NARODOWY BANK POLSKI

Monetary Policy Council

November 2023

Inflation Report

November 2023

Inflation Report

Warsaw, 2023

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 and Research Department of Narodowy Bank Polski (NBP). In terms of the contents, works on the projection have been supervised by Director of the Economic Analysis and Research 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. Chapters 1 and 2 of the *Report* include data available until 1 November 2023, while the projection of inflation and GDP presented in Chapter 4 has been prepared taking into account data available until 23 October 2023.

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

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Summary

In the recent period, economic conditions in the external environment of the Polish economy have remained subdued. In both 2023 Q2 and Q3 annual GDP growth in the euro area was declining and remained significantly below its long-term average, while in the United States it was accelerating. Alongside that, in the region of Central and Eastern Europe annual GDP growth remained close to zero in 2023 Q2. Global economic conditions continued to be negatively affected by the effects of the earlier strong rise in commodity prices, the tightening of financing conditions in many advanced economies and elevated uncertainty. Against this background, global industrial output growth remained slow, and global trade volume growth declined. Moreover, activity growth in the service sector slowed down in 2023 Q3. On the other hand, activity growth was supported by still very good labour market situation in most economies.

Since the previous *Inflation Report*, inflation in the euro area as well as in the Central and Eastern European countries has continued to decline, although it remained elevated. In turn, average global inflation in September 2023 was running at a similar level as in May 2023. In recent months, global disinflation has been hampered by faster annual energy price growth, resulting from base effects and some rise in energy commodity prices. Core inflation in most of the largest economies in the world and in Poland's immediate environment declined, yet it remained heightened. Given lower commodity prices than a year earlier and the easing of global supply chain tensions, cost pressure was limited, which in many countries was reflected in low growth in producer prices.

Prices of agricultural and energy commodities in the global markets have increased in the recent period, although they continue to run below the record high levels observed last year. At the same time, they are still much higher than before the outbreak of the COVID-19 pandemic due to the continuing limited supply in certain commodity markets.

In the recent period, many central banks in advanced economies have raised interest rates or have kept them unchanged following earlier hikes. In turn, some central banks in emerging market economies have eased their monetary policy. The expectations of financial market participants implied from the valuation of financial instruments point to a possibility that interest rates in many economies will be gradually lowered in the coming years, yet may continue to run significantly higher than before the COVID-19 pandemic.

In the global financial markets, government bond yields have risen in most economies over recent months, while equity prices have declined. At the same time, the US dollar has strengthened against the euro and the currencies of the Central and Eastern Europe economies.

Annual consumer price growth in Poland has continued to decline significantly in recent months (to 8.2% in September and, according to the Statistics Poland flash estimate, 6.5% in October compared to 11.5% in June and a peak of 18.4% in February 2023). The biggest driver of the fall in CPI inflation from June to September 2023 was the lower annual growth in prices of food and non-alcoholic beverages as well as non-food products. To a lesser extent, lower inflation was also the result of the declining annual growth in

prices of services. Annual consumer price growth fell amid reduced consumer demand and the fading of cost pressure driven, among others, by external supply shocks, including the consequences of Russia's military aggression against Ukraine. The decline in inflation was also due – although to a limited extent – to regulatory factors (the extension of the programme of free medicines as well as the raising of the consumption limits guaranteeing lower electricity bills for households from September 2023). In recent months growth in industrial producer prices (PPI) has declined and has been negative since July 2023.

Amid sluggish economic activity in the environment of the Polish economy, domestic economic conditions also remained subdued in the recent past. The annual GDP growth in 2023 Q2 was slightly negative (-0.6% y/y compared to -0.3% y/y in 2023 Q1), with a further decline in consumption. Similarly to the previous quarter, the change in inventories also had a marked negative contribution to GDP growth. By contrast, the relatively high growth in investment and the positive contribution of net exports worked in the opposite direction. At the same time, in 2023 Q2, the gross financial result of the enterprise sector in nominal terms did not change significantly on the 2022 Q2 figure. The available monthly data show that the economic conditions in 2023 Q3 continued to be weak, albeit better than in 2023 Q2.

In the first half of 2023, the general government deficit in ESA2010 terms amounted to PLN 42.5 billion (1.2% of GDP), compared to a deficit of PLN 2.6 billion (0.1% of GDP) in the same period of 2022. The deterioration was due to, among others, changes in the tax system which came into force in January and July 2022. In line with the autumn fiscal notification, at the end of 2023 the general government debt-to-GDP ratio (in ESA2010 terms) will amount to 49.3%, i.e. it will remain at the same level as at the end of 2022.

The situation in the labour market remains good, as evidenced by the low unemployment rate and high level of employment. At the same time, amid weaker economic activity in the recent period, employment growth and growth in nominal wages have slowed down.

Against the backdrop of the observed and forecasted decline in inflation, NBP interest rate cuts and a downward revision of market participants' expectations about the level of interest rates over several quarters' horizon, despite a rise in government bond yields in the major economies, yields on Polish government bonds have been relatively stable in recent months. In turn, the exchange rate of the zloty – similarly to currencies of other economies of Central and Eastern Europe – has weakened against the US dollar. Meanwhile, the zloty exchange rate against the euro – after a temporary weakening in September 2023 – has run close to the June 2023 level.

The annual growth of the M3 aggregate increased in 2023 Q3; however, it still ran slightly below its long-term average. At the same time, both household and corporate loan debt declined in annual terms.

The current account balance improved again in 2023 Q2, which was a result of the improved balance of trade in goods. This was accompanied with a slight decline in both the positive balance of services and the negative balance of primary income. 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 July and September

2023, together with the *Information from the meetings of the Monetary Policy Council* in October and November 2023. Chapter 5 presents the Monetary Policy Council voting records from the meetings held between May and September 2023.

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 projection, prepared under the assumption of unchanged NBP interest rates and taking into account data available until 23 October 2023, there is a 50-percent probability that the annual price growth will be in the range of 11.3 – 11.5% in 2023 (against 11.1 – 12.7% in the July 2023 projection), 3.2 – 6.2% in 2024 (compared to 3.7 – 6.8%) and 2.2 – 5.3% in 2025 (compared to 2.1 – 5.1%). At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of -0.1 – 0.6% in 2023 (against -0.2 – 1.3% in the July 2023 projection), 1.9 – 3.8% in 2024 (compared to 1.4 – 3.3%) and 2.4 – 4.7% in 2025 (compared to 2.1 – 4.4%).

1. External developments

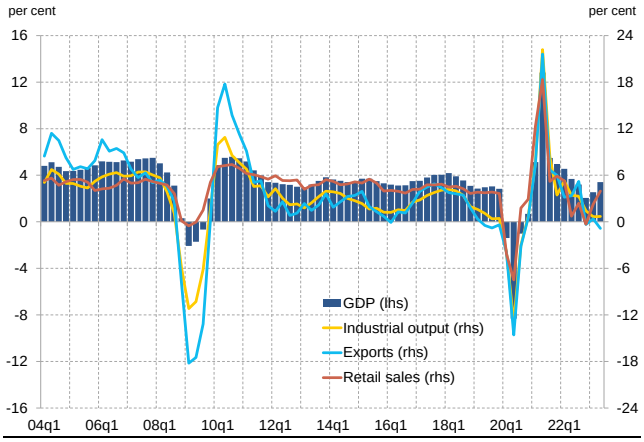
1.1 Economic activity abroad

In the recent period, economic conditions in the external environment of the Polish economy have remained subdued (Figure 1.1). In both 2023 Q2 and Q3 annual GDP growth in the euro area was declining and remained significantly below its long-term average, while in the United States it was accelerating. Alongside that, in the region of Central and Eastern Europe annual GDP growth remained close to zero in 2023 Q2.

Global economic conditions continued to be negatively affected by the effects of the earlier strong rise in commodity prices, the further tightening of financing conditions in many advanced economies and elevated uncertainty. Against this background, global industrial output growth remained slow, and global trade volume growth declined. Moreover, activity growth in the service sector slowed down in 2023 Q3. On the other hand, activity growth was supported by still very good labour market situation in most economies.

In the euro area, GDP growth in 2023 Q2 slowed down to 0.5% y/y (compared to 1.2% y/y in 2023 Q1; Figure 1.2).[1] This was largely due to a decline in exports, which reduced the contribution of net exports to zero. In addition, amid the still elevated inflation and weak consumer sentiment, private consumption growth decreased. At the same time, higher borrowing costs contributed to a further decline in housing investment. According to the Eurostat preliminary flash

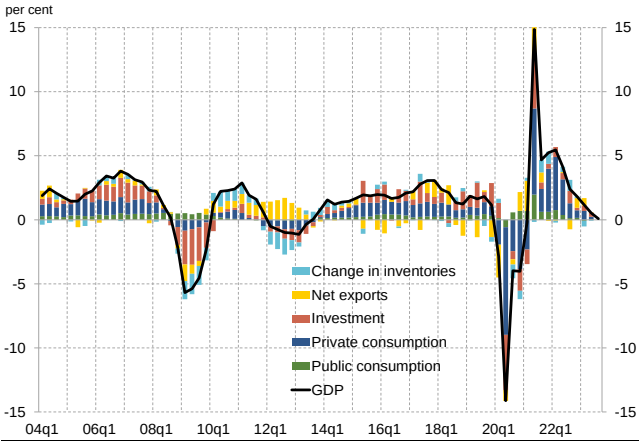
Figure 1.1 Global GDP growth and economic activity indicators (y/y)



Source: Bloomberg, Datastream, Centraal Planbureau, OECD, Eurostat, IMF and national stratistical offices data, NBP calculations.

The growth in GDP, industrial output and retail sales are calculated using weights based on GDP expressed in purchasing power parity (PPP). The sample consists of 58 economies comprising over 80% of global GDP expressed in PPP. Growth in global exports according to Centraal Planbureau. Due to limited availablility of data from some countries, the sets of economies used for calculating each time series differ slightly.

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



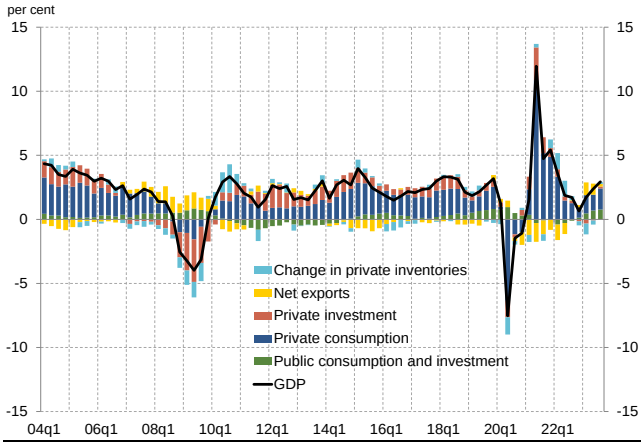
Source: Eurostat data, NBP calculations.

[1] In quarterly terms, the GDP growth in the euro area increased by 0.2% q/q in 2023 Q2, following a stagnation in 2023 Q1.

estimate, GDP growth in Q3 slowed again (to 0.1% y/y).[2] The situation in the labour market continued to be good and the unemployment rate in August 2023 was running at the lowest level in the history of the euro area (6.4%).

In the United States, GDP growth picked up to 2.4% y/y in 2023 Q2 (compared to 1.7% y/y in 2023 Q1), and the advance estimate for 2023 Q3 points to its further growth to 2.9% y/y (Figure 1.3).[3] Other factors contributing to higher GDP growth in 2023 Q2 included the smaller scale of the decline in private investment, the smaller negative contribution of changes in inventories and stronger growth in public consumption. In turn, the main cause of the rise in annual GDP growth in Q3 was accelerated private consumption. The situation in the labour market remained favourable in 2023 Q3. In particular, employment growth continued, and the unemployment rate, despite a slight rise, remained low (3.8% in September 2023).

Figure 1.3 GDP growth in the United States and its components (y/y)



Source: Bureau of Economic Analysis data, NBP calculations.

In China, GDP growth was 6.3% y/y in 2023 Q2[4] and 4.9% y/y in 2023 Q3 (compared to 4.5% y/y in 2023 Q1). With the fading of the recovery in private consumption that followed the departure from the restrictive pandemic policy of "zero-COVID", activity growth was increasingly constrained by the persistent downturn in the real estate market and the continuation of weak external demand.

In the Central and Eastern European countries outside the euro area,[5] GDP growth remained slow in 2023 Q2 (0.1% y/y in 2023 Q2 compared to 0.0% y/y in 2023 Q1). The slower GDP growth was primarily due to the highly negative contribution of changes in inventories. Moreover, against the

[2] In quarterly terms, the GDP growth in the euro area declined by 0.1% q/q in 2023 Q3, according to the Eurostat preliminary flash estimate.
[3] In quarterly terms, GDP in the United States grew by 2.1% saar in 2023 Q2, compared to 2.2% saar in 2023 Q1, while the advance estimate for 2023 Q3 points to a rise of 4.9% saar.
[4] The strong annual GDP growth in 2023 Q2 largely reflected the low base effect related to the marked decline in economic activity in China in 2022 Q2 due to an increase in COVID-19 infections.
[5] Aggregate GDP growth in the Czech Republic, Hungary and Romania, in annual terms.

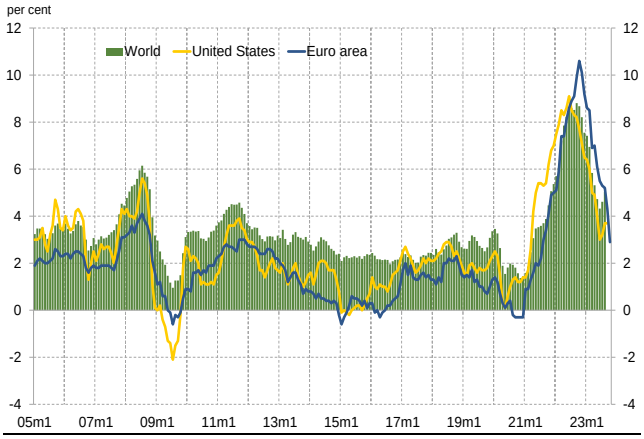
background of elevated inflation, weakened consumer sentiment and the effects of previously implemented tightening of the monetary policy, annual private consumption growth was close to zero, and annual investment growth continued to deteriorate. In turn, economic growth was primarily supported by net exports. The unemployment rate remained low (on average 4.0% in August 2023).

1.2 Inflation developments abroad

Since the previous *Inflation Report*, inflation in the euro area as well as in the Central and Eastern European countries has continued to decline, although it remained elevated (Figure 1.4). In turn, average global inflation in September 2023 was running at a similar level as in May 2023. In recent months, global disinflation has been hampered by faster annual energy price growth, resulting from base effects and some rise in energy commodity prices (see Chapter 1.3 *Global commodity markets*). Core inflation in most of the largest economies in the world and in Poland's immediate environment declined, yet it remained heightened (Figure 1.5).[6] Given lower commodity prices than a year earlier and the easing of global supply chain tensions, cost pressure was limited, which in many countries was reflected in low growth in producer prices (Figure 1.6).

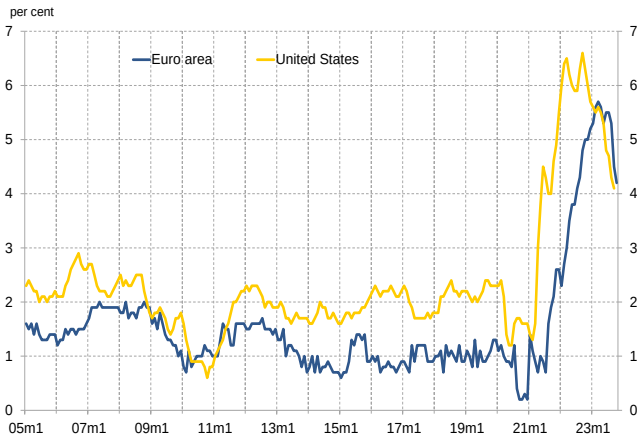
In the euro area, HICP inflation slowed to 4.3% y/y in September 2023 (compared to 6.1% y/y in May 2023), reaching the lowest level in nearly two years.[7] Weaker food price growth and a fall in energy prices were the key factors behind the decline in annual price growth since May 2023. Core inflation also fell (to 4.5% y/y in September compared to 5.3% y/y in May 2023), although it continued to run above its long-term average. The fall in core inflation was mainly driven by the

Figure 1.4 CPI inflation globally and in selected economies (y/y)



Source: Bloomberg and IMF data, NBP calculations.
World – consumer price inflation in economies whose total share in GDP PPP in 2020 amounted to 84% according to IMF estimates, weighted by GDP in PPP. The United States – annual CPI inflation. Euro area – annual HICP inflation. Euro area HICP inflation in October 2023 according to the flash Eurostat estimate.

Figure 1.5 Core inflation rate in the United States and the euro area (y/y)



Source: Eurostat and Bureau of Labor Statistics data.
For the United States – CPI inflation excluding food and energy prices. For the euro area – HICP inflation excluding energy, food, alcohol and tobacco. Euro area core inflation in October 2023 according to the flash Eurostat estimate.

[6] Core inflation is understood as the domestic CPI index (the HICP index for the euro area) excluding food and energy prices (in the case of the euro area also excluding the prices of alcoholic beverages and tobacco products).
[7] In October 2023, according to the flash Eurostat estimate, in the euro area HICP and core inflation stood at 2.9% y/y and 4.2% y/y, respectively.

lower growth in industrial goods prices, accounted for by flagging demand and the fading of supply chain disruptions, while the growth of services prices declined only slightly (it stood at 4.7% y/y in September compared to 5.0% y/y in May 2023).

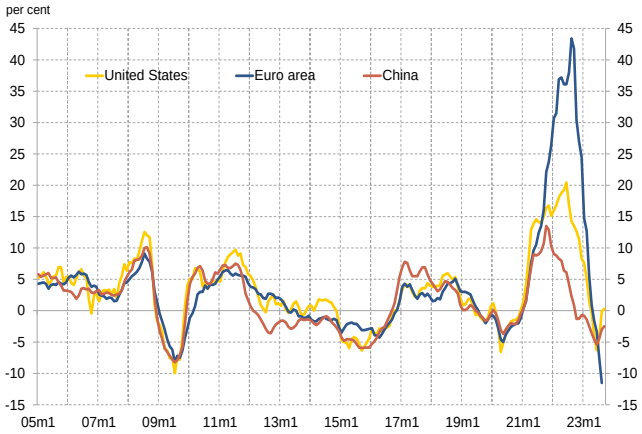
Since the previous *Report*, CPI inflation in the United States fell from 4.0% y/y in May 2023 to 3.0% y/y in June, and then – due to higher energy price growth – it rose to 3.7% y/y in September 2023. CPI core inflation, in turn, declined to 4.1% y/y in September (compared to 5.3% y/y in May 2023) reaching the lowest level in two years, amid still significantly higher growth in services prices than in goods prices.

In the Central and Eastern European countries outside the euro area, annual CPI inflation has fallen significantly since May 2023 (Figure 1.7), dragged down mainly by lower food price growth. In the Czech Republic and Hungary, a decline in both core inflation and annual energy price growth also added to the fall in CPI inflation. In September 2023, CPI inflation declined in the Czech Republic to 6.9% y/y (compared to 11.1% y/y in May 2023), in Hungary to 12.2% y/y (compared to 21.5% y/y in May 2023) and in Romania to 8.8% y/y (compared to 10.6% y/y in May 2023).

1.3 Global commodity markets

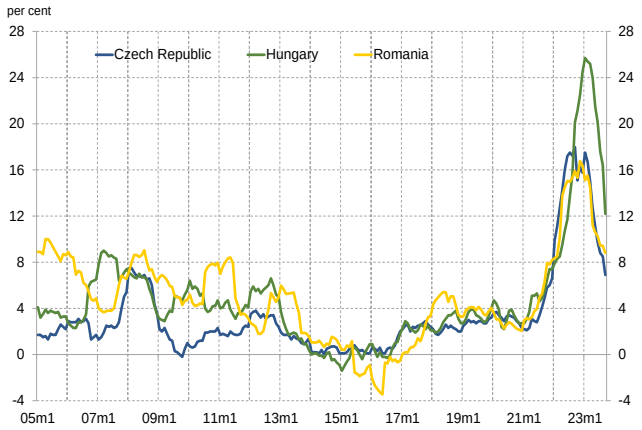
Prices of agricultural and energy commodities in the global markets have increased in the recent period, although they continue to run below the record high levels observed last year. At the same time, they are still much higher than before the outbreak of the COVID-19 pandemic due to the continuing limited supply in certain commodity markets.

Figure 1.6 Producer price inflation index in selected economies (y/y)



Source: Eurostat, Bureau of Labor Statistics and Datastream data.
For the United States – producer price growth in sectors of manufacturing industry, for the euro area and China – producer price growth in industry.

Figure 1.7 CPI inflation in the Czech Republic, Romania and Hungary (y/y)



Source: national statistical offices.

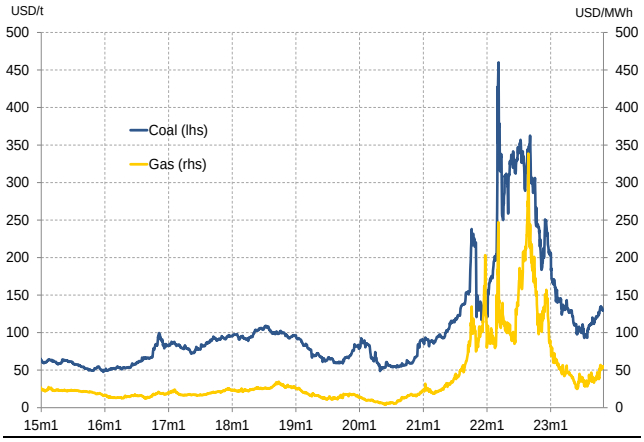
From June to October 2023,[8] the average price of Brent oil increased by more than 18%, yet remained approx. 5% lower than a year ago (Figure 1.8) and, at the same time, 54% higher than the 2015-2019 average. Oil price increases were mainly driven by the policy of oil supply cuts pursued by OPEC+ countries (mainly Saudi Arabia and Russia). Oil price increases were also caused by EU sanctions imposed on Russia and the price cap introduced on Russian oil,[9] and recently also by the escalation of geopolitical tensions in the Middle East. On the other hand, the scale of oil price increases is limited by lower growth in demand for oil and petroleum products amid weakened business conditions in many economies (see Chapter 1.1 *Economic activity abroad*).

