NARODOWY
BANK POLSKI

Monetary Policy Council

July 2023

# Inflation Report

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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 30 June 2023, while the projection of inflation and GDP presented in Chapter 4 has been prepared taking into account data available until 22 June 2023.

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

# Contents

# Summary


In 2023 Q1, the annual growth in economic activity remained low worldwide, especially in the advanced economies, including the euro area. Global economic conditions were negatively affected by the earlier strong rise in commodity prices, the tightening of financing conditions in most economies and high uncertainty. Against this background, the growth in global trade volume remained low. At the same time, economic growth was supported by the easing of tensions in global supply chains, as well as favourable labour market conditions in a majority of economies.

Since the previous *Inflation Report*, global inflation has declined, although it remains high. Price growth is boosted by the lagged effects of earlier supply shocks, including those affecting energy markets, by the rebounding activity in the services sector, as well as by increasing labour costs and high corporate unit profits. Under these circumstances, core inflation in most countries remains high, yet in some economies it has been gradually decreasing. Alongside that, in recent months, energy prices and food price growth have started to fall, while tensions in global supply chains have subsided. As a consequence, cost pressures have been decreasing, as reflected in the declining PPI inflation in many countries, and even falls in producer prices in some of them.

Global commodity prices have recently declined as a result of weaker demand dampened by the deterioration of global economic conditions, improving supply in selected markets, and, as regards energy commodities, also a mild winter. Nevertheless, prices of many commodities remained relatively high, supported by still limited supply, primarily due to the consequences of the Russian military aggression against Ukraine.

In the recent period, many central banks have raised interest rates – albeit most of them to a lesser extent than in previous months – or have kept them unchanged following earlier hikes. In the global financial markets, government bond yields in most economies have continued to run at levels markedly higher than on average in previous years. In turn, equity prices – after temporary fluctuations in March 2023 related to the tensions in the banking sector in some countries – at the end of June 2023 were higher than at the beginning of the year, particularly in advanced economies. At the same time, the US dollar has continued to gradually weaken against many currencies.

Annual consumer price growth in Poland – like in many other economies around the world – has declined in recent months (from 18.4% in February to 11.5% in June 2023, according to Statistics Poland flash estimate). The fall in annual energy price growth had the biggest impact on the decline in inflation in this period. To a lesser extent, lower inflation was also the result of the weakening annual growth in prices of food and non-alcoholic beverages as well as a fall in core inflation. The decline in CPI inflation is driven by negative base effects (due to the rapid price growth following the outbreak of the Russian military aggression against Ukraine), the fall in global commodity prices and the easing of tensions in global supply chains. The disruptions in these areas occurring in 2022 significantly increased the operating costs of

enterprises, which – despite weakening demand growth – prompted firms to raise the prices of consumer goods. In some sectors these price hikes were higher than the scale of cost increases, which was reflected in significantly higher sales profitability in the enterprise sector as compared to previous years. In the first months of 2023, PPI inflation declined markedly.

In the recent period, amid weak global economic growth, Poland has also seen a slowdown in activity. In 2023 Q1, GDP growth stood at -0.3% y/y (compared to 2.3% y/y in 2022 Q4), with a further reduction in consumer demand and a negative contribution of change in inventories. At the same time, investment continued to expand and the contribution of net exports to GDP growth increased considerably. Corporate investment activity was supported by the relatively strong financial performance of firms, despite a certain recent deterioration. Available monthly data point to a continuation of the relatively weak economic activity growth in 2023 Q2.

In 2022, the general government deficit in ESA2010 terms amounted to PLN 115.1 billion (3.7% of GDP), compared to PLN 48.2 billion (1.8% of GDP) in 2021. This deterioration was primarily due to the adoption of shielding measures against energy price increases, in particular the payment of subsidies to households. The general government debt in ESA2010 terms in 2022 markedly declined in relation to GDP and ran at 49.1% GDP, against 53.6% of GDP in 2021.

The situation in the labour market remains good as evidenced by low unemployment rate, high employment and a further growth in average nominal wages. Alongside that, weaker economic activity is conducive to a decline in the number of vacancies and a slower employment and wage growth, with real wages recently remaining lower than a year ago.

Amid the relatively stable government bond yields in major economies and the observed, as well as forecast, decline in inflation, along with the continued market expectations of the possible interest rates decrease over the next few quarters, in recent months yields on Polish government bonds have run close to the level recorded at the beginning of 2023. At the same time, the zloty exchange rate has strengthened markedly against the main currencies.

