y/y)	1.1	-7.1	-1.0	-3.2	-0.8	9.1	3.5	6.4	5.8	4.9	4.8	4.9	5.1	5.2	5.2	4.7	-2.6	4.4	5.1	5.1
Unit labour cost (%, y/y)	6.5	11.7	5.9	8.4	7.4	0.0	5.0	1.8	2.0	2.8	3.1	2.7	2.5	2.5	2.7	3.2	8.1	3.5	2.7	2.7
Potential output (%, y/y)	3.9	0.9	1.4	0.7	0.9	3.7	3.2	3.9	4.1	4.3	4.5	4.5	4.5	4.4	4.3	4.4	1.7	2.9	4.3	4.4
Output gap (% potential GDP)	0.8	-6.9	-1.0	-2.0	-1.0	-0.4	0.1	0.3	0.7	0.6	0.7	1.0	1.5	1.6	1.8	1.8	-2.2	-0.2	0.8	1.7
Index of agricultural commodity prices (EUR; 2011=1.0)	0.96	0.89	0.86	0.87	0.92	0.99	0.97	0.96	0.96	0.99	0.98	0.96	0.96	0.98	0.98	0.97	0.90	0.96	0.97	0.97
Index of energy commodity prices (USD; 2011=1.0)	0.52	0.35	0.41	0.53	0.68	0.79	0.86	0.85	0.84	0.72	0.69	0.70	0.71	0.66	0.64	0.67	0.45	0.79	0.74	0.67
Inflation abroad (%, y/y)	1.8	2.7	1.6	1.9	2.4	0.9	1.6	1.1	0.5	1.0	1.4	1.6	1.7	1.7	1.7	1.7	2.0	1.5	1.1	1.7
GDP abroad (%, y/y)	-2.6	-14.4	-4.4	-4.6	-2.0	13.5	3.8	5.0	6.4	5.0	3.2	2.5	2.1	1.8	1.7	1.6	-6.5	4.8	4.3	1.8
Current and capital account balance (% GDP)	3.3	4.6	5.2	5.9	5.3	4.8	4.4	3.3	3.3	2.7	2.3	2.0	1.7	1.6	1.4	1.2	5.9	3.3	2.0	1.2
WIBOR 3M (%)	1.62	0.58	0.24	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.66	0.21	0.21	0.21

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

For the majority of variables, the values up to Q1 2021 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 February – May 2021[66]

■ Date: 3 March 2021

Subject matter of motion or resolution:
Resolution No. 1/2021 on the National Cash Security Strategy.

Voting of the MPC members:

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

G. M. Ancyparowicz was absent.

■ Date: 7 April 2021

Subject matter of motion or resolution:
Motion to raise the required reserve ratio to 3.5%, while keeping at 0% the required reserve ratio on deposits above 2 years.

MPC decision:
Motion did not pass.

Voting of the MPC members:

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

R. Sura was absent.

[66] This chapter does not include voting on resolutions No. 3/2021, 4/2021 and 5/2021 of 5 May 2021, which have not yet been published in the Court and Commercial Gazette (*Monitor Sądowy i Gospodarczy*). Voting on these resolutions will be included in the next *Inflation Report*.

Date: 7 April 2021

Subject matter of motion or resolution:

Motion to lower the remuneration of the required reserves from 0.10% to 0.01%.

MPC decision:

Motion did not pass.

Voting of the MPC members:

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

R. Sura was absent.

Date: 7 April 2021

Subject matter of motion or resolution:

Resolution No. 2/2021 on approving the annual financial report of the National Bank of Poland prepared as of 31 December 2020.

Voting of the MPC members:

For:	Against:
A. Glapiński	
E. Gatnar	
Ł. J. Hardt	
C. Kochalski	
J. J. Kropiwnicki	
E. M. Łon	
K. Zubelewicz	
J. Żyżyński	

G. M. Ancyparowicz and R. Sura were absent.

■ Date: 5 May 2021

Subject matter of motion or resolution:
Motion to raise the required reserve ratio to 3.5%, while keeping at 0% the required reserve ratio on deposits above 2 years.

MPC decision:
Motion did not pass.

Voting of the MPC members:

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

■ Date: 5 May 2021

Subject matter of motion or resolution:
Motion to lower the remuneration of the required reserves from 0.10% to 0.01%.

MPC decision:
Motion did not pass.

Voting of the MPC members:

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

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