Figure 1.8 Brent oil barrel price

Source: Bloomberg data.

In the recent months, prices of natural gas and coal have also picked up, although they have continued to run markedly below the previous year's level (Figure 1.9). Due to structural changes in the markets for these commodities, their prices have been running significantly above the average levels recorded before the COVID-19 pandemic (by around 148% and 73%, respectively, compared to the 2015-2019 average). The rise in natural gas prices in the recent months is largely the effect of seasonal factors and the developments that increase uncertainty about the possibilities of satisfying demand for these commodities in various regions all over the world.[10] Higher gas prices also contribute to higher coal prices. On the other hand, the very high level of natural gas reserves in the EU curbs growth in European gas prices.

Figure 1.9 Hard coal and natural gas prices



Source: Bloomberg data, NBP calculations.

Prices express prices of Dutch TTF Natural Gas Futures and Coal FOB Richards Bay Futures one-month-ahead contracts. USD/t – price expressed in US dollar per metric tonne. USD/MWh – price expressed in US dollar per megawatt hour.

[8] Average monthly energy commodity prices were calculated on the basis of daily data available up to 27 October 2023.

[9] On 5 December 2022 the EU banned seaborne crude oil imports from Russia, and as of 5 February 2023, the sanctions also cover petroleum products (fuels). Additionally, on 5 December 2022, the G7 countries, the EU and Australia agreed to cap Russian oil at 60 USD/b, prohibiting the provision of maritime services to ships transporting Russian oil sold above the established cap, which results in limiting the destinations of oil imports among the signatory countries of the agreement. The EU also banned the import of coal and other solid fuels from Russia as of 10 August 2022. In the case of Poland, coal imports from Russia and Belarus have been banned since 16 April 2022 under the Act on special measures to counteract the support of aggression against Ukraine and to protect national security.

[10] Among others, strikes by LNG plant workers in Australia, failure of the undersea gas pipeline connecting Estonia with Finland and mounting geopolitical tensions in the Middle East.

In the period from June to October 2023, NBP's agricultural price index[11] increased by approx. 4%, yet remained 3% below the level recorded a year ago (Figure 1.10). At the same time, the prices of agricultural commodities were markedly higher than before the COVID-19 pandemic (more than 50% above the 2015-2019 average). The rise in agricultural commodity prices in the recent months has been driven by falling supply in certain markets (i.e. orange juice, cacao, milk, butter and wheat). On the other hand, the prices of European pork have fallen markedly on account of low import demand and declining prices of its substitutes, among others, poultry.[12] In the recent months the prices of rapeseed have also fallen on the back of an increase in production in the current farming season.

Figure 1.10 Index of agricultural commodity prices

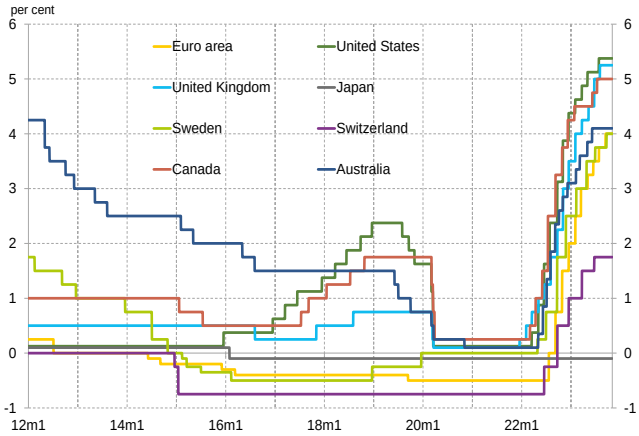
Source: Bloomberg data, NBP calculations.

Index of agricultural prices includes prices of wheat, colza, pigmeat, 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

In the recent period, many central banks in advanced economies have raised interest rates or have kept them unchanged following earlier hikes (Figure 1.11). In turn, some central banks in emerging market economies have eased their monetary policy (Figure 1.12). The expectations of financial market participants implied from the valuation of financial instruments point to a possibility that interest rates in many economies will be gradually lowered in the coming years, yet may continue to run significantly higher than before the COVID-19 pandemic (Figure 1.13).

Figure 1.11 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 policy rate; for Canada – the overnight rate target; for Australia – the cash rate target.

Since the publication of the previous edition of the *Report*, the European Central Bank (ECB) has tightened its monetary policy. Since July 2022 the ECB has raised in ten steps – interest rates by a total of 4.50 percentage points, including the deposit rate to 4.00% in September 2023, and kept interest rates unchanged in October. The expectations of financial market participants point

[11] The agricultural price index includes data up to 27 October 2023.

[12] Pork prices decreased despite the ongoing limited pork supply and low pig population in the EU.

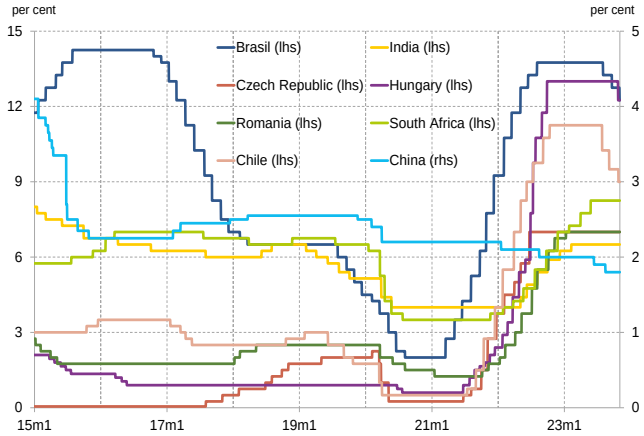
that ECB interest rates may stabilise in the coming months and then decline from mid-2024.

The Federal Reserve of the United States (the Fed) at its meeting held in July 2023 raised interest rates by 0.25 percentage points and in September and November kept them unchanged. Since March 2022, the Fed has raised interest rates by a total of 5.25 percentage points, and currently the target range for the fed funds rate is 5.25-5.50%. The majority of financial market participants expect interest rates to stabilise in the coming months and then probably decline from mid-2024.[13]

Since the publication of the previous edition of the *Report*, some central banks of advanced economies, including the United Kingdom, Canada, Sweden and Norway, have increased interest rates.[14] By contrast, in other advanced economies, including Switzerland, Australia and New Zealand, as well as Japan, central banks have kept interest rates unchanged.

In turn, some central banks in emerging market economies, including in Brazil, China, Chile and Hungary, have eased their monetary policy. On the other hand, central banks in, among others, India, Korea and Mexico have kept interest rates unchanged following earlier increases, and the central banks of, among others, Russia and Turkey have increased interest rates.

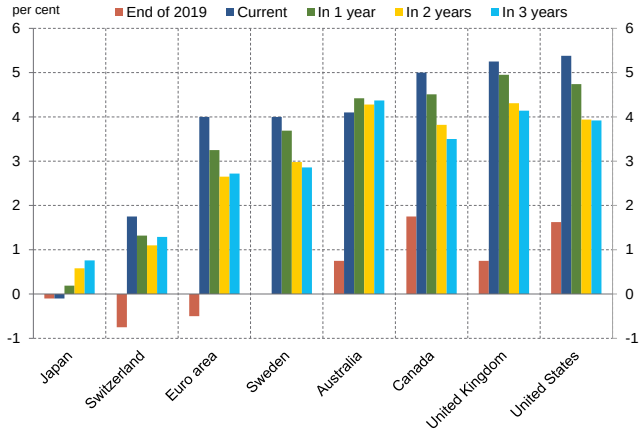
Figure 1.12 Central banks' interest rates in selected emerging market economies



Source: Bloomberg data.

Central bank interest rate: for Brasil – Selic Rate; for India – repo rate; for China – 7-day reverse repo; for Czech Republic – 2W repo rate; for Romania – Policy rate; for Hungary – base rate; for South Africa – repo rate; for Chile – monetary policy interest rate.

Figure 1.13 Past, current and expected by market participants level of central banks' interest rates in selected 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 policy rate; for Canada – the overnight rate target; for Australia – the cash rate target. Market expectatations according to Bloomberg based on IRS, as of 1 November 2023.

1.5 International financial markets

In recent months, sentiment in the global financial markets has been influenced by the weakened economic conditions in some of the largest economies and uncertainty about the economic outlook, coupled with mounting geopolitical tensions in the Middle East (see chapter 1.1 *Economic activity abroad*). At the same time, sentiment has been negatively affected by the

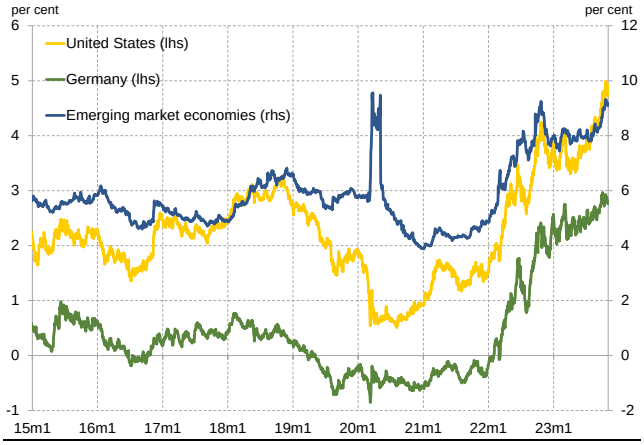
[13] In turn, the median projection of the Federal Open Market Committee (FOMC) members of September 2023 pointed to the possibility of another interest rate hike of 0.25 percentage points in 2023 and of a gradual interest rate cuts in the following years.
[14] Recently, the central banks of the United Kingdom (in September 2023) and Canada (in September and October 2023) decided to keep interest rates unchanged, following earlier increases.

monetary tightening by major central banks and by market expectations, according to which interest rates in many economies may, despite a likely decline, run significantly higher in the coming years than before the COVID-19 pandemic (see chapter 1.4 *Monetary policy abroad*).

Against this backdrop, government bond yields have risen in most economies, while in some advanced economies, including the United States and Germany, 10-year government bonds yields have reached the highest point in more than a decade (Figure 1.14). At the same time, equity prices, both in advanced and emerging economies, have declined recently (Figure 1.15).

Amid the slightly better economic outlook in the United States than in the euro area, the US dollar has strengthened against the euro and the currencies of the Central and Eastern Europe economies (Figure 1.16).

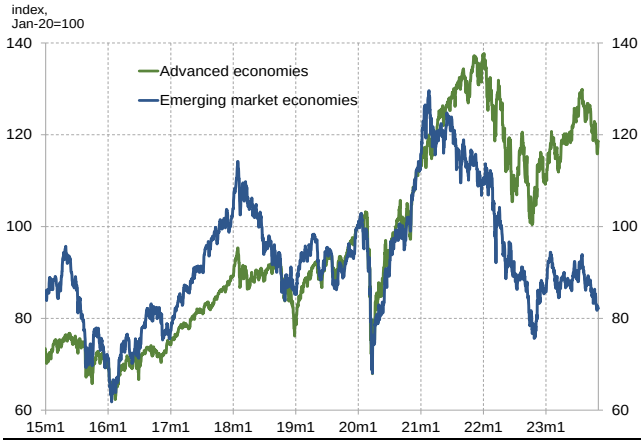
Figure 1.14 Yields on long-term government bonds



Source: Bloomberg data.

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

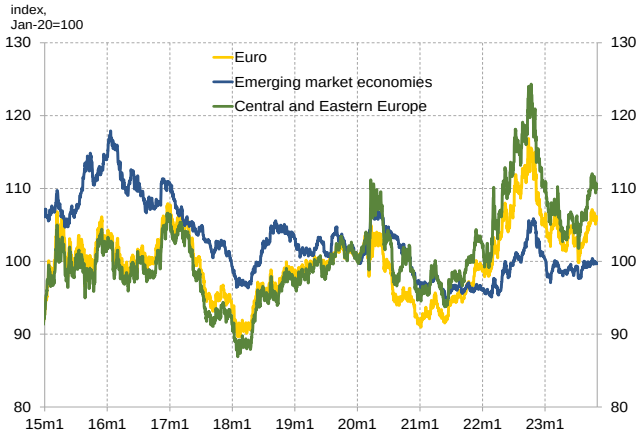
Figure 1.15 Equity prices



Source: Bloomberg data.

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

Figure 1.16 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.

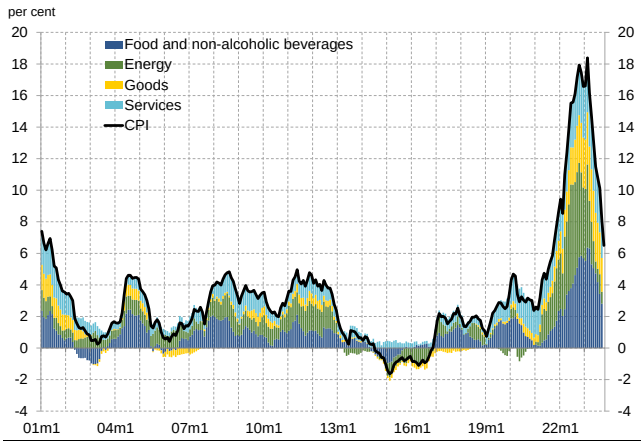
Emerging market economies – *MSCI Emerging Market Currency Index*; Central and Eastern Europe – GDP-weighted average of exchange rates of the Czech koruna, the Hungarian forint, and Romanian leu against the US dollar.

2. Domestic economy

2.1 Inflation developments

Annual consumer price growth in Poland has continued to decline significantly in recent months (to 8.2% in September and, according to the Statistics Poland flash estimate, 6.5% in October compared to 11.5% in June and a peak of 18.4% in February 2023; Figure 2.1).[15] The biggest driver of the fall in CPI inflation from June to September 2023 was the lower annual growth in prices of food and non-alcoholic beverages as well as non-food products. To a lesser extent, lower inflation was also the result of the declining annual growth in prices of services.

Figure 2.1 Composition of CPI inflation (y/y)



Source: Statistics Poland (GUS) data, NBP calculations.
CPI inflation in October 2023 – Statistics Poland flash estimate.

Annual consumer price growth fell amid reduced consumer demand and the fading of cost pressure driven, among others, by external supply shocks, including the consequences of Russia's military aggression against Ukraine. The decline in inflation was also due – although to a limited extent – to regulatory factors (the extension of the programme of free medicines as well as the raising of the consumption limits guaranteeing lower electricity bills for households from September 2023).

Inflation of food and non-alcoholic beverages prices declined from 17.8% y/y in June 2023 to 10.4% y/y in September 2023. Annual price growth of all groups of food products fell significantly due to the fading of cost pressure, declining demand (probably resulting from consumers limiting purchases of food with high price elasticity of

[15] At the same time, the level of consumer prices has declined in recent months (monthly CPI growth amounted to 0.0% in June, -0.2% in July, 0.0% in August, -0.4% in September, and according to the Statistics Poland flash estimate, 0.2% in October).

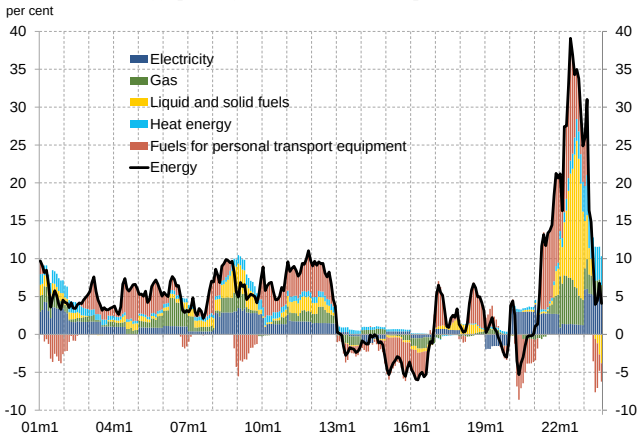
demand) and the intensification of nationwide campaigns by large retail chains.

Energy price inflation rose from 3.9% y/y in June 2023 to 6.8 % y/y in August 2023, and then declined to 4.1% y/y in September 2023 (Figure 2.2). Higher energy price inflation was driven by rising annual growth in prices of fuels for personal transport equipment (base effect due to the sharp fall in oil prices in the second half of 2022). On the other hand, the growth of inflation of energy prices was curbed by the decline in annual growth in prices of fuels and heat energy (due to the fading of price impulses caused by the increase in prices of energy commodities following Russia's military aggression against Ukraine and the introduction of the embargo on the import of coal from Russia and Belarus to Poland). The raising of the consumption limits guaranteeing lower electricity bills for households from September 2023 also contributed - to a limited extent - to lowering energy price growth.

Inflation excluding food and energy prices declined from 11.1% y/y in June 2023 to 8.4% y/y in September 2023 (Figure 2.3). The fall in this measure of core inflation resulted from the decline in annual growth of prices of a broad group of non-food products and services. This was supported by weakened demand making it difficult for companies to pass through on rising – although at a weaker pace than previously – production costs to final prices and the easing of global supply chain disruptions. In September 2023 the fall in core inflation was also a result – although to a limited extent – of new regulations, i.e. the extension of the programme of free medicines reimbursed to people up to the age of 18 and patients over 65. The decrease in CPI inflation excluding food and energy prices was accompanied by a fall in the remaining measures of core inflation, including CPI inflation excluding administered prices to 6.8%.

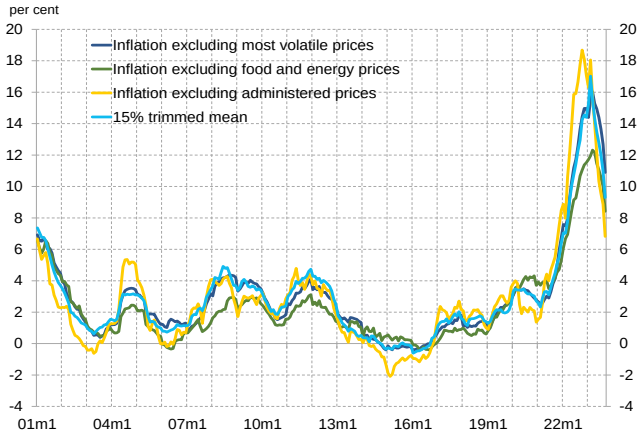
In recent months growth in industrial producer prices (PPI) has declined and has been negative

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



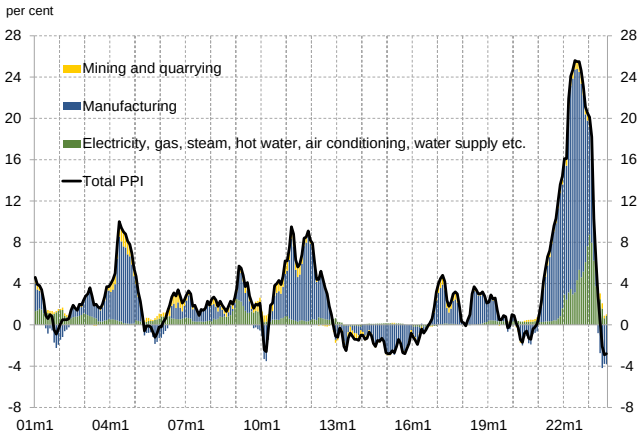
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.3 Core inflation indices (y/y)



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

Figure 2.4 Composition of PPI inflation (y/y)



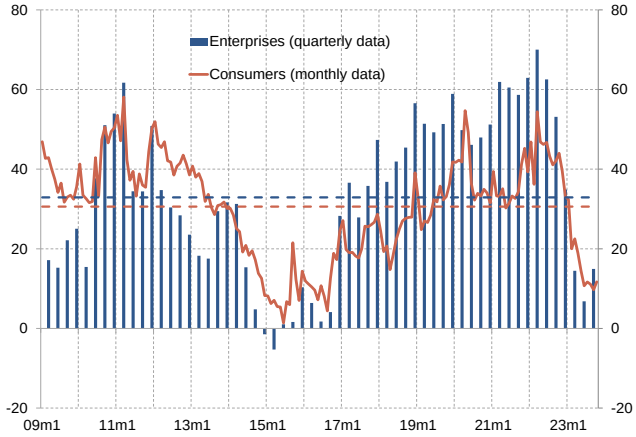
Source: Statistics Poland (GUS) and Eurostat data.

since July 2023 (-2.8% y/y in September 2023 compared to 0.3% y/y in June 2023; Figure 2.4). The slower growth of these prices reflects, to a large extent, the fading of the effects of the supply shocks – including those related to the outbreak of Russia's military aggression against Ukraine – amid flagging demand in both domestic and export production. The prices of supply goods declined significantly (by 8.0% y/y in September 2023), which had a curbing effect on growth of producer prices at the later stage of the value chain. At the same time, growth in prices of consumer goods included in the PPI index slowed down (to 0.1% y/y in September 2023 compared to 4.5% y/y in June).

The inflation expectations of consumers and enterprises measured by balance statistics have fallen markedly since 2022 Q2, which suggests a decline in inflation expectations in relation to the current level of inflation (enterprises) or perceived inflation (consumers). Balance statistics are currently markedly lower than the long-term average, despite their slight growth in October 2023 (consumers) and in 2023 Q3 (enterprices) (Figure 2.5). This growth was the result of, among others, the greater percentage of respondents expecting a rise in prices at a faster pace than current inflation (enterprices) and at a faster or similar rate than perceived inflation (consumers), while current and perceived inflation was lower than in previous surveys.

Financial sector analysts surveyed in October 2023 by Refinitiv expect inflation to decline to 5.7% in 2024 Q4 and 4.4% y/y in 2025 Q4 (Figure 2.6). According to this survey – and also the NBP Survey of Professional Forecasters from September 2023 – since the previous publication of the *Inflation Report* short-term inflation expectations of external experts (i.e. for 4 quarters) have declined significantly (Table 2.1). On the other hand, medium-term inflation expectations (i.e. for 8 quarters) of analysts surveyed by Refinitiv rose slightly, while according to the NBP Survey of Professional Forecasters they remained stable.