In 2023 Q1, given the earlier strong monetary policy tightening undertaken by NBP, the annual growth rate of the M3 aggregate was still considerably below its long-term average, with current deposits shrinking and term deposits expanding. Alongside that, the annual growth in corporate loans slowed down again, while the decline in household loans deepened yet another time.

The current account balance improved considerably in 2023 Q1. This mainly reflected an improvement in the balance of trade in goods, coupled with the continued surplus of trade in services. External imbalance indicators evidence that the Polish economy is well balanced.

The *Report* is structured as follows: Chapter 1 presents the analysis of economic conditions in the external environment of the Polish economy in terms of their impact on inflation developments in Poland. These developments and the domestic factors that might affect them are described in Chapter 2. Chapter 3 includes *Minutes of the Monetary Policy Council decision-making meetings* held between March and June 2023, together with the *Information from the meeting of the Monetary Policy Council* in July 2023. Chapter 5 presents the Monetary Policy Council voting records from the meetings held between February and May 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 22 June 2023, there is a 50-percent probability that the annual price growth will be in the range of 11.1 – 12.7% in 2023 (against 10.2 – 13.5% in the March 2023 projection), 3.7 – 6.8% in 2024 (compared to 3.9 – 7.5%) and 2.1 – 5.1% in 2025 (compared to 2.0 – 5.0%). At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of -0.2 – 1.3% in 2023 (against -0.1 – 1.8% in the March 2023 projection), 1.4 – 3.3% in 2024 (compared to 1.1 – 3.1%) and 2.1 – 4.4% in 2025 (compared to 2.0 – 4.3%).

# 1. External developments

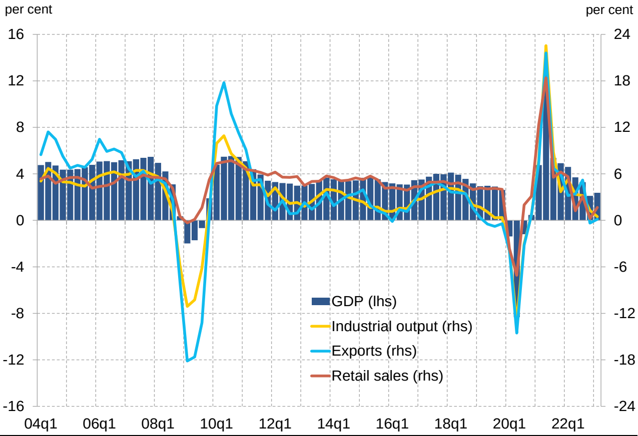
## 1.1 Economic activity abroad

In 2023 Q1, the annual growth in economic activity remained low worldwide (Figure 1.1), especially in the advanced economies, including the euro area. Global economic conditions were negatively affected by the earlier strong rise in commodity prices, the tightening of financing conditions in most economies and high uncertainty. Against this background, the growth in global trade volume remained low. At the same time, economic growth was supported by the easing of tensions in global supply chains (Figure 1.2), as well as favourable labour market conditions in a majority of economies.

According to the business sentiment indicators, the global economic conditions improved somewhat in 2023 Q2 due to the pickup of activity in the services sector. At the same time, the sentiment in manufacturing remained poor, given a slow inflow of new orders.

GDP growth in the euro area slowed down to 1.0% y/y in 2023 Q1 (compared to 1.8% y/y in 2022 Q4;[1] Figure 1.3), primarily reflecting a slower increase in private consumption – amid high inflation and weak consumer sentiment – as well as a decline in public consumption. The contribution of net exports to GDP growth remained positive, although slightly lower than in the previous quarter. At the same time, in 2023 Q1, the growth in capital expenditures increased, which was related to the easing of tensions in global supply chains and to the rise in construction investment

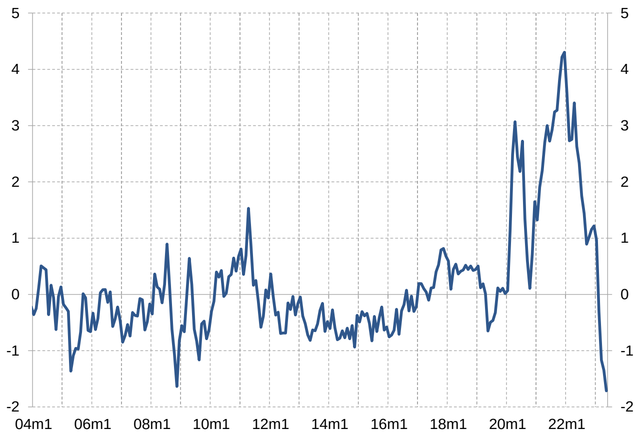
**Figure 1.1** Global GDP growth and economic activity indicators (y/y)




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** Global Supply Chain Pressure Index (GSCPI)




Source: data by Federal Reserve Bank of New York.

The value of 0 means that the index is equal to its mean value; a value above zero indicates by how many standard deviations the index is above its mean value.

[1] In quarterly terms, GDP in the euro area in 2023 Q1 and 2022 Q4 dropped by 0.1% (seasonally adjusted data).

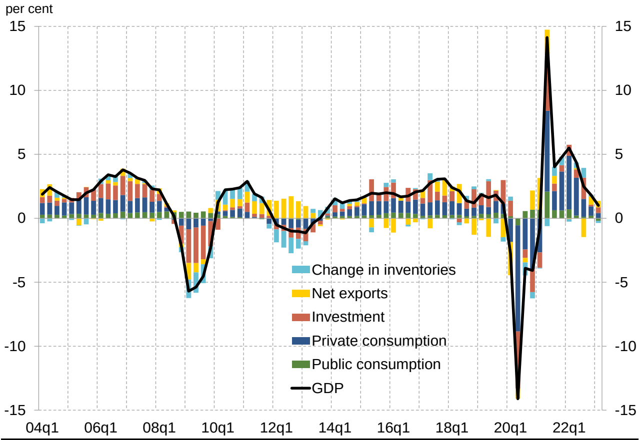
due to favourable weather conditions. Situation in the labour market was still good, and the unemployment rate in May 2023 was the lowest in the history of the euro area (6.5%).

In the United States, GDP growth increased to 1.8% y/y in 2023 Q1 (from 0.9% y/y in 2022 Q4;[2] Figure 1.4), albeit it still stayed somewhat below the long-term average. Higher GDP growth in 2023 Q1 was accounted for by faster growth in consumption and higher contribution of net exports. Alongside that, the decline in private investment became more pronounced due to the continued fall in capital expenditures in the residential real estate sector, which – similarly as the change in inventories – curbed GDP growth in 2023 Q1. The situation in the labour market at the beginning of 2023 Q2 was still favourable, although in May 2023 unemployment rate grew to 3.7% (from 3.4% in April, the lowest level in a few decades).

In China, GDP growth in 2023 Q1 accelerated to 4.5% y/y (compared to 2.9% y/y in 2022 Q4), which was driven primarily by the rebound in private consumption following the abandonment of the restrictive "zero Covid" epidemic policy. At the same time, GDP growth was constrained by the persistent downturn in the real estate market and the slowdown in the global economy.

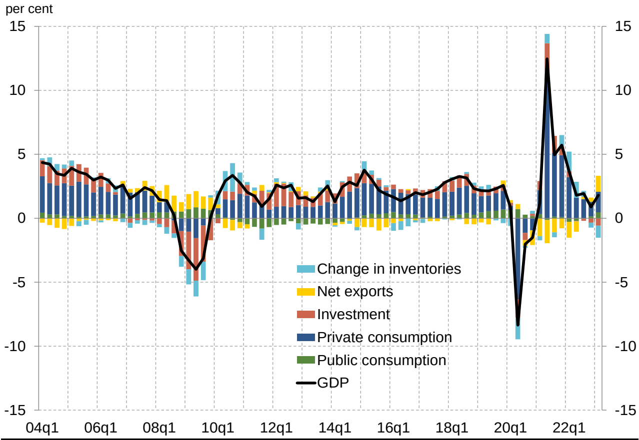
In the Central and Eastern European countries outside the euro area,[3] GDP growth decelerated again (to 0.6% y/y in 2023 Q1 from 1.9% y/y in 2022 Q4). Amid high inflation, elevated uncertainty and the previously implemented tightening of the monetary policy, GDP growth in 2023 Q1 was restrained by the further decline in gross capital formation and a slowdown in private consumption. In turn, GDP growth was supported by net exports.

**Figure 1.3** GDP growth in the euro area and its components (y/y)




Source: Eurostat data, NBP calculations.

**Figure 1.4** GDP growth in the United States and its components (y/y)




Source: Bureau of Economic Analysis data, NBP calculations.