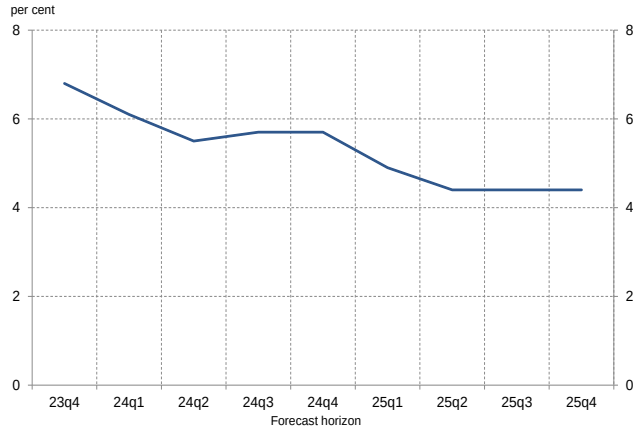
Figure 2.5 Balance statistics of consumer and enterprise inflation expectations



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

Dashed lines show long-term average (from 2008 Q3) of balance statistics. Balance statistics is defined as a difference between the fraction of respondents expecting a faster rise in prices or at the same pace as at present (or as currently perceived) and the percentage of respondents expecting no change or a fall in prices (with respective weights). A rise in balance statistics should be interpreted as a shift in opinions towards higher rise in prices.

Figure 2.6 Inflation forecasts of financial sector analysts in October 2023



Source: Refinitiv data.

Median of forecasts of analysts surveyed by Refinitiv.

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

	Survey conducted in:				
	22q4	23q1	23q2	23q3	23q4
Refinitiv Survey, inflation expected in 4 quarters	9.8	7.8	7.1	5.8	5.7
Refinitiv Survey, inflation expected in 8 quarters	5.3	4.3	4.1	4.0	4.4
NBP Survey, inflation expected in 4 quarters	9.6 (7.8-11.9)	7.5 (5.9-9.7)	7.1 (5.5-9.0)	6.1 (4.7-7.9)	-
NBP Survey, inflation expected in 8 quarters	6.0 (4.1-8.7)	4.8 (3.1-7.1)	4.6 (3.1-6.9)	4.6 (3.1-6.5)	-

Source: NBP and Refinitiv data.

Inflation expectations of the financial sector analysts show the median forecast of the analysts surveyed by Refinitiv in the last month of a given quarter, except 2023 Q4, where the forecast of October 2023 is presented.

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 (interpreted as the range of typical scenarios considered by the experts). The survey takes place in the last month of a given quarter.

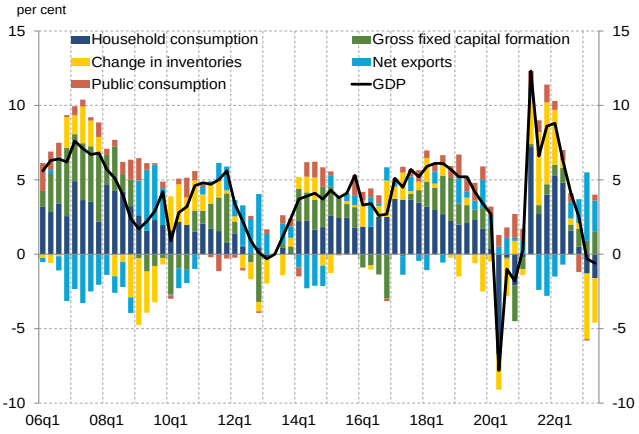
2.2 Demand and output

Amid sluggish economic activity in the environment of the Polish economy, domestic economic conditions also remained subdued in the recent past. The annual GDP growth in 2023 Q2 was slightly negative (-0.6% y/y compared to -0.3% y/y in 2023 Q1; Figure 2.7, Table 2.2), with a further decline in consumption. Similarly to the previous quarter, the change in inventories also had a marked negative contribution to GDP growth. By contrast, the relatively high growth in investment and the positive contribution of net exports worked in the opposite direction. The available monthly data show that the economic conditions in 2023 Q3 continued to be weak, albeit better than in 2023 Q2.

In 2023 Q2, household consumption decreased again in annual terms (by 2.8% y/y compared to a fall of 2.0% y/y in 2023 Q1). Consumption was negatively affected by the still weaker than before the pandemic – albeit improving – consumer sentiment (Figure 2.8) and the ongoing marked uncertainty caused by Russia's military aggression against Ukraine, as well as the consequences of the earlier supply shocks reducing the purchasing power of consumer income and the previously implemented interest rate cuts. Alongside that, the robust labour market situation continued to support consumption. Amid low unemployment, the ongoing relatively high rise in nominal wages and falling inflation, the real growth of the wage bill in the enterprise sector increased, although on average in 2023 Q2 it continued to be slightly negative (Figure 2.9).

Annual growth in gross fixed capital formation – which was relatively high in recent quarters – increased again in 2023 Q2 (Figure 2.10). In particular, according to the financial statements data, corporate investment picked up significantly, especially that of the largest enterprises. In annual terms, companies considerably increased their expenditure on plant and machinery and means of transport, while slightly decreased the scale of

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



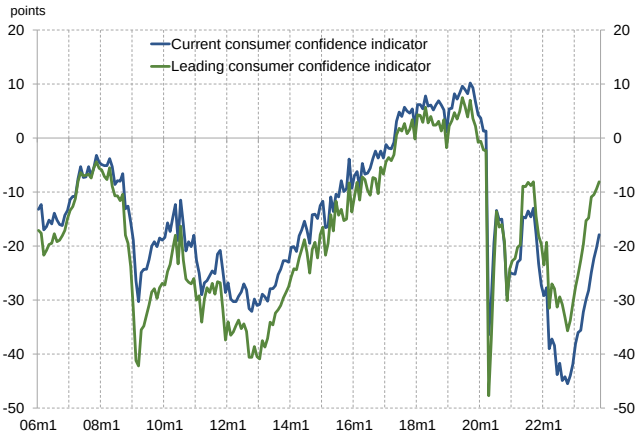
Source: Statistics Poland (GUS) data, NBP calculations.

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

	2021				2022				2023	
	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
GDP	**0.3**	**12.3**	**6.6**	**8.6**	**8.8**	**6.3**	**4.1**	**2.5**	**-0.3**	**-0.6**
Private consumption	-0.2	7.2	2.7	4.0	5.3	4.8	1.6	0.5	-1.3	-1.6
Public consumption	0.8	1.2	0.8	1.2	0.6	0.7	0.6	-1.2	-0.1	0.4
Gross fixed capital	-0.8	0.2	0.6	0.7	0.7	1.0	0.4	1.2	0.9	1.5
Change in inventories	-0.4	3.2	4.9	5.5	3.7	0.5	0.4	0.4	-4.4	-3.0
Net exports	0.9	0.5	-2.4	-2.8	-1.5	-0.7	1.1	1.6	4.6	2.1

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

Figure 2.8 Consumer confidence indicators



Source: Statistics Poland (GUS) data.

investment in construction. The largest contribution to investment growth continued to come from energy and manufacturing.

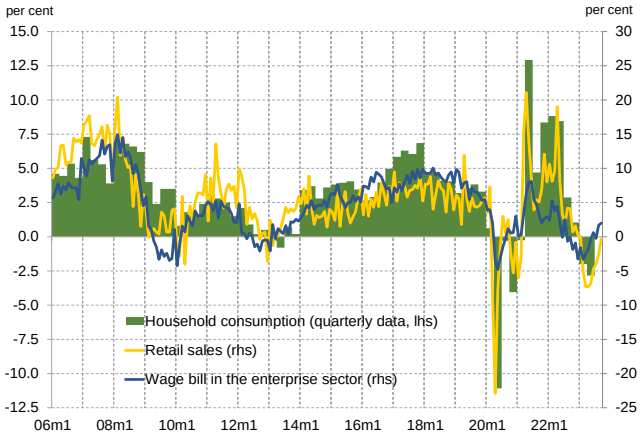
In 2023 Q2, the gross financial result of the enterprise sector in nominal terms did not change significantly on the 2022 Q2 figure (Figure 2.11).[16,17] At the same time, the result from operating activity was lower than in 2022 Q2 – annual growth in sales revenue lagged behind growth in sales costs, indicating enterprises' limited capacity to pass through their cost increases into the prices of final goods. In real terms, growth in sales revenue in 2023 Q2 was positive and slightly higher than the quarter before, yet still markedly lower than the 2021-2022 average.

In 2023 Q2, firms' profitability – measured both with the net turnover profitability indicator as well as the sales profitability indicator – continued to run above the 2010-2019 average, although it was lower than in 2022 Q2 (Table 2.3). However, businesses' profitability still varied considerably across industries.

In 2023 Q2, the liquidity position of firms was relatively good. Liquidity indicators (quick, financial and cash ratio) and the share of enterprises with safe cash ratio levels were above their long-term averages observed before the COVID-19 pandemic. At the same time, the cash liquidity ratio continued to decline gradually, following a previous increase related to the liquidity support to companies provided under the government anti-crisis measures launched after the onset of the pandemic.

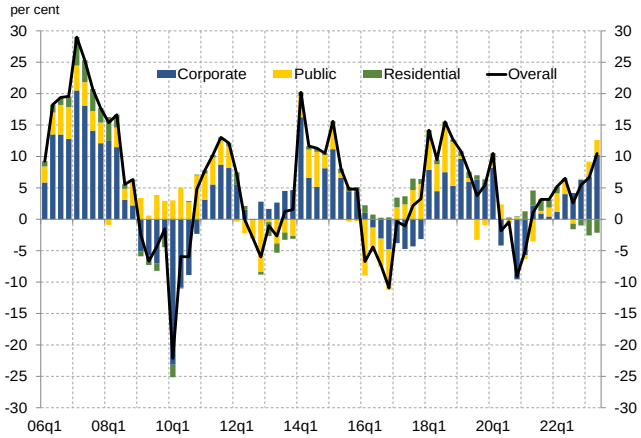
The NBP enterprise survey data indicate that investment sentiment in small and medium sized enterprises remained subdued in 2023 Q1 and Q2. At the same time, investment optimism of large

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



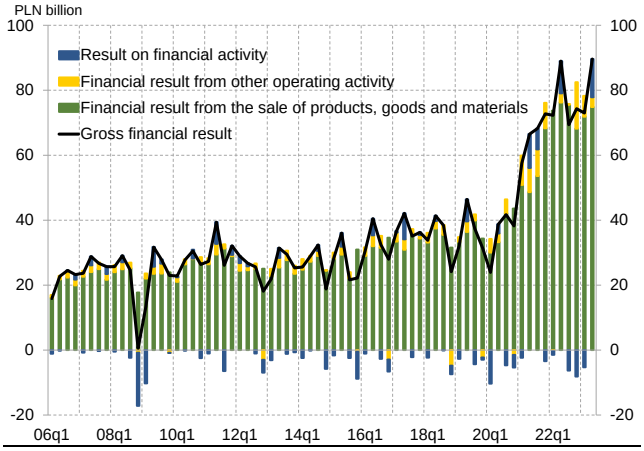
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.10 Growth in investment and its main components (y/y)



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

Figure 2.11 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).

[16] In 2023 Q2, the gross financial result of the enterprise sector in nominal terms was approx. twice as high as before the outbreak of the COVID-19 pandemic.

[17] The robust result on financial activity recorded in 2023 Q2 was related to the distribution of dividends on financial assets held by enterprises. In 2023 Q2, dividend distribution was high compared to the previous years on account of the high profits generated by enterprises in 2022.

enterprises was relatively high. Investment sentiment also varied across industries and was the most favourable, among others, in construction and manufacturing, including among durable goods producers.

In 2023 Q2, the contribution of net exports to GDP growth remained positive (it amounted to 2.1 percentage points compared to 4.6 percentage points in 2023 Q1), reflecting a markedly steeper decline in imports than exports as measured in annual terms. In nominal terms, the value of goods imports[18] in 2023 Q2 fell compared to 2022 Q2, driven primarily by a fall in imports of fuels and intermediate goods amid lower global commodity prices than a year earlier (Figure 2.12; see also Chapter 1.3 *Global commodity markets*). In turn, the decline in exports to EU following a slowdown in activity in the EU economies, was the main factor behind a slight decrease in the nominal value of exports of goods in annual terms.

Gross value added rose by 0.8% y/y in 2023 Q2 (compared to a growth of 0.9% y/y in 2023 Q1; Figure 2.13). In 2023 Q2, annual growth in gross value added in industry remained negative, while in market services it was positive, albeit lower compared to the preceding quarters. This was accompanied by higher growth in gross value added in construction than in 2023 Q1.

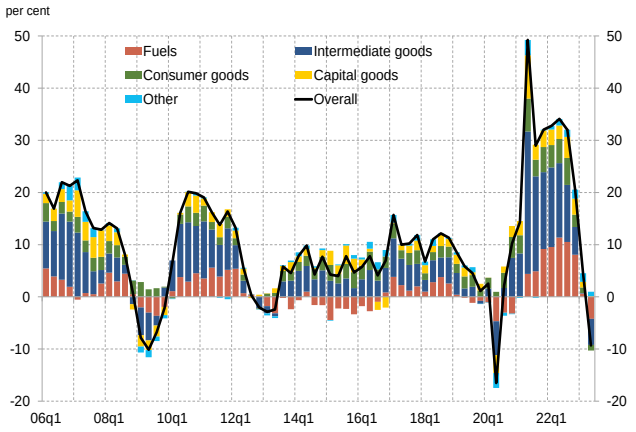
In 2023 Q3, annual growth in industrial output remained negative – despite having edged up compared to 2023 Q2 – whereas annual growth in retail sales and construction and assembly output increased considerably.[19] At the same time, 2023 Q3 continued to see an improvement in consumer sentiment, supported by declining inflation (see Chapter 2.1 *Inflation developments*).[20]

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

	average 2010-2019	2021				2022				2023	
		q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
Sales profitability indicator	4.7	6.0	5.5	5.6	5.9	6.7	6.4	6.1	5.1	5.5	5.9
Net turnover profitability indicator	4.0	5.4	6.2	5.9	5.1	5.2	6.1	4.5	4.2	4.4	5.7
Share of profitable enterprises	73.4	76.3	78.0	78.9	78.3	77.7	77.4	76.7	77.0	77.6	76.8
Share of enterprises with profitability above 5%	34.2	42.9	45.4	45.4	46.4	43.7	42.1	41.5	42.3	43.4	42.8
Cash ratio	36.3	43.0	44.1	44.6	44.1	42.7	40.9	39.9	39.0	37.5	37.3
Return on assets indicator	1.2	1.5	1.8	1.8	1.8	1.7	2.1	1.5	1.5	1.5	1.9
Share of bank credits and loans in the balance sheet total	15.2	14.7	14.3	14.5	14.5	14.1	14.2	14.7	14.3	14.1	14.2

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). Share of profitable firms and firms with profitability above 5% – seasonally adjusted data. The average share of bank credits and loans in the balance sheet total covers only the years 2015-2019.

Figure 2.12 Contribution to import growth by product group (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 and goods else not classified.

[18] Nominal value of goods imports and exports according to Statistics Poland (GUS) data.
[19] Growth in retail sales amounted to 1.4% y/y in 2023 Q3 compared to -7.3% y/y in 2023 Q2. Industrial output growth amounted to -2.4% y/y in 2023 Q3 compared to -2.7% y/y in 2023. Growth in construction and assembly output amounted to 5.5% y/y in 2023 Q3 compared to 0.6% y/y in 2023 Q2.
[20] Amid falling inflation, real growth in both wage bill and wages in the enterprises sector was positive in 2023 Q3.

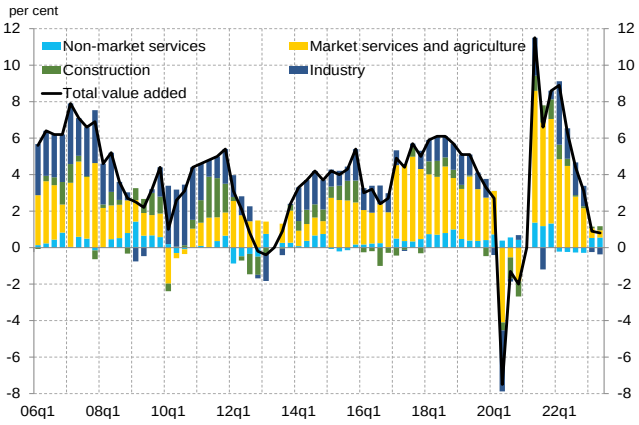
2.3 Public finance

In the first half of 2023, the general government deficit in ESA2010 terms amounted to PLN 42.5 billion (1.2% of GDP), compared to a deficit of PLN 2.6 billion (0.1% of GDP) in the same period of 2022 (Figure 2.14). The deterioration was due to, among others, changes in the tax system which came into force in January and July 2022 (including a reduction of the lower PIT rate from 17% to 12% retroactively from the beginning of 2022). As a result of these changes, in the first half of 2023 the general government revenue from direct taxes was 0.5 percentage points of GDP lower than in the first half of 2022. The growth of the deficit in the analysed period was also due to higher interest payments (by 0.3 percentage points of GDP) and higher investment expenditure (by 0.1 percentage points of GDP).

In the period from January to September 2023, a deficit of PLN 34.7 billion was recorded in the state budget, compared to a surplus of PLN 27.5 billion in the same period of 2022. The deterioration is mainly the result of the low growth of tax revenue (by 4.2% y/y, compared to 15.3% y/y growth over the whole year as planned in the amended Budget Act), including in particular a fall in PIT revenue (by 2.5% y/y) due to tax changes introduced in 2022. Moreover, in the period from January to September 2023, expenditure of the state budget rose by 27.3% y/y reflecting, among others, the increase in the State Treasury debt service costs (by 85.1% y/y) and in national defence spending (by 59.1% y/y – Ministry of Finance data for January-August 2023).

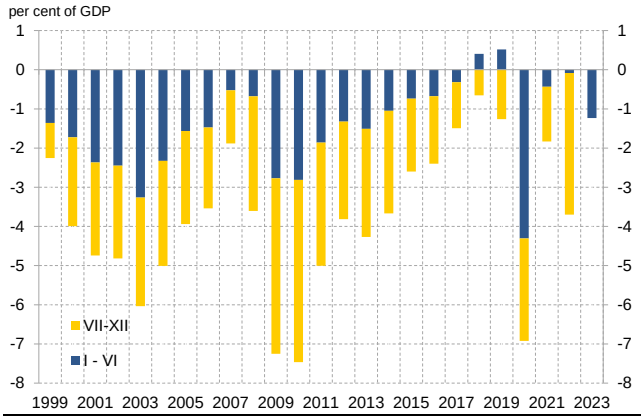
In line with the autumn fiscal notification, the fiscal outturn in ESA2010 terms will amount to -5.6% of GDP compared to -3.7% of GDP in 2022. The growth of the deficit is largely related to the slowdown in nominal GDP growth, including the low household consumption growth, which has a negative impact on revenue from indirect taxes. The costs of the reduction in the PIT rates

Figure 2.13 Growth of gross value added by sectors (y/y)



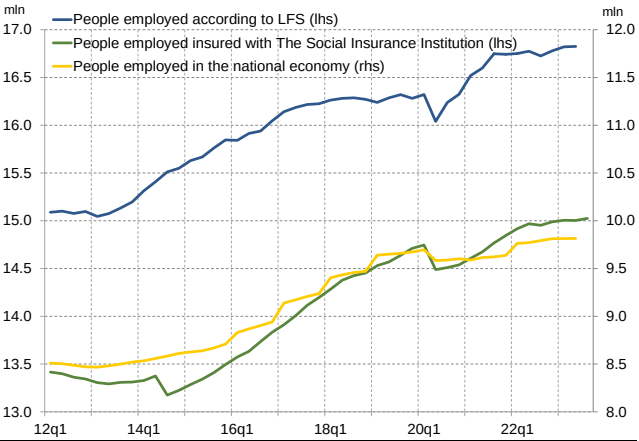
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 2.14 General government balance in ESA2010 terms



Source: Eurostat data.

Figure 2.15 Number of employed persons according to the LFS, according to reporting data from the national economy (NE) and according to The Social Insurance Institution (ZUS) data, seasonally adjusted data



Source: Statistics Poland (GUS) and The Social Insurance Institution (ZUS) data, NBP calculations.

The number of employed persons insured with ZUS, given as at the end of the quarter, includes those working under an employment contract, civil law contracts, the self-employed and those employed who are insured under another title (such as uniformed services employees and clergy). Unlike the LFS data, the number of employed persons in the NE concerns entities with more than 9 employees and does not include the following: (1) individual farming, (2) employment in the grey economy, (3) employment based on civil law contracts.

Due to a change in the LFS methodology introduced in 2021 Q1, data from 2012 Q1 to 2020 Q4 have been recalculated to make definitions classifying respondents into different categories in the labour market more consistent. Despite this, because of the significant degree of change in the survey, data from 2021 Q1 onward are not fully comparable with earlier periods.

introduced in 2022 and the increased amount of the so-called "14th pension" also contribute to this. The current year also sees a significant rise in expenditure on national defence (from 2.2% of GDP in 2022 to 3.0% of GDP in 2023 planned for this purpose in the Budget Act), as well as in local government investment. In turn, the fiscal costs of the energy shield measures launched to compensate for the increase of, among others, commodity prices, are lower than in 2022, thus contributing towards reducing the headline deficit. In 2022, these costs amounted to 1.9% of GDP in net terms,[21] while in 2023 they can be estimated at 1.1% of GDP.

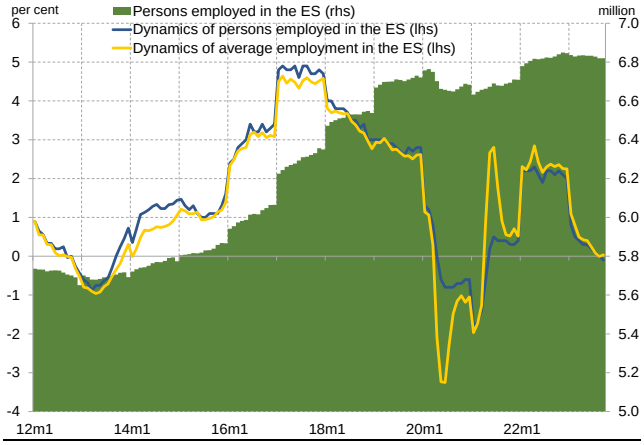
In line with the autumn fiscal notification, at the end of 2023 the general government debt-to-GDP ratio (in ESA2010 terms) will amount to 49.3%, i.e. it will remain at the same level as at the end of 2022.

2.4 Labour market

The situation in the labour market remains good, as evidenced by the low unemployment rate and high level of employment. At the same time, amid weaker economic activity in the recent period, employment growth and growth in nominal wages have slowed down.