[2] In quarterly terms, GDP in the United States grew by 2.0% saar in 2023 Q1, compared to 2.6% saar in 2022 Q4.
[3] Aggregated GDP growth in the Czech Republic, Hungary and Romania, in annual terms.

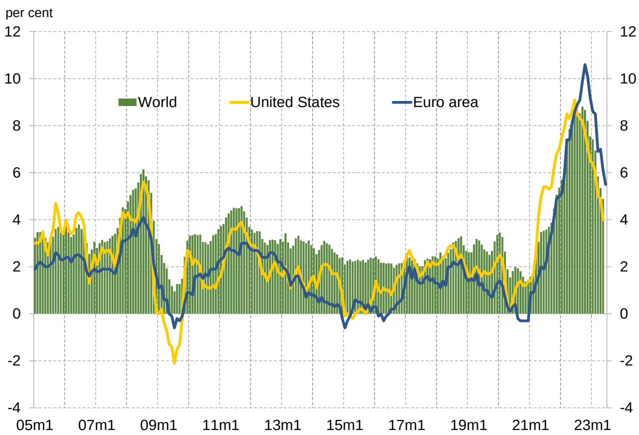
## 1.2 Inflation developments abroad

Since the previous *Inflation Report*, global inflation has declined, although it remains high (Figure 1.5). Price growth is boosted by the lagged effects of earlier supply shocks, including those affecting energy markets, by the rebounding activity in the services sector, as well as by increasing labour costs and high corporate unit profits (Figure 1.6). Under these circumstances, core inflation in most countries remains high (Figure 1.7),[4] yet in some economies it has been gradually decreasing. Alongside that, in recent months, energy prices and food price growth have started to fall, while tensions in global supply chains have subsided. As a consequence, cost pressures have been decreasing, as reflected in the declining PPI inflation in many countries, and even falls in prices in some of them (Figure 1.8).

In the euro area, in May 2023, HICP inflation fell to 6.1% y/y (compared to 8.6% y/y in January 2023 and to the long term maximum of 10.6% y/y in October 2022),[5] reaching the lowest level since February 2022. The decline in inflation since autumn 2022 has been accounted for by lower energy prices, resulting from both a fall in energy commodity prices coupled with government shielding measures, and the statistical base effect due to high energy prices in 2022. At the same time, core inflation in May 2023 remained elevated (5.3% y/y),[6] markedly above its long-term average (1.5% y/y).[7]

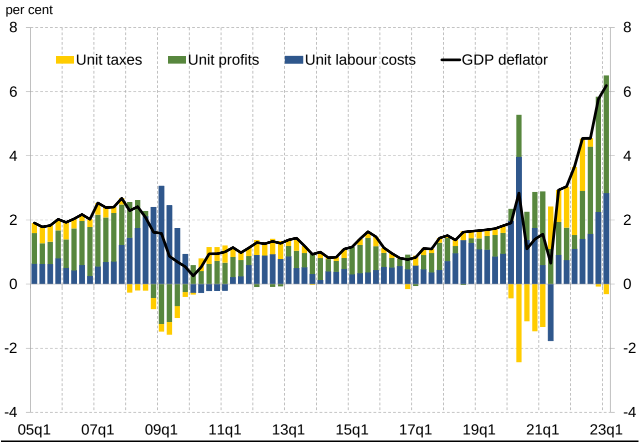
CPI inflation in the United States decreased in May 2023 to 4.0% y/y (compared to 6.4% y/y in January 2023 and to the long-term maximum of 9.1% y/y in June 2022). The decrease in inflation was caused primarily by lower growth in food and energy prices. At the same time, CPI core

**Figure 1.5** 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.

**Figure 1.6** Composition of GDP deflator growth in the euro area (y/y)




Source: Eurostat data, NBP calculations.
The GDP deflator is a measure of the level of final prices of goods and services produced in a given economy over a given period. Unit labour costs - compensation of employees, divided by real GDP; Unit profits - operating surplus and mixed income, divided by real GDP; Unit taxes - taxes on production and imports less subsidies, divided by real GDP.

[4] Core inflation is understood as the domestic CPI index (the HICP index for the euro area) excluding food and energy prices (and in the case of the euro area also excluding the prices of alcoholic beverages and tobacco products).
[5] In June 2023, according to the flash Eurostat estimate, HICP inflation in the euro area stood at 5.5% y/y.
[6] In June 2023, according to the flash Eurostat estimate, core inflation in the euro area stood at 5.4% y/y.
[7] The average for the period of January 2002 - December 2022.

inflation was declining much more slowly than inflation overall (to 5.3% y/y in May 2023 as compared with 5.6% in January 2023), with a markedly higher growth in services prices than in goods prices.

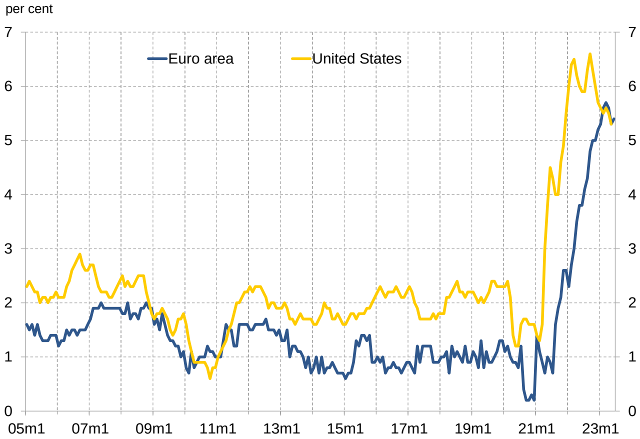
In the Central and Eastern European countries outside the euro area, inflation has been decreasing since the beginning of the year but it remains high (Figure 1.9). The downward pressure on consumer inflation was put by markedly weaker growth in energy prices and gradually decelerating growth in food prices. Core inflation also began to decline, but it remained high nevertheless. In May 2023, CPI inflation fell to 11.1% y/y (against 17.5% y/y in January 2023) in the Czech Republic, to 21.5% y/y (against 25.7% y/y in January 2023) in Hungary, and to 10.6% y/y (against 15.1% in January 2023) in Romania.

## 1.3 Global commodity markets

Global commodity prices have recently declined as a result of weaker demand dampened by the deterioration of global economic conditions, improving supply in selected markets, and, as regards energy commodities, also a mild winter. Nevertheless, prices of many commodities remained relatively high, supported by still limited supply, primarily due to the consequences of the Russian military aggression against Ukraine.

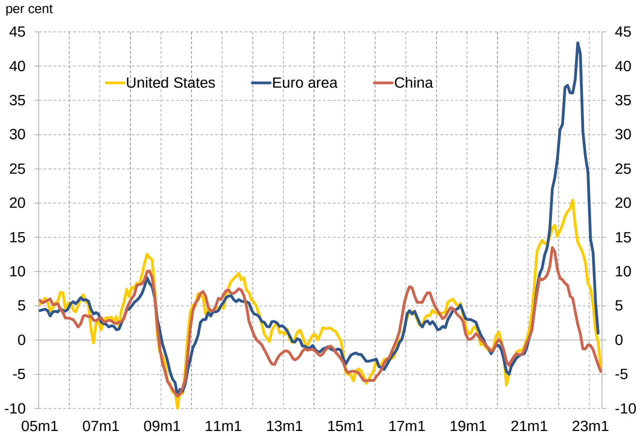
In June 2023, the average price of Brent oil[8] was 36% lower than a year ago (Figure 1.10). Oil prices, however, are still higher than their average level before the COVID-19 pandemic (around 30% higher than the average for 2015-2019). The deterioration in global economic conditions brought about lower growth of demand for fuels,[9] which contributed to price falls in recent months. Stronger declines in oil prices were, nonetheless,

**Figure 1.7** Core inflation rate in the United States and the euro area (y/y)



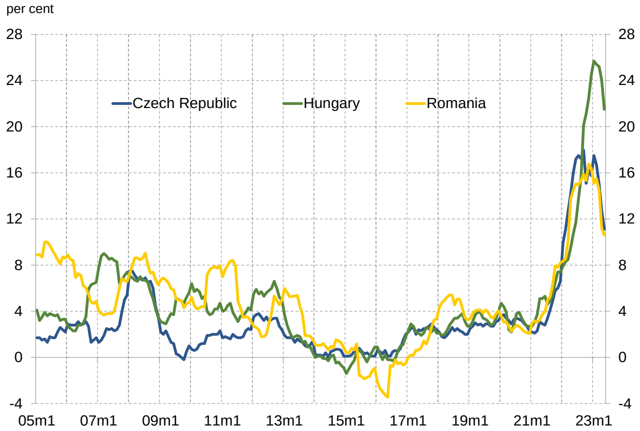

Source: Eurostat and Bureau of Labor Statistics data.
For the United States – CPI inflation excluding food and energy prices. For the euro area – HICP inflation excluding energy, food, alcohol and tobacco.