Statistics Poland (GUS) data based on the LFS as well as data relating to the national economy (NE) and the enterprise sector (ES), and also data from the Social Insurance Institution (ZUS), all indicate a gradual slowdown in the growth in the number of people employed in the recent period (Figure 2.15, Figure 2.16).[22] In particular, annual growth in the number of people employed according to the LFS declined to 0.5% y/y in 2023 Q2 from 0.8% y/y in 2023 Q1 (in seasonally adjusted quarterly terms the number of employed people was stable), while

Figure 2.16 Annual growth rates in the number of persons employed and average employment, and the number of persons employed in the enterprise sector (ES)

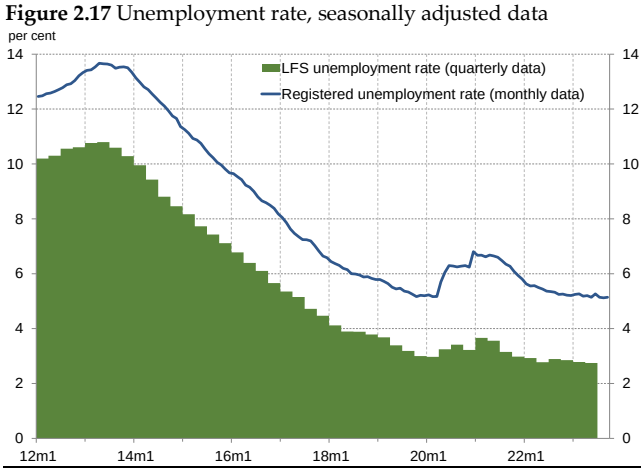


Source: Statistics Poland (GUS) data.

The enterprise sector (ES) is comprised of companies with 10 or more employees, which carry out activities classified under selected PKD (NACE) sections of the economy.

Unlike the employment statistics, the number of persons employed in the ES is not expressed in the number of full-time jobs and includes employees who are on sickness benefit or child care leave.

Figure 2.17 Unemployment rate, seasonally adjusted data



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

There are three reasons for the difference between the unemployment rate according to labour offices and the LFS unemployment 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 (on a representative sample of respondents).

Due to a change in the LFS methodology introduced in 2021 Q1, data from 2012 Q1 to 2020 Q4 have been recalculated to make definitions classifying respondents into different categories in the labour market more consistent. Despite this, because of the significant degree of change in the survey, data from Q1 2021 onward are not fully comparable with earlier periods.

Data on the unemployment rate since December 2020 take into account the number of persons employed in agriculture as estimated on the basis of the 2020 Agricultural Census, and are not fully comparable with earlier periods.

[21] The fiscal costs (increase in expenditure and loss in revenue) net of revenue from write-offs of electricity producers and extractors of domestic natural gas paid into the Price Difference Payment Fund as well as solidarity contribution.

[22] Annual growth in the number of employed people declined: in the NE from 0.5% in 2023 Q1 to 0.4% in 2023 Q2, in the ES from 0.6% in 2023 Q1 to 0.2% in 2023 Q2 and 0.0% in 2023 Q3, and according to ZUS data (the number of people who pay retirement and disability insurance contributions) on average from 0.7% in 2023 Q1 to 0.3% in 2023 Q2 and 0.3% in 2023 Q3.

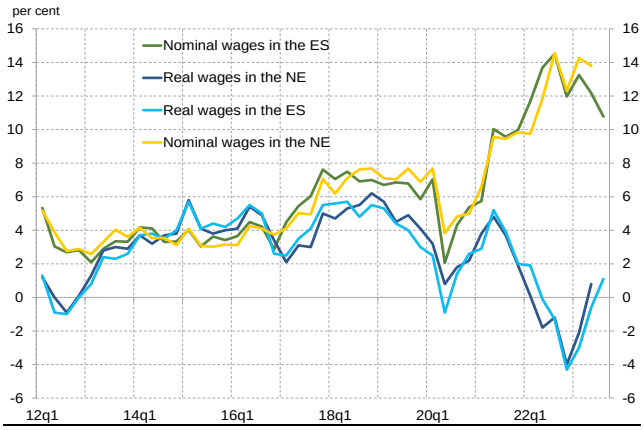
growth in the public sector (2.0% y/y) was accompanied by stabilisation in the private sector (0.0% y/y). The results of the Statistics Poland (GUS) economic conditions and labour demand surveys, as well as data from labour offices on job offers,[23] suggest the possibility of a further weakening of labour demand in the economy in the coming months.[24]

At the same time, the unemployment rate remains very low (Figure 2.17). This is also indicated by the LFS data (2.7% in 2023 Q2 compared to 2.8% in 2023 Q1, seasonally adjusted data), as well as data from district labour offices (according to Statistics Poland (GUS) the registered unemployment rate in September 2023 stood at 5.1%, i.e. the same level as in July and August and 0.1 percentage points below the average in the first half of 2023, seasonally adjusted data).

Annual growth in nominal wages has been still relatively high in the recent period, although it has slowed down (Figure 2.18). In 2023 Q2, growth of the average wage slowed down in the NE to 13.8% y/y (compared to 14.3% y/y in 2023 Q1), and in the ES to 12.2% y/y in 2023 Q2 and 10.8% y/y in 2023 Q3 (compared to 13.3% y/y in 2023 Q1).[25] At the same time, due to the significant fall in inflation, annual growth in real wages in the NE and ES has risen over the recent past and is positive.

Growth in unit labour costs fell in 2023 Q2 to 15.1% y/y (from 15.6% y/y in 2023 Q1), which was a result of the slowdown in annual wage growth in the NE and a lower growth in the number of employed people according to the LFS than in the previous quarter. Alongside that, the decline in annual GDP

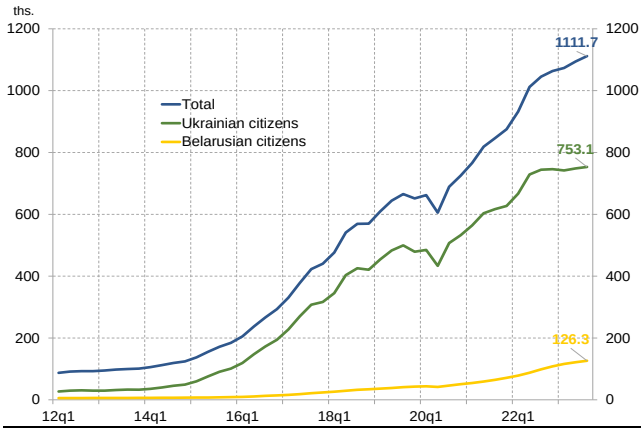
Figure 2.18 Annual nominal and real wage growth rates in the national economy (NE) and in the enterprise sector (ES)



Source: Statistics Poland (GUS) data.

Wages in the ES concern entities classified in selected PKD (NACE) sections that employ 10 or more people. Data on wages in the NE cover the whole statistical population, i.e. regardless of the number of people employed, and also cover all PKD (NACE) sections of the economy.

Figure 2.19 Foreigners covered by retirement and disability insurance in the Social Insurance Institution (ZUS), the state at the end of quarter



Source: The Social Insurance Institution (ZUS) data.

[23] The results of the Statistics Poland (GUS) survey on demand for labour in 2023 Q2 show a further decline in the number of job vacancies in the economy, and a fall in the number of occupied jobs (see *The demand for labour in the second quarter of 2023*, Statistics Poland (GUS), September 2023). At the same time, the number of job offers available in the labour offices continued to run significantly below the previous year's level (with a fall of almost 17% y/y at the end of September 2023) and the level before Russia's armed aggression against Ukraine (a fall of almost 31% at the end of September 2023 compared to the end of January 2022, seasonally adjusted data).

[24] The results of the Statistics Poland (GUS) economic situation survey from October 2023 show a predominance of firms planning layoffs in the next three months over firms increasing employment. See *The economic situation in manufacturing, construction, trade and services 2000-2023 (October 2023)*, Statistics Poland (GUS), October 2023.

[25] It is the health care sector, among others, that contributed to the high wage growth outside the ES.

growth had a positive effect on growth in unit labour costs.

The large number of economically active immigrants continues to have an impact on the domestic labour market situation (Figure 2.19). According to the Social Insurance Institution (ZUS) data, in September 2023 over 1.1 million foreigners were covered by retirement and disability insurance due to their employee status in Poland (an increase of 6.4% y/y). Among those, 753,100 people (i.e. 67.7%) were Ukrainian citizens, of which approx. 242,000 were refugees with ZUS insurance coverage.[26]

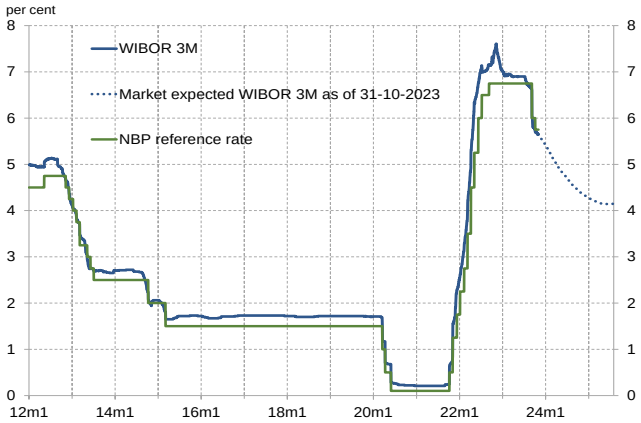
2.5 Financial markets and asset prices

In recent months prices of financial instruments in Poland have been determined by, among others, the observed and forecasted decline in inflation and NBP interest rate cuts. This was accompanied by a downward revision of market participants' expectations about the level of interest rates over several quarters' horizon (Figure 2.20).

In these conditions, despite a rise in government bond yields in the major economies (see Chapter 1.5 *International financial markets*), yields on Polish government bonds have been relatively stable in recent months (Figure 2.21). In turn, the exchange rate of the zloty – similarly to currencies of other economies of Central and Eastern Europe – has weakened against the US dollar. Meanwhile, the zloty exchange rate against the euro – after a temporary weakening in September 2023 – has run close to the June 2023 level (Figure 2.22).

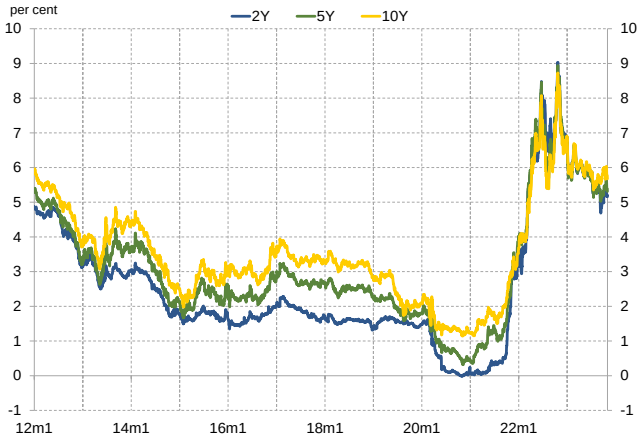
On the other hand, in the housing market nominal transaction prices continued to rise in annual terms in 2023 Q2, due to increased demand and higher costs of housing construction than a year ago

Figure 2.20 NBP reference rate and WIBOR 3M with expectations based on FRA contracts



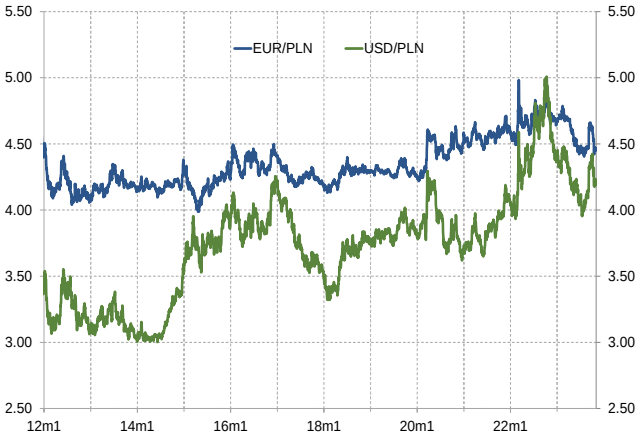
Source: NBP and Bloomberg data.

Figure 2.21 Yields on Polish government bonds



Source: Bloomberg data.

Figure 2.22 Exchange rates of the euro and the US dollar in zloty



Source: Bloomberg data.

[26] The estimate of the number of working refugees from Ukraine covered by ZUS insurance includes people who, in their application for pension and disability insurance, indicated Ukrainian citizenship and were assigned a "UKR" personal identification number (PESEL UKR). The estimate does not include people who work but who are not subject to compulsory ZUS insurance, e.g. pupils and students up to 26 years of age employed on the basis of contracts of mandate, or people working in the grey economy.

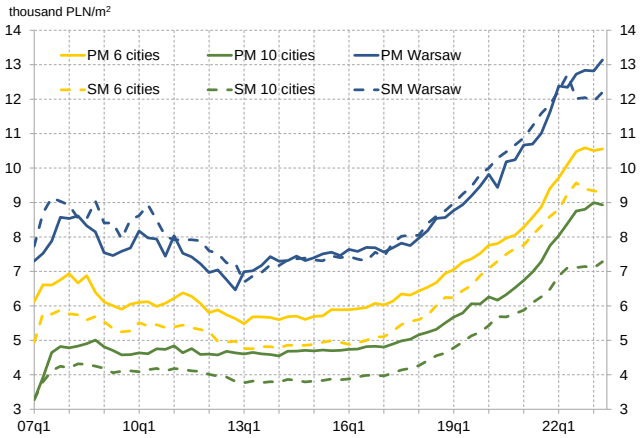
(Figure 2.23).[27] According to NBP data,[28] growth in average housing transaction prices stood at 2.4% y/y in 2023 Q2 (compared with 5.2% y/y in 2023 Q1).[29]

2.6 Money and credit[30]

The growth rate of the M3 aggregate increased in 2023 Q3; however, it still ran slightly below its long-term average (it amounted to 8.9% y/y compared to 7.7% y/y in 2023 Q2 and 6.8% y/y in 2023 Q1; Figure 2.24). The growth in the M3 aggregate was primarily supported by an increase in household and corporate term deposits,[31] amid the markedly higher interest rates offered on those deposits than in previous years (Figure 2.25).[32] However, the M3 aggregate growth was constrained by a decline in cash in circulation (it amounted to -0.8% y/y in 2023 Q3 compared to -4.0% y/y in 2023 Q2 and -1.6% y/y in 2023 Q1).

In 2023 Q3, household loan debt declined by 3.1% y/y (after a drop of 4.5% y/y in 2023 Q2 and of 4.9% y/y in 2023 Q1; Figure 2.26) amid substantially higher interest rates on loans than on average in previous years. Despite higher demand associated especially with the launch of the so-called "2% Safe Mortgage" government programme, growth in housing loans was still negative (it amounted to -4.6% y/y in 2023 Q3 compared to -5.6% y/y in 2023 Q2 and -5.3% y/y in 2023 Q1), remaining under the impact of, among others, increased overpayments and early repayments of loans in

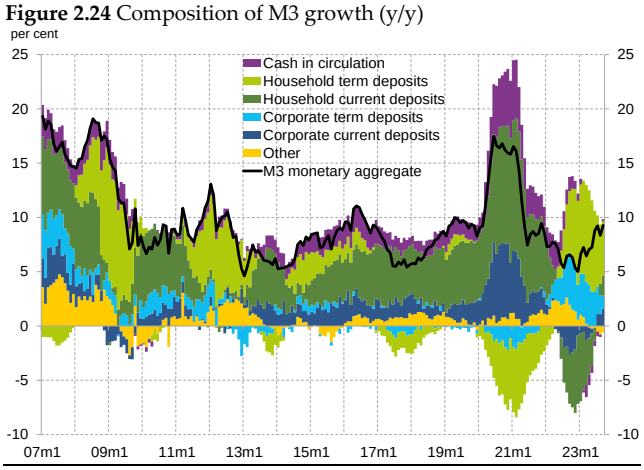
Figure 2.23 Nominal transaction prices of flats in major cities in Poland



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.

Figure 2.24 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.

[27] For more information on the situation in the Polish housing market, see the cyclical NBP publications *Information on home prices and the situation in the residential and commercial real estate market in Poland*.

[28] The discussed data on prices do not fully correspond to the quarters of the calendar year. In particular, data referring to 2023 Q2 cover transactions concluded between March 2023 – May 2023.

[29] These data apply to the average housing transaction prices (PLN/sq.m.) in 17 cities (16 voivodeship capitals and Gdynia) in the primary and secondary markets, weighted by the housing stock. In quarterly terms, growth in these prices stood at 1.0% q/q in 2023 Q2 (compared to -1.0% q/q in 2023 Q1.)

[30] In this chapter, growth in the broad money aggregate M3, deposits and loans is defined as nominal annual growth resulting from transaction changes, on average in a given quarter. The data refer to monetary financial institutions.

[31] At the same time, in 2023 Q3 household current deposit growth stood at 2.6% y/y (compared to -5.9% y/y in 2023 Q2 and -11.8% y/y in 2023 Q1), and corporate current deposit growth amounted to 8.5% y/y (compared to -3.0% y/y in 2023 Q2 and -5.0% y/y in 2023 Q1).

[32] The term structure of deposits changed substantially throughout the year 2022. At the end of 2023 Q3, term deposits accounted for nearly 32% of total household and corporate deposits, while at the end of 2021 Q4 it was approx. 15%.

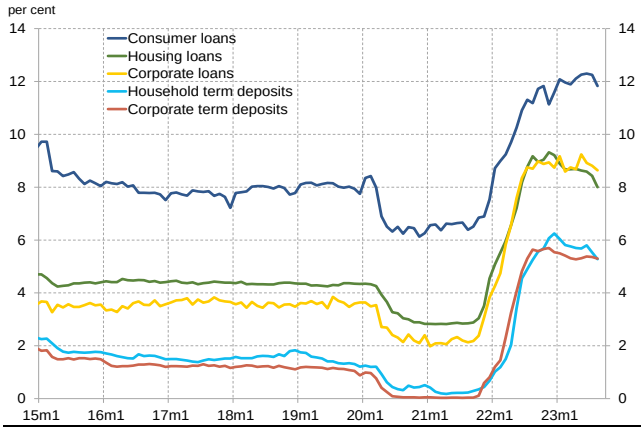
zloty and the dwindling stock of FX loans.[33] In turn, amid limited consumer demand and the another tightening of lending standards,[34] growth in consumer loans remained relatively low, although its pace increased, which was supported by some improvement in consumer sentiment (it amounted to 1.7% y/y in 2023 Q3 compared to 0.0% y/y in 2023 Q2 and -1.3% y/y in 2023 Q1; see Chapter 2.2 *Demand and output*).

In 2023 Q3, corporate loan debt fell by 0.9% y/y (after increasing by 3.2% y/y in 2023 Q2 and by 8.4% y/y in 2023 Q1; Figure 2.27). This was due to the decline in the stock of current loans (by 5.1% y/y in 2023 Q3 compared to a rise of 2.4% y/y in 2023 Q2 and 11.7% y/y in 2023 Q1) as well as some slowdown in investment loan growth (4.0% y/y in 2023 Q3 compared to 4.8% y/y in 2023 Q2 and 6.7% y/y in 2023 Q1).

2.7 Balance of payments[35]

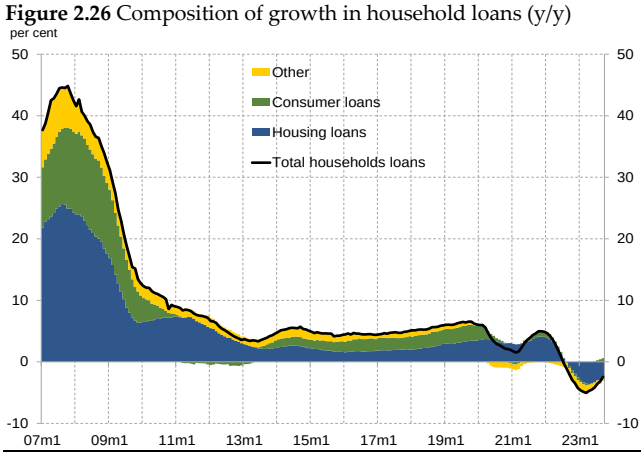
The current account balance improved again in 2023 Q2 (amounting to -0.1% of GDP compared to -0.7% of GDP in 2023 Q1; Figure 2.28),[36] which was a result of the improved balance of trade in goods (up to -1.0% of GDP in 2023 Q2 from -2.2% of GDP in 2023 Q1; see Chapter 2.2. *Demand and output*). This was accompanied by a slight decline in both the positive balance of services (to 5.4% of GDP in 2023 Q2 compared to 5.6% of GDP a quarter earlier) and the negative balance of primary income (to -4.2% of GDP in 2023 Q2 compared to -3.9%), with the latter remaining negative due to the high income of foreign direct investors in Poland.[37]

Figure 2.25 Average interest rates on new and renegotiated business, PLN denominated



Source: NBP data.

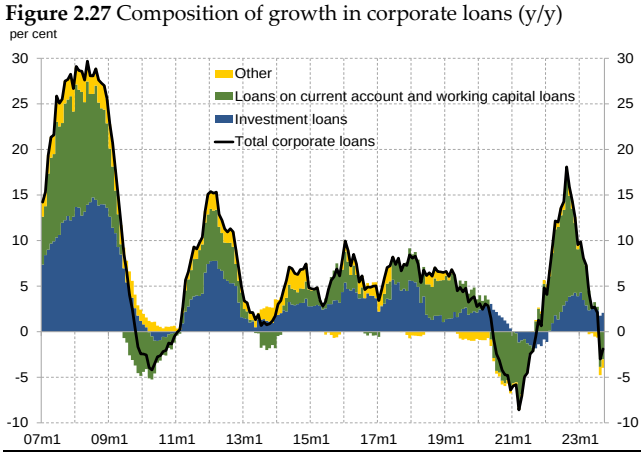
Figure 2.26 Composition of growth in household loans (y/y)



Source: NBP data.

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

Figure 2.27 Composition of growth in corporate loans (y/y)



Source: NBP data.