**Figure 1.8** 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 1.9** CPI inflation in the Czech Republic, Romania and Hungary (y/y)




Source: national statistical offices.

[8] The average prices of energy commodities were calculated on the basis of data up to 29 June 2023.
[9] In particular, after China abandoned its "zero-COVID policy" Chinese demand for fuels was lower than expected.

counteracted by sanctions imposed on Russia[10] and the related concerns about the availability of crude oil in the international market, as well as the OPEC+ countries' policy[11] of oil supply cuts.

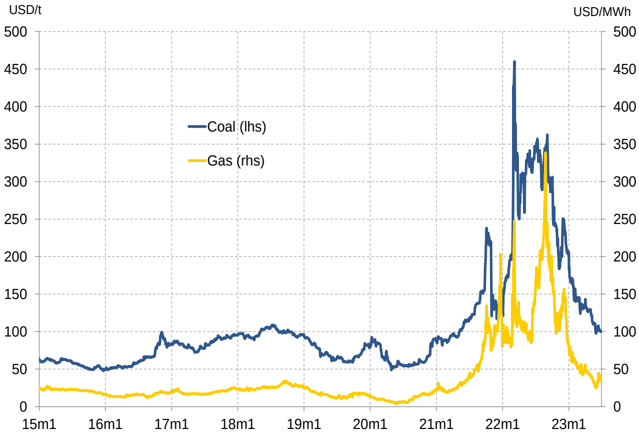
Prices of natural gas and coal also declined sharply (Figure 1.11) in recent months. Apart from the weaker global economic activity, this was driven by the higher than average temperature in winter 2022/23 and high stocks of natural gas in the EU. In June 2023, in the European market, gas and coal were approx. 69% cheaper than a year before. At the same time, the prices of both of these commodities continued to be markedly higher than before the COVID-19 pandemic (by approx. 76% and 36%, respectively, in comparison with the averages for 2015-2019).

From February to June 2023,[12] NBP's index of agricultural commodity prices declined slightly (Figure 1.12). In June 2023, its value was approx. 6% lower than a year before, mainly as a result of declines in the prices of wheat and rapeseed on the back of improved supply expectations and the concluded agreement allowing grain exports from Ukraine via the Black Sea. Also the prices of dairy products were lower than a year before amid weaker global demand (particularly from Asian countries) and the expected slight rise in milk supply. Alongside that, prices of agricultural commodities remained significantly higher than before the COVID-19 pandemic (by 47% in June 2023 as compared with the average for 2015-2019, especially the prices of pork, due to a sharp decline in the number of pigs in the EU in recent years).

**Figure 1.10** Brent oil barrel price


Source: Bloomberg data.

**Figure 1.11** 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.

[10] On 5 December 2022, the EU banned oil imports from Russia by sea, and as of 5 February 2023 the sanctions also cover oil products (fuels). Additionally, on 5 December 2022, the G7 countries, the EU and Australia introduced a cap price for Russian oil in the amount of 60 USD per barrel, prohibiting the provision of services to vessels transporting Russian oil sold above the limit. The EU also banned imports of coal and other solid fuels from Russia as of 10 August 2022. In the case of Poland, imports of coal 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.
[11] OPEC+ countries limited oil production by 100,000 b/d as of October 2022 and by 2 million b/d as of November 2022, by 1.66 million b/d as of May 2023 and by 1 million b/d as of July 2023.
[12] The average agricultural commodity prices were calculated on the basis of data up to 28 June 2023.

## 1.4 Monetary policy abroad

In the recent period, many central banks have raised interest rates – albeit most of them to a lesser extent than in previous months – or have kept them unchanged following earlier hikes (Figure 1.13). The expectations of financial market participants implied from the valuation of financial instruments point to a possibility that interest rates in most advanced economies may rise somewhat or stabilise in the horizon of a year, and decline in the longer term (Figure 1.14).

The European Central Bank (ECB) has continued to tighten monetary policy in recent months. From July 2022 the ECB has raised, in eight steps, its policy rates by a total of 4 percentage points, including the deposit rate to 3.50%. Financial market participants expect that the ECB deposit rate might increase to approx. 4.00% this year. Recently, the ECB has decided to discontinue the reinvestment of funds from maturing financial instruments purchased under the asset purchase programme (APP) starting from July 2023. At the same time, the ECB is continuing flexible reinvestment of funds from maturing bonds purchased under the pandemic emergency purchase programme (PEPP).

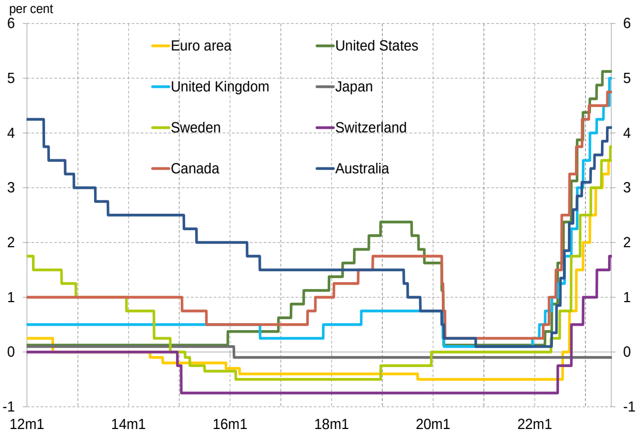
In June 2023, the Federal Reserve of the United States (the Fed) kept interest rates unchanged, after the earlier rises. Between March 2022 and May 2023, at ten consecutive meetings, the Fed raised interest rates by a total of 5 percentage points, and currently the target range for the fed funds rate is 5.00-5.25%. Expectations of financial market participants suggest that the fed funds rate may rise to 5.25-5.50% in 2023 Q3, and may decline over the longer term.

In recent months, many central banks of other advanced economies – including the United Kingdom, Switzerland, Sweden, Australia and Canada – have raised interest rates again, albeit

**Figure 1.12** Index of agricultural commodity prices

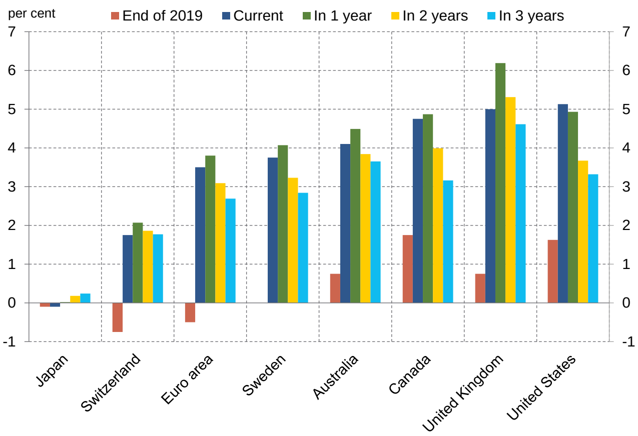

Source: Bloomberg data, NBP calculations.
Index of agricultural prices includes prices of wheat, colza, pigmeat, potatoes, sugar, cocoa, coffee, skimmed milk powder, butter and frozen concentrated orange juice. The weights reflect the consumption structure of Polish households.

**Figure 1.13** Interest rates of selected central banks




Source: Bloomberg data.
Central bank interest rate: for the United States – the midpoint of the fed funds range; for the euro area – the deposit facility; for 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.

**Figure 1.14** 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 30 June 2023.

most of them on a smaller scale than in previous months.

Many central banks of emerging market economies, including those in Central and Eastern Europe, have recently kept interest rates unchanged after the previous firm monetary policy tightening. In turn, the central banks of, among others, China and Hungary have recently eased the parameters of their monetary policy.

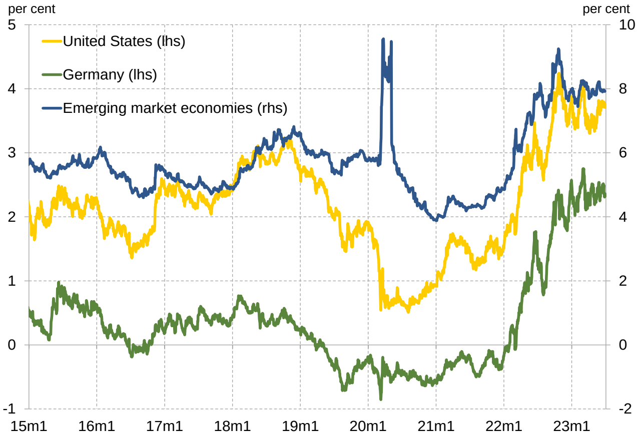
## 1.5 International financial markets

In recent months, sentiment in the global financial markets has been supported by the reduction in the scale of interest rate hikes by many central banks of advanced economies and unchanged monetary policy stance by the Fed in June (see Chapter 1.4 *Monetary policy abroad*). However, uncertainty about the outlook for global economic activity, related, among others, to the banking sector stresses in some countries, worked in the opposite direction.