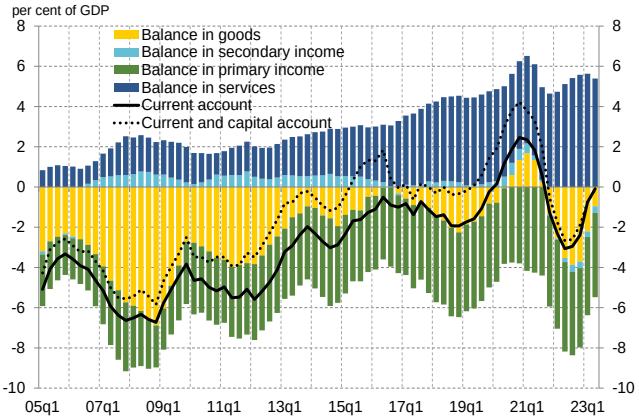
The category *Investment loans* covers loans for investments and real estate purchases. The category *Other* covers i.a. car loans, loans for security purchases and other receivables.

[33] The stock of FX loans was decreasing as a result of, among others, the gradual repayment of those loans and currency conversions as part of settlements between banks and borrowers as well as court judgments.
[34] See also *Senior loan officer opinion survey on bank lending practices and credit conditions – 3rd quarter 2023*, NBP, July 2023.
[35] In this chapter, data on the balance of payments in relation to GDP are presented in terms of a four-quarter rolling sum.
[36] According to preliminary estimates, the current account balance stood in July 2023 and in August 2023 at PLN -0.3 billion and -0.9 billion, respectively.
[37] In turn, the surplus on the capital account amounted to 0.0% of GDP both in 2023 Q1 and 2023 Q2.

At the same time, the financial account balance also saw further improvement (to 0.7% of GDP in 2023 Q2 against -0.3% of GDP in 2023 Q1; Figure 2.29).[38]

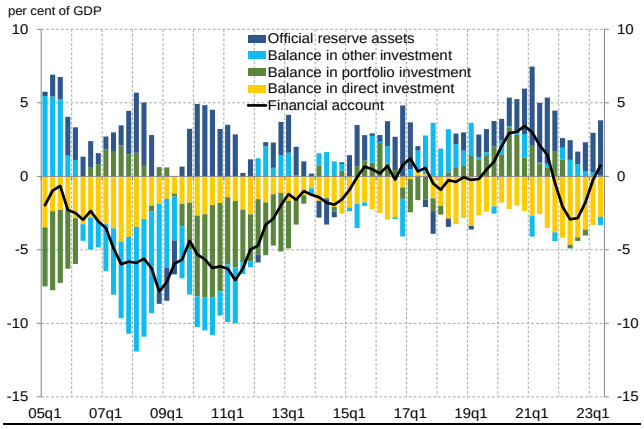
External imbalance indicators evidence that the Polish economy is well balanced (Table 2.4). In 2023 Q2, Poland's net international investment position (in relation to GDP) amounted to -32%, running at a level compliant with the criterion indicating an absence of imbalances relating to this indicator (-35% of GDP), as laid down by the European Commission. Alongside that, the external debt to GDP ratio fell again (to 50% in 2023 Q2) and was at its lowest level since 2008.

Figure 2.28 Current account balance (4-quarter rolling sum)



Source: NBP data.

Figure 2.29 Financial account balance (4-quarter rolling sum)



Source: NBP data.

A positive balance means an increase in Poland's net foreign assets (net outflow of capital from Poland). The balance of financial derivatives is not shown on the graph.

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

	2021				2022				2023	
	q1	q2	q3	q4	q1	q2	q3	q4	q1	q2
Current account balance/GDP	2.4	1.8	0.6	-1.3	-2.3	-3.1	-3.0	-2.4	-0.7	-0.1
Current and capital account balance/GDP	3.8	3.3	2.0	-0.6	-1.7	-2.7	-2.6	-1.9	-0.8	-0.1
Trade balance/GDP	6.0	5.9	4.9	3.3	2.2	1.6	1.6	1.9	3.4	4.4
Official reserve assets (in monthly imports of goods and services)	6.6	5.8	6.0	5.7	5.1	5.0	5.1	4.7	4.6	4.8
Foreign debt/GDP	61	57	58	57	56	56	57	53	52	50
Net international investment position/GDP	-42	-41	-41	-40	-39	-36	-34	-33	-32	-32
Official reserve assets/short-term foreign debt minus forecasted current account balance	110	103	111	121	111	115	123	137	130	134
Official reserve assets/short-term foreign debt	124	121	130	140	115	116	118	127	122	123

Source: NBP data.

The two last indicators include external debt and the level of reserve assets at the end of the period.

[38] According to preliminary estimates, the financial account balance stood in July 2023 and in August 2023 at PLN 6.7 billion and -2.2 billion, respectively.

3. Monetary policy in July – November 2023

This chapter includes the previously published *Minutes of the Monetary Policy Council decision-making meetings* held between July and September 2023 as well as the *Information from the meeting of the Monetary Policy Council* in October and November 2023.

Minutes of the Monetary Policy Council decision-making meeting held on 6 July 2023

At the meeting it was pointed out that the economic conditions in the environment of the Polish economy remained subdued. In the euro area activity growth had been constrained in recent quarters. It was emphasised that the euro area economy was expected to rebound in the coming quarters; however, the scale of the recovery would be rather modest, and in Germany, according to forecasts, GDP would fall in 2023. In the United States the current economic conditions remained better than in the euro area, although forecasts indicated their possible weakening.

The Council members underlined that global inflation was declining, but continued to be elevated. CPI inflation in the United States had fallen to 4.0% in May, while HICP inflation in the euro area had fallen to 5.5% in June. In Central and Eastern European countries inflation had also declined. It was pointed out that in recent months core inflation had also begun to decline in many economies, although it remained elevated.

Forecasts signalled a further fall in global inflation in the coming quarters. This was supposed to result from both the fading of the earlier supply shocks and the significant global monetary tightening and the related weakening of economic activity. The continuation of the disinflation process is indicated by the significant fall in cost and price pressure, including a sharp decline in PPI inflation.

At the Council meeting it was pointed out that the central banks in the United States and the euro area forecasted that price growth would decline only gradually. As a result, inflation in these economies might still slightly exceed the inflation targets in 2025. It was underlined that the future pace of disinflation in the environment of the Polish economy would be determined in particular by the situation in the labour markets and enterprises' price policy. In this context, attention was drawn to the significant role of growth in corporate mark-ups and profits in shaping prices in recent quarters.

Amid subdued economic growth around the world, activity growth had also slowed down in Poland. The Council members stressed that May 2023 was the third month in a row in which retail sales had fallen sharply in annual terms. Consequently, it was pointed out that in 2023 Q2 the fall in household consumption had most likely deepened. Industrial as well as construction and assembly output had also declined in annual terms in May 2023. At the same time, it was highlighted that the situation in the labour market had not changed significantly. It was observed that employment continued to rise in the services sector, while industry saw a fall in employment. This was accompanied by steady wage growth in the enterprise sector.

While discussing the economic activity outlook in Poland, the Council members indicated that in line with the NBP's July projection, GDP growth would be low in 2023. It was underlined that consumption growth might be negative

throughout the whole of 2023, which would support the disinflation process. Although according to the July projection the coming quarters were to see some recovery in activity – amid a rise in real wages and the fading of the negative supply shocks – GDP growth was expected to remain moderate and the output gap negative over the projection horizon.

At the Council meeting it was underlined that – in line with earlier predictions – inflation declined significantly. According to the Statistics Poland flash estimate, CPI inflation fell to 11.5% y/y in June 2023. It was observed that in the last four months inflation had declined by about 7 percentage points, and that June was the second month in a row in which the overall consumer price level had remained unchanged from the previous month. Attention was drawn to a further drop in energy prices and a decline in food prices compared to the previous month.

Therefore, the majority of the Council members argued that the still high annual inflation rate was not resulting from current growth in the overall price level, but was reflecting past price changes in previous periods. It was pointed out that based on available data, it could be estimated that in June price growth of all the main groups included in the basket of consumer goods and services had declined, and that in particular core inflation had probably fallen markedly. The Council members also observed that PPI inflation had fallen rapidly in recent quarters and producer price growth in the manufacturing sector had already been negative in May 2023.

Certain Council members expressed the opinion that price-setting processes in Poland, like in other countries, were currently following a different pattern than in a low inflation period. In the view of these Council members, the decline in the annual CPI index mainly reflected the base effects and the fall in commodity prices, while inflation expectations – despite declining – continued to be high, and inflation both in Poland and aboard remained persistent. These Council members also underlined the improvement in the expected labour market situation envisaged in several previous NBP projections, which could support higher inflation.

However, while discussing the outlook for inflation in Poland, the majority of the Council members pointed out that in line with the July projection, in the coming quarters inflation would keep declining and in the second half of 2025 it would reach a level consistent with the NBP inflation target. This would be supported by the fading of the earlier shocks in commodity markets and the global supply chain disruptions, strong monetary policy tightening undertaken by NBP and the slowdown in aggregate demand growth. In the opinion of these Council members, the currently observed strong fall in PPI inflation, the reduction in value of loans to the non-financial sector and the declining inflation expectations of consumers and enterprises would also contribute to a fall in CPI inflation. It was judged that the disinflation process was also supported by the marked appreciation of the zloty observed in recent months.

Some Council members drew attention to the fact that relatively high wage growth could be a risk factor for the inflation outlook in Poland. However, the majority of the Council members judged that the weakening economic conditions would curb enterprises' ability to raise prices further and that firms would be able to absorb rising costs, including labour costs, by reducing their margins, which had been high in the previous quarters.

The majority of the Council members assessed that the weakening of the external economic conditions, together with lower commodity prices, would continue to curb global inflation, which would still contribute to lower price growth in Poland. The decline in domestic inflation would be supported by the weakening of domestic GDP growth, including the continued decline in

consumption, amid a significant decrease in credit growth. The majority of the Council members assessed that the strong monetary policy tightening undertaken by NBP has been leading to a decline in inflation in Poland towards the NBP inflation target. At the same time, given the strength and persistence of the earlier shocks, which remained beyond the impact of domestic monetary policy, the return of inflation to the NBP inflation target would be gradual. Alongside that, it was underlined that the Council flexibly determined the desirable time necessary to bring inflation back to the target, as bringing inflation rapidly back to the target might entail significant costs to macroeconomic and financial stability. The Council members upheld the assessment that the decrease in inflation would be faster if supported by an appreciation of the zloty exchange rate, which, in the Council's assessment, would be consistent with the fundamentals of the Polish economy.

The majority of the Council members recognised that, taking into account the above conditions, and in particular the significant decline in inflation and its expected further gradual decline, as well as the weakening of the domestic economic conditions, including the consolidating fall in consumer demand, decline in inflation expectations, low growth in monetary and credit aggregates, and also the decline in inflationary pressure abroad combined with the risks to the global economic outlook, and taking into account the earlier strong monetary policy tightening, it was warranted to end the monetary policy tightening cycle. At the same time, certain Council members pointed out that the significant fall in inflation and declining inflation expectations amid unchanged interest rates were contributing to an increase in the restrictiveness of monetary policy. Under these circumstances, and also considering the prospect of a further fall in inflation and low economic activity growth, in the coming months it might be justified to consider lowering of the NBP interest rates.

The view was expressed that given the persistently high annual price growth and elevated inflationary expectations, the current level of the NBP interest rates was too low to ensure the return of inflation to the target in the medium term and to lower inflation expectations to levels consistent with the medium-term inflation target.

The Council decided to keep the NBP interest rates unchanged: the reference rate at 6.75%, the lombard rate at 7.25%, the deposit rate at 6.25%, the rediscount rate at 6.80%, and the discount rate at 6.85%.

The Council pointed out that further decisions of the Council would depend on incoming information regarding prospects for inflation and economic activity.

Minutes of the Monetary Policy Council decision-making meeting held on 6 September 2023

At the meeting, it was pointed out that the economic conditions in the environment of the Polish economy remained weakened and that uncertainty about the activity outlook persisted. In the euro area, annual GDP growth in 2023 Q2 slowed well below its long-term average, while in Germany GDP contracted in annual terms. The Council underscored that data incoming in 2023 Q3 signalled a further deterioration in economic conditions in the euro area, including in Germany. Furthermore, it was observed that the recovery of activity in China following the departure from the so-called "zero-Covid" policy was unfolding much more slowly than expected. In turn, the current economic conditions in the United States remained better than in the euro area.

Council members pointed out that the weak global economic conditions, along with the receding supply shocks, was having a disinflationary effect. According to the Eurostat flash estimate, inflation in the euro area stood at 5.3% in August. In the United States, inflation in July was markedly lower than in the euro area, although it continued

to run above the inflation target. There has been a marked decline in inflation in the countries of Central and Eastern Europe. It was observed that core inflation was also declining across the world, although at a slower pace, amid declining growth in goods prices, and still elevated services prices growth. Strong disinflationary trends are reflected in producer price indices, including in the economies important for global industry. It was emphasised that producer prices had fallen by about 6% y/y in Germany in July, while in China the annual PPI growth had been negative for ten months.

Certain Council members observed that some major central banks, including the ECB and the Fed, were signalling that they would keep interest rates elevated for a longer period, because the upward pressure on prices in these economies remained heightened. By contrast, some Council members observed that these banks had started increasing their interest rate later than many other central banks.

Amid the weakened global economic conditions, activity growth has also declined in Poland. According to the Statistics Poland preliminary estimate, the annual GDP growth in 2023 Q2 stood at -0.6%. Council members pointed out that this reading was markedly lower than forecast in the July projection. It was emphasised that consumer demand continued to decline, which was conducive to disinflation. At the same time, investment continued to rise. Certain Council members were of the opinion that the heavy inflow of refugees to Poland directly upon the onset of the Russian military aggression against Ukraine had boosted consumption in Poland in 2022, which, due to the statistical base effect, was currently hampering annual growth in this category. At the same time, an opinion was voiced that the present slowdown in the Polish economy was to a great extent structural in nature, related to energy transformation and the consequences of the COVID-19 pandemic.

Incoming data indicate that in 2023 Q3 the economic conditions remained weak. Retail sales and industrial output in July 2023 declined in annual terms. Similarly, the PMI in industry signals weak economic conditions. In this context, Council members indicated that annual GDP growth in 2023 Q3 would be also probably lower than the predictions of the July projection. At the same time, it was judged that economic activity growth in Poland would gradually pick up in the following quarters, which should be supported by the fading of the previous supply shocks and the declining inflation.

At the meeting it was pointed out that the situation in the labour market remained good, and that unemployment continued to be low. While the number of the working persons remained high, annual employment growth in the enterprise sector was slowing down, and nominal wage growth was gradually declining.

The majority of Council members pointed out that the effects of the previous NBP monetary policy tightening were still being seen in the credit market. In July 2023, annual growth in credit in the economy, as well as cash in circulation and the M1 aggregate were negative. At the same time, the credit-to-GDP ratio remained at the lowest level in more than a decade. In this context, certain Council members pointed to what they thought was a considerable amount of newly extended loans and the recently rising number of applications for housing loans, which was fuelled by the launch of the so-called "Safe Credit" programme. Yet most of the Council members were of the opinion that the expected scale of the impact of this programme on macroeconomic developments would be limited.

The Council members pointed out that the annual CPI inflation in August 2023 had decreased markedly once again and – according to Statistics Poland flash estimate – stood at 10.1%. It was emphasized that in half a year annual CPI inflation had fallen by more than 8 percentage points. It was

also remarked that in recent months the overall price level had decreased. The fall in inflation in annual terms in August was mainly due to the fall in the annual growth of prices of food and non-alcoholic beverages. It was pointed out that on the basis of available data it could be estimated that in August core inflation had also declined again. Certain Council members indicated that core inflation remained high despite slower growth in economic activity.

During the discussion it was pointed out that in July industrial producer prices had fallen in annual terms, while annual PPI growth had declined by over 27 percentage points since June 2022. At the same time, it was pointed out that enterprises were reporting growing difficulties in raising prices and that they were revising downwards their expectations regarding CPI inflation within a one-year horizon. It was indicated that production capacity utilization had also been falling. All consumer inflation expectations measures were also decreasing. The majority of the Council members judged that the marked decline in inflation and the lowering of inflation expectations were contributing to an increase in the restrictiveness of monetary policy. It was emphasized that this had been mirrored in the growth of real interest rates. In this context, it was pointed out that the NBP reference rate was higher than inflation expectations of market analysts within a one-year horizon, which had significantly dropped recently. Certain Council members indicated, however, that the NBP reference rate remained lower than the quantified consumer inflation expectations within a one-year horizon.

While discussing the outlook for inflation in Poland, the majority of the Council members indicated that the disinflation process was firming and that inflation would continue to decline. On the basis of incoming information and forecasts it was judged that annual growth of prices in September 2023 would fall again to stand below 10%. It was judged that in the coming quarters inflation would continue to decrease. It was indicated that taking into consideration information on lower demand pressure in the economy and regulatory factors, future price growth would probably stand below the predictions from the July projection. Certain Council members emphasized that predictions for inflation developments were contingent on the future scale and scope of support measures introduced in relation to the previous rise in global commodity prices.

The majority of the Council members judged that the weaker domestic economic conditions – in particular, weaker demand pressure than previously expected – coupled with low growth of monetary and credit aggregates, a decrease in inflation expectations and cost pressure, as well as a drop in inflation pressure abroad and weak economic conditions in the environment of the Polish economy, would contribute to a faster return of inflation in Poland to the NBP inflation target. Considering these circumstances – and taking into account the time lags in the monetary policy transmission to the economy – the Council adjusted the NBP interest rates. In the opinion of the majority of Council members, following this adjustment, the level of interest rates will continue to support the return of inflation to the NBP inflation target in the medium term. Alongside that, it was underlined that the Council flexibly determined the desirable time necessary to bring inflation back to the target, as bringing inflation rapidly back to the target might entail significant costs to macroeconomic and financial stability. The Council members upheld the assessment that the decrease in inflation would be faster if supported by an appreciation of the zloty exchange rate, which, in the Council's assessment, would be consistent with the fundamentals of the Polish economy.

Certain Council members expressed the opinion that considering the uncertainty over the pace of a

further decline in inflation, and given the prospects of economic recovery, the hitherto level of interest rates was optimal, yet they pointed out that in the future a reduction of interest rates might be justified.

The view was expressed that given the persistently high annual price growth and elevated inflationary expectations, the level of the NBP interest rates was too low to ensure the return of inflation to the target in the medium term and to lower inflation expectations to levels consistent with the medium-term inflation target.

The Council decided to lower the NBP reference rate by 0.75 percentage points, i.e. to 6.00%. At the same time the Council set the remaining NBP interest rates at the following levels: the lombard rate at 6.50%; the deposit rate at 5.50%; the rediscount rate at 6.05%; the discount rate at 6.10%.

The Council pointed out that further decisions of the Council would depend on incoming information regarding prospects for inflation and economic activity.

Information from the meeting of the Monetary Policy Council held on 3-4 October 2023

The Council decided to cut the NBP reference rate by 0.25 percentage points, i.e. to 5.75%. At the same time, the Council set the remaining NBP interest rates at the following levels: lombard rate at 6.25%. deposit rate at 5.25%, rediscount rate at 5.80%, discount rate at 5.85%.

The global economic conditions remain weakened. At the same time, uncertainty about the activity outlook in the largest economies persists. In the euro area, incoming data suggest that annual GDP growth slowed down further in 2023 Q3, while in Germany it was negative. Meanwhile, in the United States the economic conditions remain relatively favourable.

This is accompanied by a further decline in inflation in many economies, however, in most countries annual price growth remains elevated. The earlier decrease of commodity prices together with the easing of global supply chain disruptions reduce price pressures, which is reflected in falling producer prices in many economies. At the same time, core inflation in most economies is still elevated, although it gradually declines.

Amid the weakened global economic conditions, activity growth declined also in Poland. Retail sales and industrial output decreased in annual terms in August 2023, however their decrease was somewhat milder compared to a month ago. Despite the slowdown in activity growth, the labour market situation remains good and unemployment is low. Although the number of working persons continues to be high, in August 2023 the annual growth in employment in the enterprise sector halted.

According to Statistics Poland flash estimate, annual CPI inflation in September 2023 markedly declined again, falling to a level of 8.2% y/y (compared to 10.1% y/y in August 2023). The decrease in inflation in annual terms was driven mainly by a fall in annual price growth of energy as well as food and non-alcoholic beverages. Taking into account the data by Statistics Poland, it can be estimated that core inflation also decreased again in September. In August 2023 producer prices were again lower than a year before, which confirms the fading of most external supply shocks and a reduction of cost pressures. Together with the low economic activity growth, it will support a further decline in consumer price inflation in the coming quarters. The significant fall in inflation is accompanied by decreasing inflation expectations, which contributes to an increase in the restrictiveness of monetary policy.

In the Council's assessment, incoming data confirm weak demand and cost pressure in the economy as well as reduced inflation pressure amongst the weakened external economic

conditions. Considering these circumstances – and taking into account the time lags in the monetary policy transmission to the economy – the Council adjusted the NBP interest rates, which is consistent with meeting the NBP inflation target in the medium term. The Council upheld the assessment that the decrease in inflation would be faster if supported by an appreciation of the zloty exchange rate, which would be consistent with the fundamentals of the Polish economy.

Further decisions of the Council will depend on incoming information regarding prospects for inflation and economic activity.

NBP will continue to take all necessary actions in order to ensure macroeconomic and financial stability, including above all to bring inflation down to the NBP inflation target in the medium term. NBP may intervene in the foreign exchange market.

Information from the meeting of the Monetary Policy Council held on 7-8 November 2023

The Council decided to keep the NBP interest rates unchanged: reference rate at 5.75%, lombard rate at 6.25%, deposit rate at 5.25%, rediscount rate at 5.80%, discount rate at 5.85%.

The global economic conditions remain weakened. At the same time, uncertainty about the activity outlook in the largest economies persists. In the euro area, the annual GDP growth in 2023 Q3 slowed down and was close to zero, while in Germany it was negative. Meanwhile, in the United States the annual GDP growth in 2023 Q3 accelerated and exceeded a long-term average.

At the same time, inflation in many economies declines further, however, in most countries annual price growth remains elevated. The earlier decrease of commodity prices together with the easing of global supply chain disruptions reduce cost pressures, which is reflected in falling producer prices in many economies. Core inflation in most economies is still elevated, although it gradually declines.

Amid the weakened global economic conditions, also in Poland activity growth remains low, although some data signal its gradual recovery. In September 2023 retail sales and industrial output decreased in annual terms, however, the scale of retail sale decline was milder compared to the previous months. This was accompanied by a higher growth in construction and assembly output. Despite the weakened activity growth, the labour market situation remains good and unemployment is low. Although the number of working persons continues to be high, the annual growth in employment in the enterprise sector halted.

According to Statistics Poland flash estimate, annual CPI inflation in October 2023 markedly declined again, falling to a level of 6.5% y/y (compared to 8.2% y/y in September 2023). The decrease in inflation in annual terms was driven mainly by a fall in annual price growth of energy as well as food and non-alcoholic beverages. Considering the Statistics Poland data, it can be estimated that core inflation also decreased again in October. In September 2023 producer prices were again lower than a year ago, which confirms the fading of most external supply shocks and a reduction of cost pressures. Together with the low economic activity growth, it will support a further decline in consumer price inflation in the coming quarters.

The Council became acquainted with the results of the November projection of inflation and GDP based on the NECMOD model. In line with the projection, prepared under the assumption of unchanged NBP interest rates and taking into account data available until 23 October 2023, there is a 50-percent probability that the annual price growth will be in the range of 11.3 – 11.5% in 2023 (against 11.1 – 12.7% in the July 2023 projection), 3.2 – 6.2% in 2024 (compared to 3.7 – 6.8%) and 2.2 – 5.3% in 2025 (compared to 2.1 – 5.1%). At the

same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of -0.1 – 0.6% in 2023 (against -0.2 – 1.3% in the July 2023 projection), 1.9 – 3.8% in 2024 (compared to 1.4 – 3.3%) and 2.4 – 4.7% in 2025 (compared to 2.1 – 4.4%). Inflation developments, both in the short and in the medium term, are fraught with uncertainty related i.a. to future fiscal and regulatory policies.

The Council assesses that incoming data indicate low demand and cost pressures in the Polish economy, which amidst weakened economic conditions and falling inflation pressure abroad will support a gradual decline in domestic inflation. Considering the adjustment in the NBP interest rates introduced in recent months, together with uncertainty about a future course of fiscal and regulatory policies and their impact on inflation, the Council decided to keep the NBP interest rates unchanged. The Council judges that the current level of the NBP interest rates is conducive to meeting the NBP inflation target in the medium term. The Council upheld the assessment that the decrease in inflation would be faster if supported by an appreciation of the zloty exchange rate, which would be consistent with the fundamentals of the Polish economy.

Further decisions of the Council will depend on incoming information regarding prospects for inflation and economic activity.

NBP will continue to take all necessary actions in order to ensure macroeconomic and financial stability, including above all to bring inflation down to the NBP inflation target in the medium term. NBP may intervene in the foreign exchange market.

4. Projection of inflation and GDP

This inflation and GDP projection was prepared by the Economic Analysis and Research Department (EARD) of Narodowy Bank Polski and presents a forecast of economic developments under the assumption of unchanged NBP interest rates. In terms of the contents, work on this projection was supervised by the Director of the Economic Analysis and Research Department. The process was coordinated by the Macroeconomic Forecasts Division of the EARD and the projection was prepared using the macroeconomic NECMOD model. The Management Board of NBP approved the projection to be submitted to the Monetary Policy Council. The projection constitutes one of the inputs to the Monetary Policy Council's decision-making process concerning the NBP interest rates.

The November projection based on the NECMOD model covers the period from 2023 Q4 to 2025 Q4. The starting point for the projection is 2023 Q3.

The projection was prepared under the assumption of unchanged NBP interest rates, including a reference rate of 5.75%. The cut-off date for the data used in this projection is 23 October 2023.

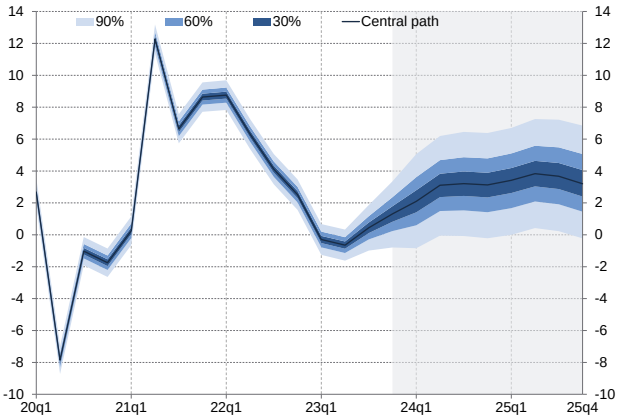
4.1 Summary

The projection scenario assumes the continued fading of the effects of the sharp negative supply shock related to the COVID-19 pandemic and the Russian aggression against Ukraine. As a result, a rebound of domestic demand and an improvement in economic activity abroad are expected, which will translate into a significant pick-up of economic growth in Poland in 2024 and 2025. Additional fiscal instruments, including raising the child benefit from PLN 500 to PLN 800 at the beginning of 2024 and the introduction of a permanent 14th pension payment, will also support economic growth over this horizon. GDP growth will reach its highest level in 2025, when a sharp increase in the inflow of EU funds under the new 2021-2027 framework is expected. However, GDP growth in 2024-2025 will be lower than the long-term average for the Polish economy. The scale of the recovery will be limited by the assumption made in the projection that interest rates will remain unchanged, including the reference rate at 5.75%, and by the only modest recovery abroad.

The fading of the effects of the strong negative supply shock will simultaneously lead to a further fall in CPI inflation. In particular, the easing of the earlier disruptions in the commodity markets and in the global supply chains, contributing to a decline in inflation in the external environment of the Polish economy and slower growth in import prices, will be conducive to lowering the costs of enterprises in the coming quarters. Inflation pressure will also be curbed by aggregate demand remaining at a reduced level over the projection horizon, which is illustrated by a negative output gap in the Polish economy in the years 2024-2025.

Under the assumption of unchanged NBP interest rates (including the reference rate at 5.75%), CPI inflation will return to the band of deviations from the NBP inflation target defined as 2.5% +/-1 p.p. at the end of the projection horizon. The current

Figure 4.1 GDP (y/y, %)



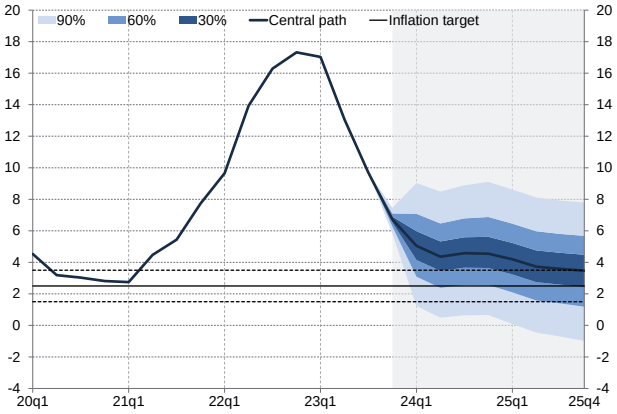
Source: Statistics Poland (GUS) data, NBP calculations.

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.).

period of inflation running at the highest level for many years increases its persistence – although over the projection horizon a decline in growth in unit labour costs is expected, in the coming quarters inflation will still run at an elevated level. Despite a deterioration of the domestic economic conditions, the situation in the labour market remains favourable, with a limited pass-through of the economic slowdown to the unemployment rate. At the same time, the scale of the fall in wage growth is limited by the high increase in the minimum wage in 2024.

The future economic activity and CPI inflation path in Poland depend to a considerable extent on the scale of disruptions to the global economy triggered by Russia's military aggression against Ukraine and the conflict in the Middle East. Apart from external conditions, an important source of risk for the projection is the shape of fiscal policy following the parliamentary elections in Poland. The balance of uncertainty factors indicates a close to symmetric distribution of risks for GDP growth and an upward asymmetry of risks 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

The economic situation in the countries that are Poland's main trading partners remains weakened in 2023, still influenced by the earlier sharp rise in prices of many commodities, heightened uncertainty and monetary policy tightening. Signs of a slowdown in economic activity in the euro area in 2023 Q3, including a significant deterioration in business sentiment, indicate that the expected recovery in this economy will be somewhat weaker and will occur later than assumed in the July projection (Table 4.1). In particular, this concerns Germany, where, besides a recession in the industrial sector, there is also a downturn in the services sector. Along with the fading of the effects of the earlier negative supply shocks and the accompanying expected easing of monetary policy

(Figure 4.3), GDP growth in the euro area will pick up slightly in 2024-2025. The recovery in this economy will be additionally supported by the measures taken under the NextGenerationEU recovery programme.

On the other hand, the economic situation in the United States is unfolding more favourably than earlier expected (see Chapter 1.1 *Economic activity abroad*). The relatively weak response of the US real economy to monetary policy tightening is due to the significant fiscal policy easing during the pandemic and the ongoing realization of pent-up post-pandemic demand. In addition, the relatively rapid curbing of inflation in the United States translates into faster growth in real household income. As a result, the slowdown in domestic demand triggered by the Fed's interest rate hike will be weaker and will occur later than in the euro area, while in 2025 the US economy will once again pick up.

Table 4.1 GDP abroad – November projection versus July projection

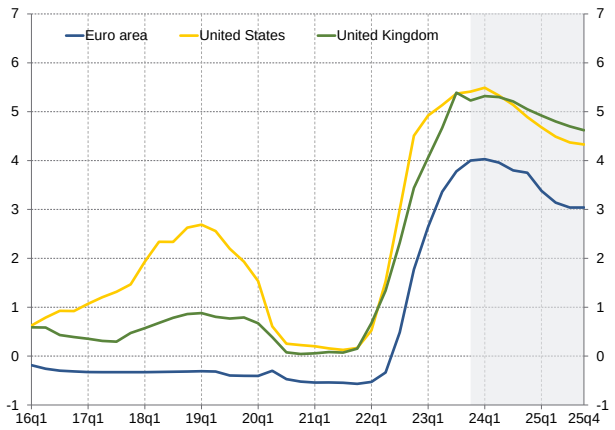
	2023	2024	2025
GDP in Euro Area (y/y, %)			
November 2023	0.6	1.1	1.4
July 2023	0.7	1.5	1.5
GDP in Germany (y/y, %)			
November 2023	-0.4	0.9	1.3
July 2023	-0.1	1.4	1.5
GDP in United States (y/y, %)			
November 2023	2.2	1.3	1.8
July 2023	1.4	0.8	1.9
GDP in United Kingdom (y/y, %)			
November 2023	0.6	0.5	1.1
July 2023	0.4	0.9	1.2

Source: NBP calculations.

Inflation and commodity markets

Despite the downturn in the global economy, the global prices of many energy commodities persist above their pre-pandemic levels, as they are still under the influence of the sanctions imposed on Russia and the country's retaliatory actions against the West (see Chapter 1.3 *Global commodity markets*). This concerns both natural gas, whose prices rose slightly in 2023 Q3 due to the still tense supply-demand situation in global markets, strengthened by the impact of seasonal factors, and coal, which is used as a substitute to gas in the generation of electricity. Oil prices are also affected by the OPEC+ countries' policy of limiting supply, strengthened by the voluntary reduction of production by Saudi Arabia and the reduction of exports by Russia, and also by the mounting geopolitical tensions in the Middle East in the recent period. As a result, following more than a year of falls, oil prices have begun to rise again since July 2023.

Figure 4.3 Interest rates abroad (%)



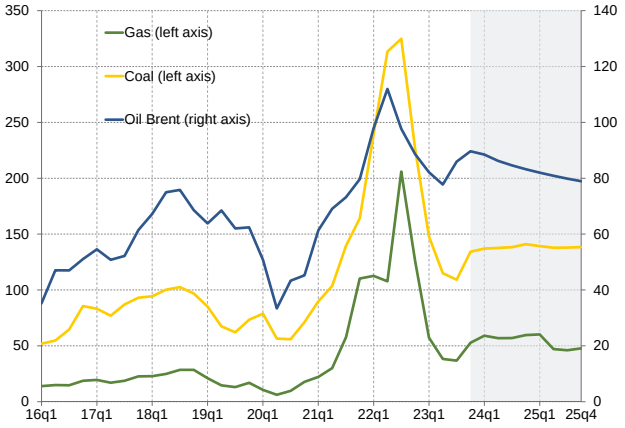
Source: Bloomberg data, NBP calculations.

Futures quotes suggest that global prices of energy commodities will run at a relatively stable level over the projection horizon, above the expectations of the previous projection (Figure 4.4, Figure 4.5). The currently observed rise in oil prices will slow down as a result of the expected increase in production of this commodity in the non-OPEC countries, including the United States. The impact of the improving economic conditions on the price of natural gas in the European market will, in turn, to a large extent be limited by measures aimed at reducing its consumption in Europe, whilst at the same time increasing the opportunities to import natural gas from other sources than Russia.

As a result of the increase in prices of key energy commodities recorded in recent months, the marked fall in global prices of agricultural commodities observed since the second half of 2022 has slowed down. In addition, imbalances in some of the global markets triggered by unfavourable weather conditions are currently boosting the prices of agricultural products. Futures valuations indicate that following a temporary rise in the agricultural products prices, the years 2024-2025 will see a further gradual fall, somewhat slower than expected in the July projection, on the back of the reduced impact of the disruptions resulting from the Russian aggression (Figure 4.5).

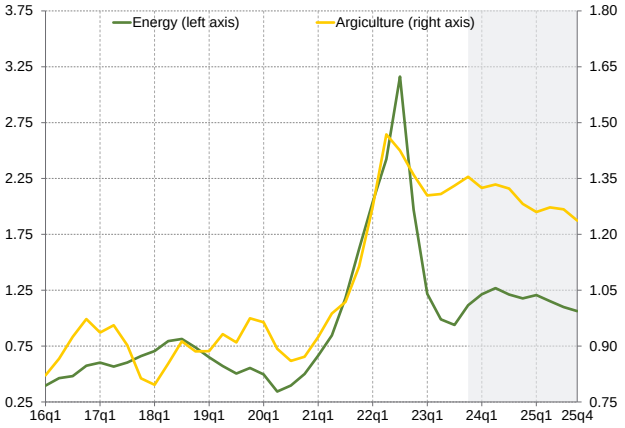
In the current year, global disinflation processes continued, supported by the effects of the falls in energy commodity prices so far, which are spread over time (Figure 4.5), the easing of supply chain tensions and the slowdown in economic activity. Over the projection horizon, inflation in Poland's economic environment will continue to decline under the impact of the further fading of the global supply chain disruptions; however, its rate of decline will slow down due to the expected increase in energy price dynamics. In the major developed economies the disinflation process will be limited by the relatively high nominal wage growth amid persisting tensions in labour markets (Figure 4.6).

Figure 4.4 Brent oil prices (USD/b), natural gas (TTF, USD/MWh) and hard coal (Richards Bay, USD/t)



Source: Bloomberg data.

Figure 4.5 Energy commodities price index (USD, 2011=1) and index of agricultural prices (EUR, 2011=1) in global markets



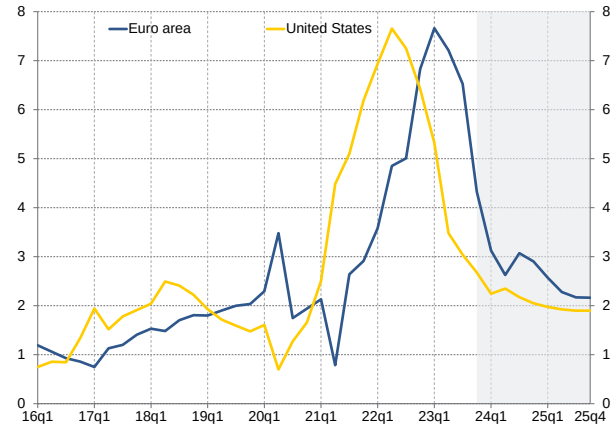
Source: Bloomberg data, NBP calculations.

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.

Uncertainty

Europe and the world continue to see heightened geopolitical risks related to the Russian military aggression against Ukraine, the conflict in the Middle East and tensions in certain other regions of the world. These events are a significant risk factor for both the size of supply and the global prices of energy and agricultural commodities, as well as for the pace of economic growth around the world. This is accompanied by uncertainty regarding the impact of the strong monetary policy tightening by the major central banks on the global economy. The above risks are more extensively discussed in Chapter 4.5 *Forecast uncertainty sources*.

Figure 4.6 Change in gross value added deflator (y/y, %)



Source: Bloomberg, Eurostat data, NBP calculations.

4.3 Polish economy in 2023-2025

Legislative changes affecting the projected paths of GDP and CPI inflation

In response to severe disruptions in the global markets of energy carriers, in the years 2022-2023 the government undertook measures to protect households and firms from the impact of rising energy prices. In 2023 the government withdrew most of the direct tax cuts, while introducing, at the same time, statutory regulation of tariffs for heating and selected energy carriers, combined with compensation payments to their providers and distributors.[39] According to the currently applicable legal regulations, these measures will be in place until the end of 2023. They will be partly financed by electricity producers, the coal mining and coke manufacturing industry and trading companies.

Table 4.2 The impact of additional social transfers – the costs for the general government (% of GDP)

	2023	2024	2025
Increase in child benefit ("Family 500 plus" programme)	0	0.7	0.6
Support and care allowances	0	0.1	0.2
14th pension (another additional annual cash benefit for pensioners)	0.7	0.4	0.4
Total increase in social transfers	**0.7**	**1.2**	**1.2**

Source: NBP calculations based on the government estimates.
Numbers are rounded to one decimal place.

The projection assumes that in subsequent years government support aimed at limiting the increase in electricity prices for vulnerable entities will be gradually reduced, and in the case of gas prices, it will be in place until the end of 2023 only, due to a

[39] In 2023, government regulations include the introduction of a cap on electricity prices for households, public utility units and micro, small and medium-sized firms, as well as, a one-off subsidy of PLN 125 to households. Moreover, since January 2023 gas prices for households and vulnerable entities have been frozen at the 2022 level. A statutory cap on the increase of tariffs for heating and hot water for households and public utility units will be in place until the end of 2023.

marked decline in the prices of this commodity. According to NBP estimates, based on government documents and forecasts, the total value of compensation payments resulting from the regulation of tariffs on gas, coal, heating and electricity will amount to 1.3% of GDP in 2023. At the same time, a large part of this sum – 0.8% of GDP – will be financed by electricity producers and domestic coal and natural gas extractors.

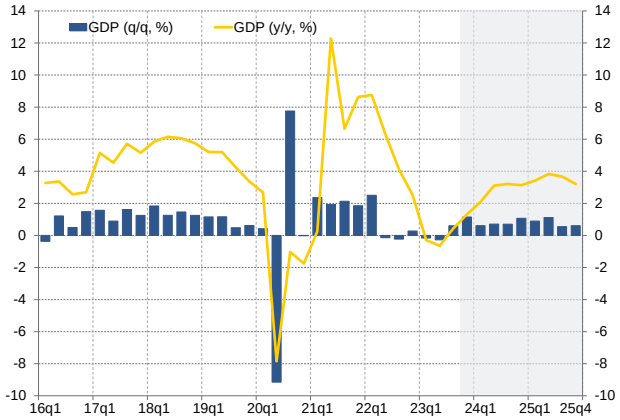
Under the Anti-Inflation Shield, the government extended for 2023 the period of zero VAT rate on staple food products together with exemption from retail sales tax for the sale of fuel, and lowered VAT rates on selected agricultural products. The cost of this tax cut for the general government sector will amount to 0.3% of GDP.

The projection also takes into account the impact of additional social transfers adopted by the Parliament in recent months. In particular, the projection takes into account the introduction of a permanent 14th pension payment, including its raise above the statutory minimum in 2023 and the increase in the "Family 500 plus" benefit to PLN 800 per child from 2024, and the introduction of a support allowance for disabled persons and an allowance for persons taking care of the disabled who undertake employment or other paid work. The total cost of these measures is estimated at approx. 0.7% of GDP in 2023 and on average at approx. 1.2% of GDP in the subsequent years (Table 4.2).

Economic activity

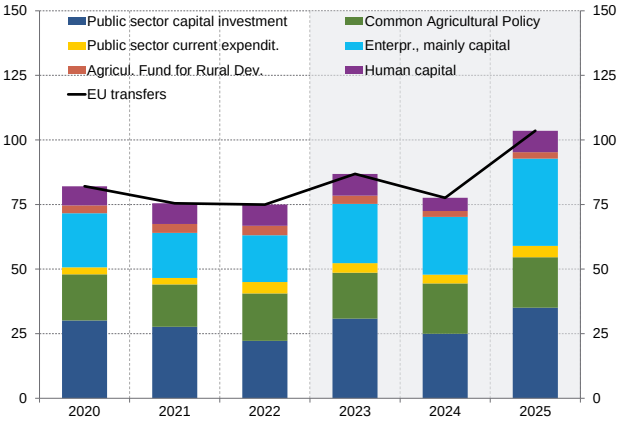
The projection assumes the fading of the negative impact on the Polish economy of the strong negative supply shock caused by the COVID-19 pandemic and Russia's military aggression against Ukraine. As a result, domestic demand is expected to recover and economic activity abroad to improve, translating into a marked acceleration of Poland's economic growth in the years 2024-2025. GDP growth will reach its peak in 2025, when a sharp increase in the inflow of EU funds under the

Figure 4.7 Economic growth



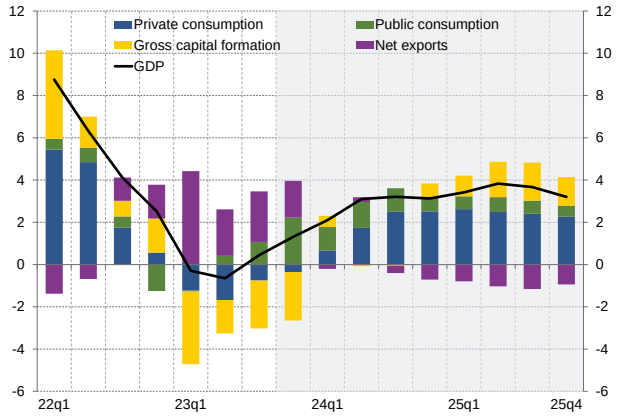
Source: Statistics Poland (GUS) data, NBP calculations.

Figure 4.8 Expenditure financed by EU funds (in PLN billion) – breakdown



Source: NBP calculations.

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



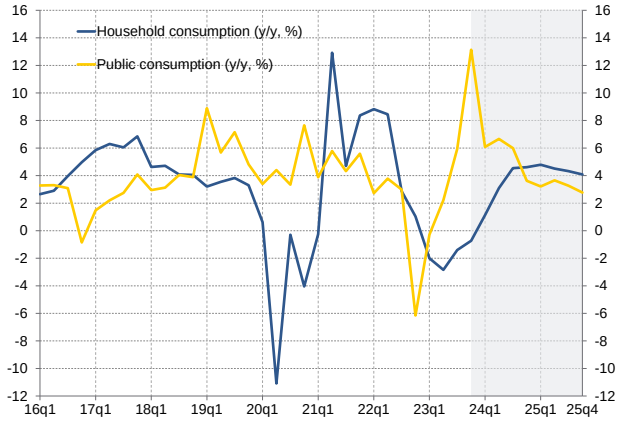
Source: Statistics Poland (GUS) data, NBP calculations.

new financial framework 2021-2027 is expected. The scale of the recovery will be curbed by the assumption of the unchanged level of interest rates, including the reference rate of 5.75% adopted in the projection. From the demand perspective, economic growth will accelerate in 2024-2025 on the back of the completion of the adjustment of the level of inventories, leading to a reduction in their negative contribution to GDP growth, as well as the recovery of private consumption.

Consumption will grow following its steep fall in 2023, which was driven by high inflation limiting purchasing power of households' income, pessimist consumer sentiment and the effects of the earlier increases of NBP interest rates (Figure 4.10). In the coming quarters, household consumption will be positively impacted by a gradual improvement in consumer confidence indicators that has already been observed and a marked increase in household real disposable income. It will be the result of rapidly growing nominal wages amid falling inflation and a further increase in the amount of social allowances (see point *Legislative changes affecting the projected paths of GDP and CPI inflation*). The pass-through of wage growth to consumption in 2024 will be boosted by a high increase in the minimum wage, which will more strongly improve the income situation of households with relatively higher marginal propensity to consume.

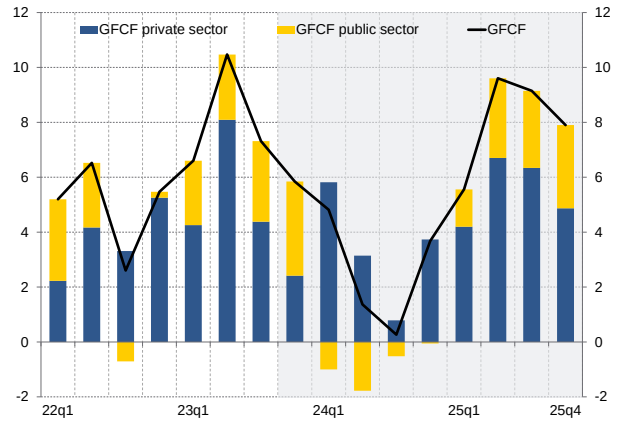
Since the beginning of 2023, gross fixed capital formation has been increasing at a relatively high pace (Figure 4.11). This is driven by growing investment of large enterprises, despite the continued increased uncertainty[40] and still high commodity prices in the global markets. At the same time, outlays of the public finance sector on national defence were increasing, as well as the expenditure in the local government subsector with the use of funds under the Government Polish Deal Fund: Strategic Investment Programme. On

Figure 4.10 Household and public consumption



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

Figure 4.11 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.

[40] NBP Quick Monitoring Survey. Economic climate in the enterprise sector, NBP, October 2023.

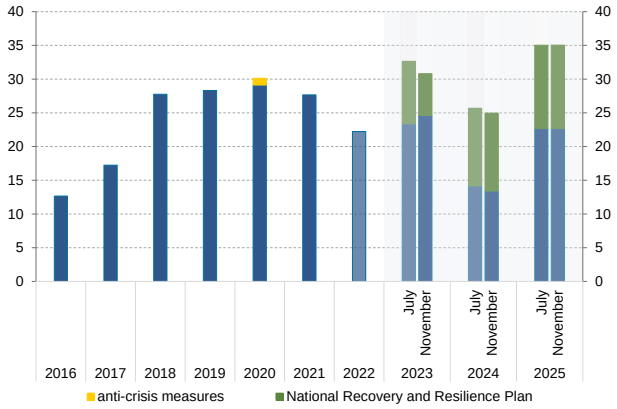
the other hand, in 2023 households have markedly reduced real estate purchases, which are more strongly affected than corporate demand by the still high NBP interest rates, despite their cuts in the recent period, limiting the availability of credit and increasing its cost. Yet, the impact of this factor since July 2023 has been mitigated by the government programme "2% Safe Mortgage ".

In 2024, investment growth will slow down, which will be driven by falling EU capital transfers as expenditure under the 2014-2020 EU financial framework comes to an end (Figure 4.12). Absorption of the EU funds is a factor determining, to a large extent, the projected path of public investment and, to a lesser extent, of corporate investment. Despite the expected decline in expenditure financed with EU transfers in 2024, the outlook for corporate investment remains favourable. At the same time, the housing sector will see a recovery in demand following its steep decline in 2023, which will be driven by the government programme "2% Safe Mortgage" and the improving household situation.

A more marked acceleration of corporate investment is expected in 2025, driven by the need to increase the stock of corporate productive capital, resulting from the reduced investment rate during the pandemic, low degree of automation and robotisation of Polish industry as well as rising labour costs. The year 2025 will also see a further increase in EU funds absorption under the 2021-2027 financial framework, also supporting the rebound in public investment. In the years 2024-2025 the capital outlays of the public finance sector will continue to be increased by the planned rise in expenditure on national defence.

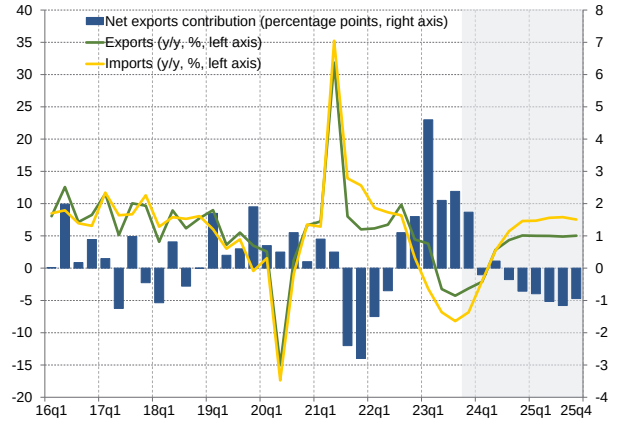
Due to the ongoing slowdown in economic activity in the major developed economies, including in the German economy, demand for Polish goods and services will decline in 2023 compared to previous years, resulting in a fall in exports (Figure 4.13). At the same time, on account of its high import intensity as well as a significant decline in domestic

Figure 4.12 Use of EU funds for public investment (PLN billion)



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

Figure 4.13 Foreign trade



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

demand and the stronger cyclical response of imports than exports, the contribution of net exports to GDP growth will have a significantly positive value. In the coming years, on the back of an improvement in domestic economic conditions, the contribution of net exports to GDP will decline, reaching negative values from 2024 Q3.

Potential output and the output gap

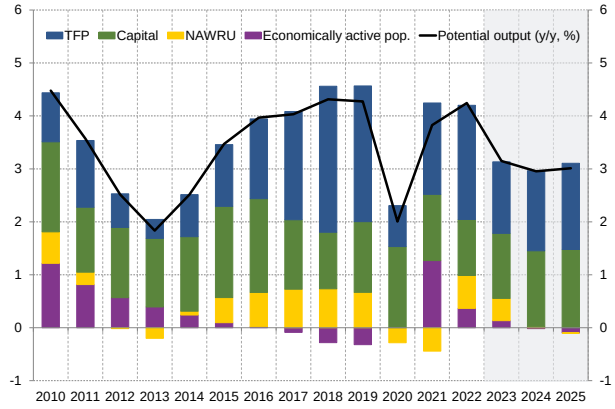
Following the relatively high growth in the potential output of the Polish economy in 2022, resulting from the post-pandemic increase in the utilisation of the factors of production, its growth is expected to slow down to close to 3% y/y in the years 2023-2025 (Figure 4.14).

On the one hand, demographic changes, reflected in a decline in the number of the working age population, reducing the number of economically active population, will have a negative impact on the potential GDP growth rate.

On the other hand, the productive capacity of the Polish economy in the years 2023-2025 is boosted by the increase in the labour supply following the activation of refugees from Ukraine and the inflow of migrants from other countries[41] as well as the growing rate of corporate investment, which increases the growth rate of productive capital.

As a result of the strong fall in the GDP growth rate in recent quarters, the output gap, which is a synthetic measure of demand pressure in the economy, has significantly declined and has been running at a negative level since the beginning of 2023 (Figure 4.16). In the years 2024-2025, the output gap will narrow; however, the scale of economic recovery forecasted in this period will be insufficient for the output gap to rise above zero. This implies that over the whole projection horizon demand pressure will be at a reduced level, contributing to a decline in CPI inflation.

Figure 4.14 Potential product (y/y, %) – breakdown



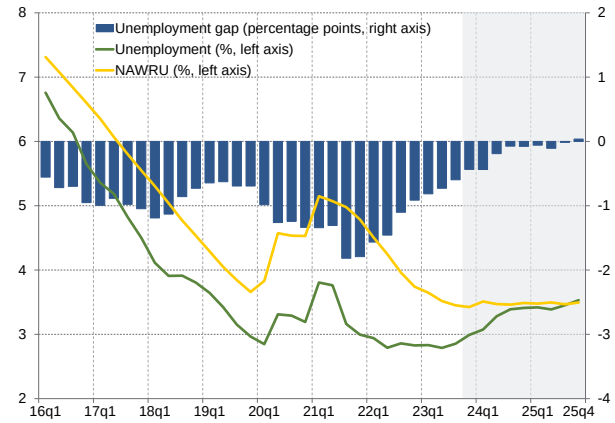
Source: NBP calculations.

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 4.15 Unemployment



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

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

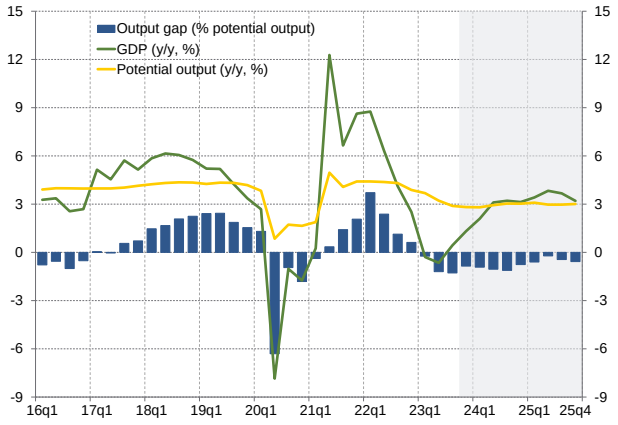
[41] The inflow of immigrants will be only partially reflected in LFS statistics, due to the methodology of the survey. Consequently, the projection assumes that it will be manifested in the rise in total factor productivity (TFP).

Labour market

Over the projection horizon, a slight fall in the employment is expected in Poland (Figure 4.17), as a result of a decline in the working age population and the spread over time effect of the slowdown in domestic GDP growth in 2023. This scenario is confirmed by the predominance of companies reducing the number of employees over companies increasing their number in NBP surveys[42], as well as the declining PMI employment sub-index in the Markit Group survey. The lagged response of employment to changes in economic activity is related to the labour hoarding, as suggested by the downward trend of the average number of hours worked in LFS data. This phenomenon is a result of the intention to reduce the costs associated with finding and onboarding new employees if they need to be re-employed. The gradually declining labour force participation over the projection horizon, resulting from the negative impact of demographic trends, will also lower the number of people employed, but at the same time limit the scale of the increase in the unemployment rate (Figure 4.15, Figure 4.18).

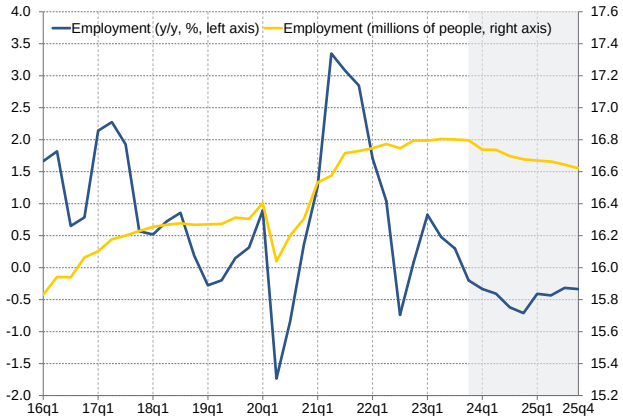
On the back of the fall in inflation, over the projection horizon nominal wage growth will decline from the currently observed double digit level (Figure 4.19). This scenario is supported by the weakening wage pressure, as reflected in the results of the NBP Quick Monitoring Survey.[43] Over the projection horizon, wage pressure will also be mitigated by the assumed growing presence of migrants from Ukraine and other countries on the Polish labour market and the forecasted increase in the unemployment rate. The noticeable staff shortages in many industries, as well as the double increase in the level of the minimum wage in 2024, amounting to an annual average of 20.5% y/y, will act in the opposite direction. Given the multi-directional impact of the

Figure 4.16 Output gap



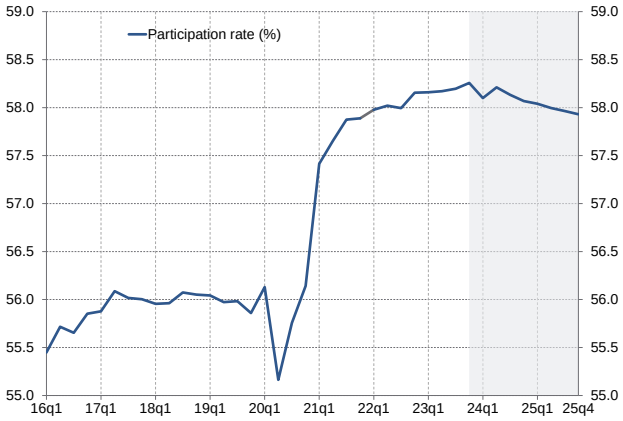
Source: Statistics Poland (GUS) data, NBP calculations.
The output gap is a synthetic measure of demand pressure in the economy. It is expressed as a percentage of the deviation of the actual real level of GDP from the level of potential output.

Figure 4.17 Employment



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

Figure 4.18 Labour force participation



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

[42] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2023.
[43] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, October 2023.

above-mentioned factors, in the years 2024-2025 real wages will rise on average at a pace close to the rate of labour productivity growth, contributing to a rebound in real household disposable income.

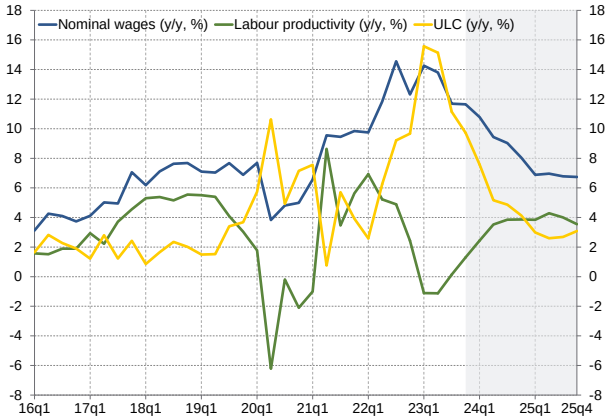
CPI inflation

The fading of the effects of the strong negative supply shock amplified by the effects of Russia's military aggression against Ukraine leads to the decline in CPI inflation, which reached its highest level in February 2023. Disinflation will continue over the projection horizon with a changing contribution of factors responsible for this process.

Slower growth of consumer prices over the projection horizon will be related to the decline in the growth rate of all the main components of the CPI basket. The disinflation process will be supported by a significant reduction in cost pressure in the economy due to a marked decline in global prices of agricultural and energy commodities following their sharp rise in the years 2021-2022. The expected decline in wage growth over the projection horizon will also weaken cost pressure. At the same time, the fading of the earlier global supply chain disruptions, contributing to lower inflation in the environment of the Polish economy, and as a result, lower growth of import prices, will lower the costs of enterprises (Figure 4.22). Inflation pressure will also be curbed by aggregate demand remaining at a reduced level over the projection horizon, as illustrated by a negative output gap in the Polish economy in the years 2024-2025 (Figure 4.16).

Under the assumption of unchanged NBP interest rates (including the reference rate at 5.75%), CPI inflation will return to the band of deviations from the NBP inflation target (defined as 2.5% +/-1 p.p.) at the end of the projection horizon (Figure 4.20, Figure 4.21). The highest inflation in many years increased its persistence resulting from elevated wage pressure and increased tolerance of price growth. The decline in energy price growth for households, electricity and heating in particular,

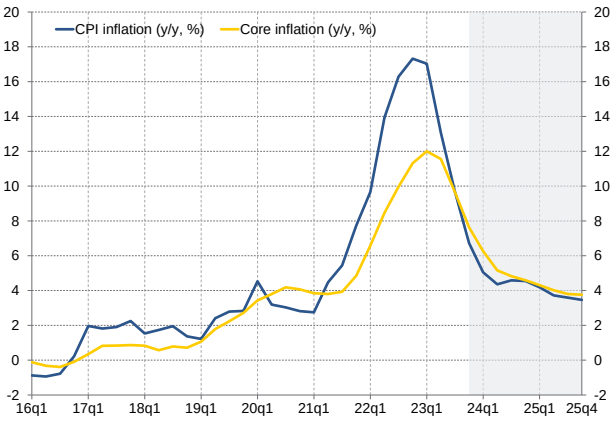
Figure 4.19 Unit labour cost



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

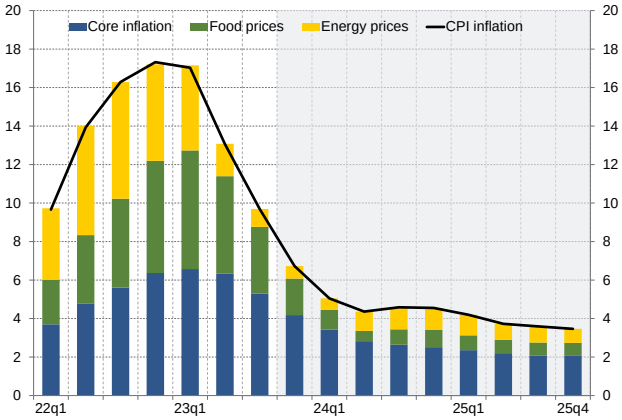
Unit labour cost is defined as the average cost of labour per unit of output produced. They are calculated by dividing the product of average wages and the number of employed persons in the economy by the total GDP. Alternatively, they can be expressed as the quotient of the average wage and labour productivity, in other words, the relation of GDP to the number of the employed persons. Unit labor cost (ULC) presented in the chart include employers' social security contributions.

Figure 4.20 CPI and core inflation



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

Figure 4.21 CPI inflation (y/y, %) – breakdown



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

will also be spread over time. This is a result of the tariffication process and delayed adjustment to the earlier increases in prices of energy commodities, with CO2 emission allowances several times higher than before the pandemic. At the same time, it is expected that along with lower global energy commodity prices than immediately following the launch of the Russian aggression, the scale of government shielding measures in the years 2024-2025 will decline (see section *Legislative changes affecting the projected paths of GDP and CPI inflation*).

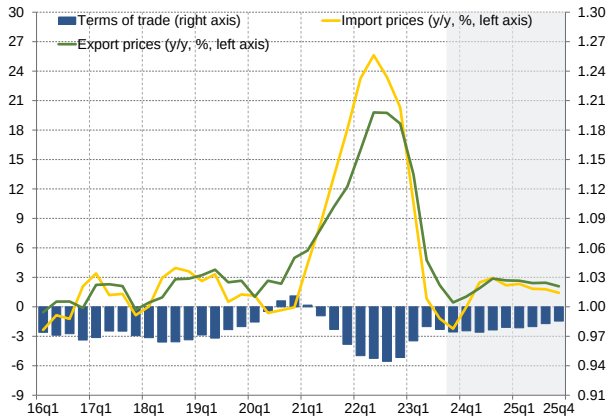
4.4 Current versus previous projection

Data and information released after the cut-off date of the July projection have contributed to a downward revision of the economic growth forecast in 2023 and its upward revision in 2024-2025. In the case of CPI inflation, there was a downward revision for 2023 and 2024, with a slightly higher level in 2025 (Table 4.3, Figure 4.24, Figure 4.25, Figure 4.26, Figure 4.27).

The downward revision of domestic economic growth in 2023 is a result of the stronger than expected adjustment of inventories amid lower demand and expectation of a fall in prices of supply goods. Worse than expected economic conditions in the euro area, including in Germany, which delay the recovery in Polish industry, also contributed to the downward revision of GDP growth. On the other hand, the greater resilience of corporate investment to flagging demand, related to the need to increase the stock of productive capital following the pandemic and rapidly rising labour costs, has a positive effect on economic growth. At the same time, public investment is developing more favourably in 2023 due to the greater than previously assumed local government absorption of funds under the Government Fund "Polish Deal": Strategic Investment Programme.

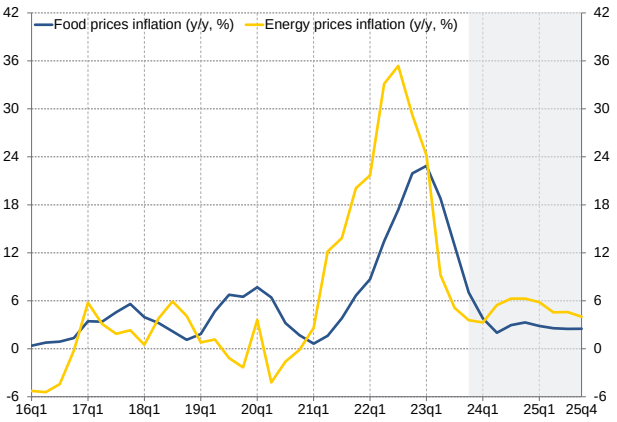
A significant factor behind the upward revision of GDP growth in 2024 and 2025 compared to the expectations of the previous forecasting round is the NBP interest rate cuts in September and

Figure 4.22 Export and import prices



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

Figure 4.23 Food and energy price inflation



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

Table 4.3 November projection versus July projection

	2023	2024	2025
GDP (y/y, %)			
November 2023	0.3	2.9	3.5
July 2023	0.6	2.4	3.3
CPI inflation (y/y, %)			
November 2023	11.4	4.6	3.7
July 2023	11.9	5.2	3.6

Source: NBP calculations.

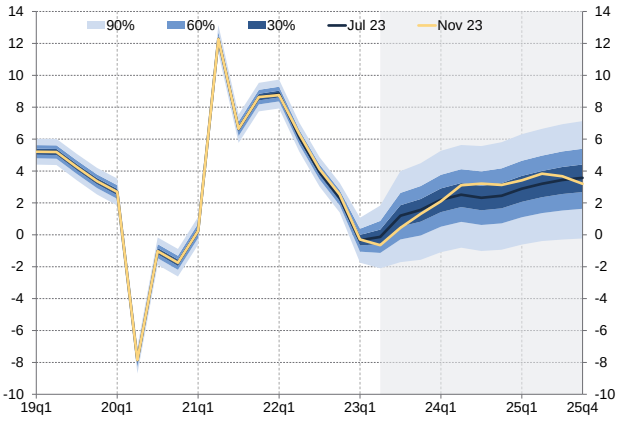
October 2023, amounting to a total of 100 basis points. This contributed to an upward revision of the forecast growth in accumulation and private consumption. The rebound of economic activity in 2024 will additionally be supported by higher than previously expected growth in public consumption, which is indicated by the provisions of the 2024 Draft Budget Act regarding an increase in current expenditure of budgetary units of 11.9% compared to the plan for 2023. The increase in imports caused by higher domestic demand partly neutralises its impact on GDP growth.

CPI inflation is influenced by the downward revision of core inflation and food price growth in 2023 and 2024. Flagging demand, reflected in a wider negative output gap, is a factor lowering the path of prices of many goods and services compared to earlier expectations. This reduces consumers' acceptance of price rises, an example of which is the recently observed intensification of price competition between retail chains. The easing of cost pressure, reflected in a stronger than anticipated fall in industrial producer prices in recent months, also lowers consumer price growth. Lower growth in prices of medical and pharmaceutical goods, as a result of more age groups becoming eligible for the programme of free reimbursed medicines from 1 September, contributes towards the downward revision of core inflation in the coming quarters.

On the other hand, in 2024 CPI inflation will be boosted by the upward revision of energy price growth due to higher oil prices (the impact of this factor on energy prices in 2023 is cancelled out by the statutory increase in the consumption limits guaranteeing lower electricity bills for households).

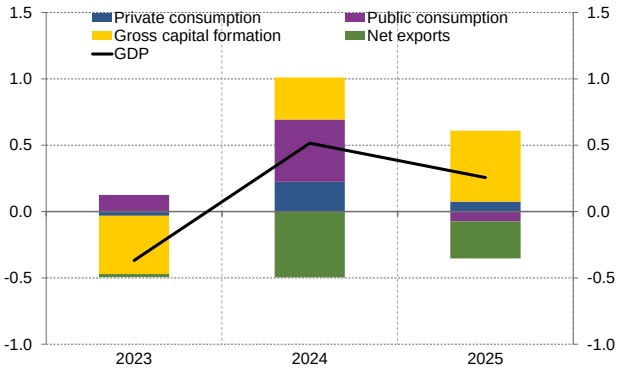
In 2025, a slowdown in the disinflation process is expected with price growth slightly higher than in the previous projection. This will be due to the impact of higher prices of energy and agricultural commodities on food prices, with core inflation close to the path of the July projection. The return

Figure 4.24 November projection versus July projection: GDP growth (y/y, %)



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

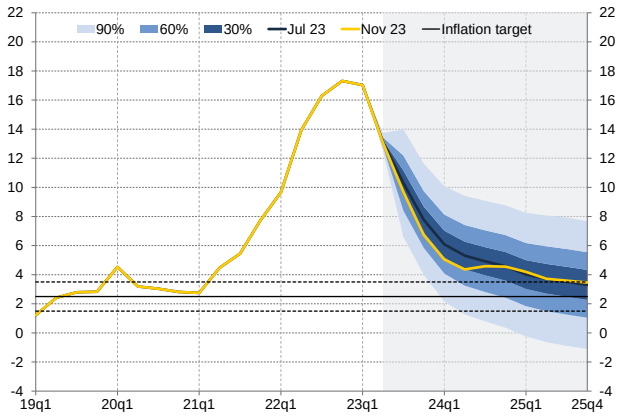
Figure 4.25 Decomposition of deviations between November and July projection: GDP growth (percentage points)



Source: NBP calculations.

The data presented in the chart may vary slightly from those in Table 4.3, due to rounding of numbers to one decimal place.

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



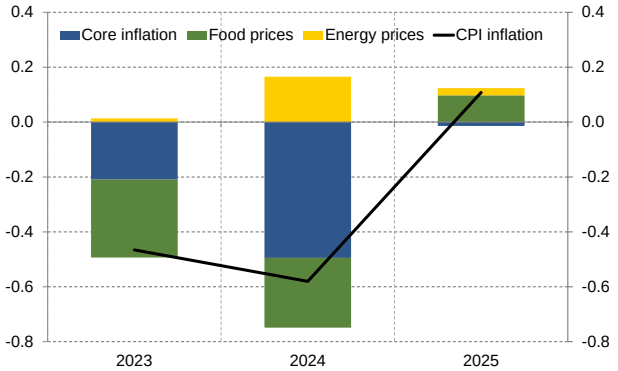
Source: Statistics Poland (GUS) data, NBP calculations.

of core inflation to the scenario of the previous projection is a result of the fact that following a period of weaker economic conditions in 2023, in the coming years the negative output gap will be closing faster and it will return to the values of the July projection, which means that demand will be a factor limiting growth to a similar degree as expected in the previous forecasting round.

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 economic outlook and CPI inflation path in Poland still depend to a large extent on the macroeconomic effects of Russia's military aggression against Ukraine. Important risk factors in the environment of the Polish economy also include the impact of monetary policy tightening by the ECB and the Fed on economic activity in the euro area and the United States. Another external source of uncertainty in the current forecasting round is the development of the economic situation in China over the projection horizon. Apart from external conditions, an important source of risk for the projection is the shape of fiscal policy following the parliamentary elections in Poland, including the scale and scope of the government shielding measures. The balance of uncertainty factors indicates an approximately symmetric distribution of risks for GDP growth and a higher probability of CPI inflation running above the central path over the projection horizon (Table 4.4).

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



Source: NBP calculations.

The data presented in the chart may vary slightly from those in Table 4.3, due to rounding of numbers to one decimal place.

Table 4.4 Probability of inflation running:

	Below 1.50%	Below 2.50%	Below 3.50%	Below the central projection	In the range (1.5-3.5%)
24q1	0.06	0.13	0.25	0.49	0.19
24q2	0.11	0.21	0.35	0.48	0.24
24q3	0.09	0.18	0.31	0.48	0.22
24q4	0.09	0.18	0.30	0.46	0.21
25q1	0.13	0.24	0.38	0.48	0.24
25q2	0.19	0.31	0.45	0.49	0.27
25q3	0.21	0.34	0.48	0.50	0.27
25q4	0.24	0.37	0.51	0.51	0.27

Source: NBP calculations.

Further course of Russia's military aggression against Ukraine

A significant risk factor for the future path of economic activity and price processes in Poland continues to be the course of the Russian aggression against Ukraine. This uncertainty is related to the further course of the military conflict and the scope of economic sanctions imposed on Russia by the West, as well as Russia's retaliatory measures. The future evolution of the situation surrounding the Russian aggression against Ukraine has important implications for the global energy and agricultural commodity price developments as well as capital flows in the global economy.

An escalation of the conflict, both in military and economic terms, would lead to an increase in uncertainty in the global economy. In such a scenario, increased risk aversion, combined with Poland's close geographical location to the sides of the conflict, might result in an outflow of foreign capital from the domestic economy, which would put pressure on the zloty exchange rate. At the same time, the global prices of energy and agricultural commodities would once again rise above the levels assumed in the central projection scenario. Under these conditions, increased inflationary inertia in the domestic economy would be expected, which would delay the return of the CPI inflation rate to the NBP inflation target. On the other hand, should the realisation of the optimistic scenario of a quick and favourable end for Ukraine to the Russian aggression materialise, the negative effects of the supply shock currently impacting on the European economy would be less severe, which could support a faster disinflation process in Poland.

Other factors affecting global prices of energy commodities

The future path of energy commodity prices is also dependent on the materialisation of other significant risks in the global economy which are unrelated to the Russian aggression against Ukraine. In particular, increased oil production in OPEC+ countries, the United States and other major oil producers, along with higher than average temperatures in Europe during the coming heating season, would support an improvement in the global balance between supply and demand for energy commodities. As a result, a decline in their global price level could be expected compared to the projection assumptions, which would contribute to a faster decline in CPI inflation and a faster recovery of economic activity in Poland.

A further escalation of tensions in the Middle East, in particular the involvement in the conflict of the countries of the region that are important oil producers, might in turn cause a fall in supply of this commodity. Cuts in oil production by the major oil producers combined with worse meteorological conditions in the current heating season, would result in higher global prices and price volatility of energy commodities than assumed in the central projection scenario. As a result, a slower decline in CPI inflation and lower economic activity in Poland would be expected over the projection horizon.

Effects of monetary policy tightening by the ECB and the Fed

Further significant risk factors in the environment of the Polish economy are related to the effects of monetary policy tightening in the major developed economies. In particular, the negative impact of the interest rate hikes carried out so far by the ECB and the Fed on economic activity in the euro area and the United States may be stronger than assumed in the central projection scenario. At the same time, there is a risk of a prolonged period of high interest rates in these economies due to the persistence of core inflation amid low unemployment. Under these conditions, the path of household consumption and private investment in the euro area and the United States would decline, leading to recession in both of these economies.

This scenario, should it unfold, would have a negative influence on economic growth in Poland over the projection horizon, with a mixed impact on domestic CPI inflation. On the one hand, persistent core inflation abroad and a depreciation of the zloty as a result of the ECB and the Fed keeping interest rates high would add to inflationary inertia in the Polish economy through higher import price growth. On the other hand, an economic downturn abroad and, consequently, lower demand pressure in Poland than assumed in the central projection scenario would support a faster pace of disinflation in the domestic economy.

Economic growth in China

Another source of uncertainty in the current forecasting round is the development of the economic situation in China, where it is estimated that the risks of slower GDP growth in this economy predominate. Should the crisis in the real estate market worsen and have a negative impact on financial stability, alongside continued weak consumption and private investment, economic growth in China might be below the projection assumptions. In such a scenario the growth prospects in the global economy would deteriorate, which would lead to lower economic activity and inflation in Poland. On the other hand, the introduction of additional stimulus measures in the Chinese economy would improve its growth prospects, boosting global demand, which would translate positively into the future path of domestic GDP and raise inflationary pressure in Poland.

Government fiscal policy

An important domestic risk factor in the projection is the shape of fiscal policy after the formation of the government following the parliamentary elections, including the possibility of an increase in public expenditure above the assumptions of the central projection scenario or a reduction in the tax burden. The materialisation of this risk would contribute towards a higher path of GDP and CPI inflation, while the scale of the deviation of these categories from the base scenario would depend on the form of fiscal expansion. Another source of uncertainty is related to the future decisions of the new government with regard to the scale and scope of the fiscal shielding measures aimed at mitigating the negative effects of high commodity prices on households (see section *Legislative changes affecting the projected paths of GDP and CPI inflation*). Legal acts introducing a reduction in the VAT rate on staple food products, subsidies to electricity and gas prices for households and other selected entities are in force until the end of 2023. While it is true that in 2023 the situation in the energy commodities markets stabilised, the market prices of electricity nevertheless remain significantly higher than the level observed before the outbreak of the Russian military aggression against Ukraine. Consequently, it cannot be ruled out that in order to avoid a sharp increase in tariffs for households, these solutions might be continued in 2024. On the other hand, the 0% VAT rate on staple food products might not be maintained over the projection horizon. However, so far legislative work on any possible extension of the arrangements in force in 2023 has not begun and there is also no mention of this in the 2024 Draft Budget Act.

Table 4.5 Central path of inflation and GDP projection

	2022				2023				2024				2025				2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Consumer Price Index CPI (%, y/y)	9.7	13.9	16.3	17.3	17.0	13.1	9.7	6.7	5.0	4.4	4.6	4.6	4.2	3.7	3.6	3.5	14.4	11.4	4.6	3.7
Core inflation (CPI net of food and energy prices, %, y/y)	6.6	8.5	10.0	11.3	12.0	11.6	9.7	7.6	6.3	5.2	4.8	4.6	4.3	4.0	3.8	3.8	9.1	10.1	5.2	4.0
Food prices (%, y/y)	8.7	13.4	17.4	21.9	22.9	18.8	12.9	7.0	3.8	2.0	3.0	3.3	2.9	2.6	2.5	2.5	15.4	15.0	3.0	2.6
Energy prices (%, y/y)	21.7	33.1	35.4	29.2	24.2	9.2	5.1	3.6	3.3	5.5	6.3	6.3	5.8	4.6	4.6	4.0	29.9	10.0	5.3	4.7
GDP (%, y/y)	8.8	6.3	4.1	2.5	-0.3	-0.6	0.4	1.3	2.1	3.1	3.2	3.1	3.4	3.8	3.7	3.2	5.3	0.3	2.9	3.5
Domestic demand (%, y/y)	10.8	7.4	3.1	1.0	-4.8	-2.9	-2.0	-0.4	2.5	3.1	3.8	4.1	4.5	5.2	5.2	4.4	5.2	-2.3	3.4	4.8
Household consumption (%, y/y)	8.8	8.5	2.9	1.0	-2.0	-2.8	-1.4	-0.7	1.1	3.1	4.5	4.6	4.8	4.5	4.3	4.1	5.2	-1.6	3.3	4.4
Public consumption (%, y/y)	2.7	3.8	3.0	-6.2	-0.3	2.2	5.9	13.1	6.1	6.7	6.0	3.6	3.2	3.7	3.3	2.8	0.3	4.3	5.6	3.2
Gross fixed capital formation (%, y/y)	5.1	6.5	2.5	5.6	6.8	10.5	7.6	5.8	4.8	1.4	0.3	3.7	5.6	9.6	9.1	7.9	4.9	7.3	2.5	8.0
Contribution of net exports (percentage points, y/y)	-1.5	-0.7	1.1	1.6	4.6	2.1	2.4	1.7	-0.2	0.2	-0.4	-0.7	-0.8	-1.0	-1.2	-0.9	0.2	2.5	-0.3	-1.0
Exports (%, y/y)	6.2	6.7	9.8	4.5	3.8	-3.2	-4.3	-3.1	-2.1	2.8	4.4	5.1	5.0	5.0	4.9	5.0	6.7	-1.9	2.5	5.0
Imports (%, y/y)	9.3	8.7	8.2	1.6	-3.2	-6.8	-8.2	-6.8	-2.0	2.8	5.7	7.3	7.4	7.8	7.9	7.5	6.8	-6.9	3.4	7.7
Gross wages (%, y/y)	9.7	11.8	14.6	12.3	14.3	13.8	11.7	11.6	10.8	9.4	9.0	8.0	6.9	7.0	6.8	6.7	12.1	12.8	9.3	6.8
Total employment (%, y/y)	1.7	1.0	-0.7	0.1	0.8	0.5	0.3	-0.2	-0.3	-0.4	-0.6	-0.7	-0.4	-0.4	-0.3	-0.3	0.5	0.4	-0.5	-0.4
Unemployment rate (%)	2.9	2.8	2.9	2.8	2.8	2.8	2.9	3.0	3.1	3.3	3.4	3.4	3.4	3.4	3.5	3.5	2.9	2.9	3.3	3.4
NAWRU (%)	4.5	4.2	4.0	3.7	3.6	3.5	3.5	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.1	3.5	3.5	3.5
Labour force participation rate (%, y/y)	58.0	58.0	58.0	58.2	58.2	58.2	58.2	58.3	58.1	58.2	58.1	58.1	58.0	58.0	58.0	57.9	58.0	58.2	58.1	58.0
Labour productivity (%, y/y)	6.9	5.2	4.9	2.4	-1.1	-1.1	0.1	1.3	2.4	3.5	3.9	3.9	3.8	4.3	4.0	3.5	4.7	0.1	3.4	3.9
Unit labour cost (%, y/y)	2.6	6.3	9.2	9.7	15.6	15.1	11.1	9.7	7.6	5.2	4.9	4.1	3.0	2.6	2.7	3.1	7.1	12.4	5.4	2.8
Potential output (%, y/y)	4.4	4.4	4.3	3.9	3.7	3.2	2.9	2.8	2.8	2.9	3.0	3.0	3.1	3.0	3.0	3.0	4.2	3.1	3.0	3.0
Output gap (% potential GDP)	3.7	2.4	1.1	0.6	-0.2	-1.2	-1.3	-0.9	-0.9	-1.0	-1.1	-0.8	-0.6	-0.2	-0.4	-0.6	1.9	-0.9	-1.0	-0.5
Index of agricultural commodity prices (EUR; 2011=1.0)	1.27	1.47	1.42	1.36	1.30	1.31	1.33	1.35	1.32	1.33	1.32	1.28	1.26	1.27	1.27	1.24	1.38	1.32	1.32	1.26
Index of energy commodity prices (USD; 2011=1.0)	2.04	2.42	3.16	1.97	1.22	0.99	0.94	1.12	1.21	1.27	1.21	1.18	1.21	1.15	1.10	1.06	2.40	1.07	1.22	1.13
Gross value added deflator abroad (%, y/y)	3.6	4.8	4.8	6.1	6.4	5.7	5.0	3.3	2.6	2.4	2.9	2.8	2.4	2.2	2.1	2.1	4.8	5.1	2.7	2.2
GDP abroad (%, y/y)	5.7	3.4	2.1	1.4	0.9	0.6	0.4	0.5	0.7	0.9	1.2	1.4	1.4	1.4	1.4	1.3	3.1	0.6	1.0	1.4
Current account balance (% GDP)	-2.3	-3.1	-3.0	-2.4	-0.7	-0.1	0.7	1.2	1.1	1.4	1.1	0.9	0.6	0.3	0.1	0.0	-2.4	1.2	0.9	0.0
WIBOR 3M (%)	3.50	6.24	7.08	7.29	6.93	6.90	6.50	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	6.03	6.57	5.95	5.95

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

For the majority of variables, the values up to 2023Q3 are determined on the basis of raw quantities, while in the projection horizon are presented seasonally adjusted data. In the case of the unemployment rate, the NAWRU rate, the labour force participation rate, potential output growth, the output gap, the agricultural commodity price index, the energy commodity price index, inflation abroad and GDP growth abroad only seasonally adjusted data are presented, while the WIBOR 3M rate and import price growth are not seasonally adjusted series.

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

5. The voting of the Monetary Policy Council members in May – September 2023[44]

■ Date: 9 May 2023

Subject matter of motion or resolution:
Resolution no. 2/2023 on approving the Report on monetary policy in 2022.

Voting of the MPC members:

For: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
G. Masłowska
H.J. Wnorowski

Against: L. Kotecki
P. Litwiniuk
J.B. Tyrowicz

■ Date: 9 May 2023

Subject matter of motion or resolution:
Resolution no. 3/2023 on evaluation of the activities of the NBP Management Board as regards the implementation of monetary policy guidelines for 2022.

Voting of the MPC members:

For: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
G. Masłowska
H.J. Wnorowski

Against: L. Kotecki
P. Litwiniuk
J.B. Tyrowicz

[44] This chapter does not include voting on motions of 10 May 2023, which were included in the previous Inflation Report – July 2023.

■ Date: 9 May 2023

Subject matter of motion or resolution:
Resolution no. 4/2023 on approving the report on the operations of Narodowy Bank Polski in 2022.

Voting of the MPC members:

For: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
P. Litwiniuk
G. Masłowska
H.J. Wnorowski

Against: L. Kotecki
J.B. Tyrowicz

■ Date: 6 June 2023

Subject matter of motion or resolution:
Motion to raise the NBP interest rates by 1.00 p.p.

MPC decision:
The motion did not receive majority vote.

Voting of the MPC members:

For: J.B. Tyrowicz

Against: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
L. Kotecki
P. Litwiniuk
G. Masłowska
H.J. Wnorowski

■ Date: 6 June 2023

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

MPC decision:
The motion did not receive majority vote.

Voting of the MPC members:

For: L. Kotecki
P. Litwiniuk
J.B. Tyrowicz

Against: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
G. Masłowska
H.J. Wnorowski

■ Date: 5 July 2023

Subject matter of motion or resolution:
Resolution no. 1/DRF/2023 on the appointment of the external auditor for the annual financial statements of Narodowy Bank Polski for the years 2023, 2024 and 2025.

Voting of the MPC members:

For: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
L. Kotecki
P. Litwiniuk
G. Masłowska
J.B. Tyrowicz
H.J. Wnorowski

Against: No-one

■ Date: 6 July 2023

Subject matter of motion or resolution:
Motion to raise the NBP interest rates by 1.00 p.p.

MPC decision:
The motion did not receive majority vote.

Voting of the MPC members:

For: J.B. Tyrowicz

Against: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
L. Kotecki
P. Litwiniuk
G. Masłowska
H.J. Wnorowski

■ Date: 5 September 2023

Subject matter of motion or resolution:
Resolution no. 5/2023 on adopting monetary policy guidelines for 2024.

Voting of the MPC members:

For: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
P. Litwiniuk
G. Masłowska
H.J. Wnorowski

Against: L. Kotecki
J.B. Tyrowicz

■ Date: 6 September 2023

Subject matter of motion or resolution:
Motion to raise the NBP interest rates by 1.00 p.p.

MPC decision:
The motion did not receive majority vote.

Voting of the MPC members:

For: J.B. Tyrowicz

Against: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
L. Kotecki
P. Litwiniuk
G. Masłowska
H.J. Wnorowski

■ Date: 6 September 2023

Subject matter of motion or resolution:
Motion to cut the NBP interest rates by 0.75 p.p.

MPC decision:
The motion was passed.

Voting of the MPC members:

For: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
G. Masłowska
H.J. Wnorowski

Against: L. Kotecki
P. Litwiniuk
J.B. Tyrowicz

- Date: 6 September 2023

Subject matter of motion or resolution:

Resolution no. 6/2023 on the reference rate, refinancing credit rate, fixed-term deposit rate, rediscount rate and discount rate at Narodowy Bank Polski.

Voting of the MPC members:

For: A. Glapiński
I.K. Dąbrowski
I. Duda
W.S. Janczyk
C. Kochalski
G. Masłowska
H.J. Wnorowski

Against: L. Kotecki
P. Litwiniuk
J.B. Tyrowicz

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