In these circumstances, government bond yields in most economies have continued to run at levels markedly higher than on average in previous years (Figure 1.15). In turn, equity prices – after temporary fluctuations in March 2023 related to the tensions in the banking sector in some countries – at the end of June 2023 were higher than at the beginning of the year, particularly in advanced economies (Figure 1.16).

In the recent period, the US dollar has continued to gradually weaken against the euro, which was supported by the narrowing of the interest rate disparity between the United States and the euro area (Figure 1.17). At the same time, the US dollar has also weakened against the currencies of the Central and Eastern European economies.

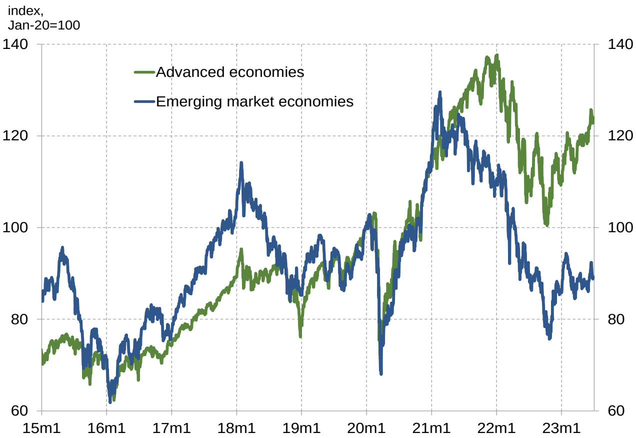
**Figure 1.15** Yields on long-term government bonds




Source: Bloomberg data.

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

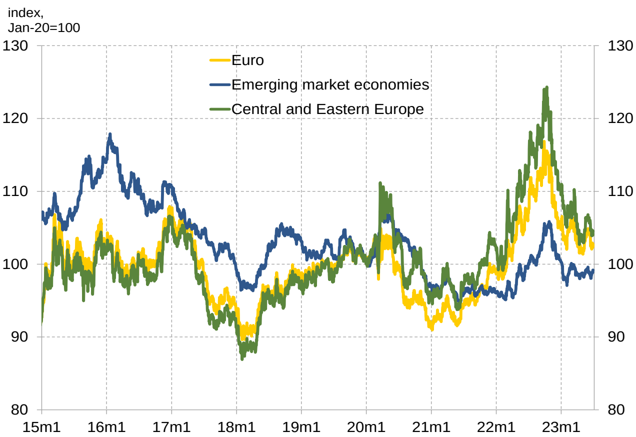
**Figure 1.16** Equity prices




Source: Bloomberg data.

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

**Figure 1.17** 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.

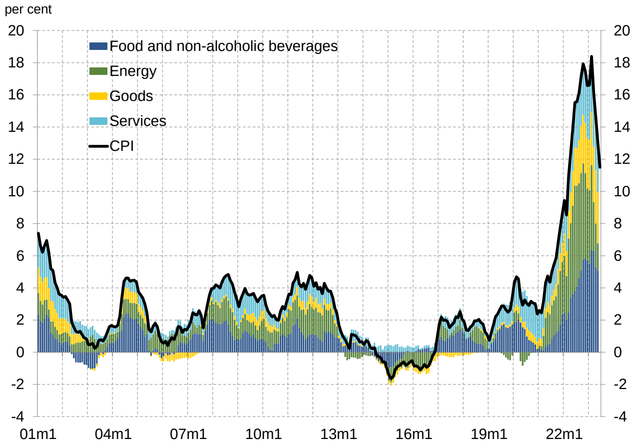
# 2. Domestic economy

## 2.1 Inflation developments

Annual consumer price growth in Poland – like in many other economies around the world – has declined in recent months (from 18.4% in February to 11.5% in June 2023, according to Statistics Poland flash estimate; Figure 2.1).[13] The fall in annual energy price growth had the biggest impact on the decline in inflation in this period. To a lesser extent, lower inflation was also the result of the weakening annual growth in prices of food and non-alcoholic beverages as well as a fall in core inflation.

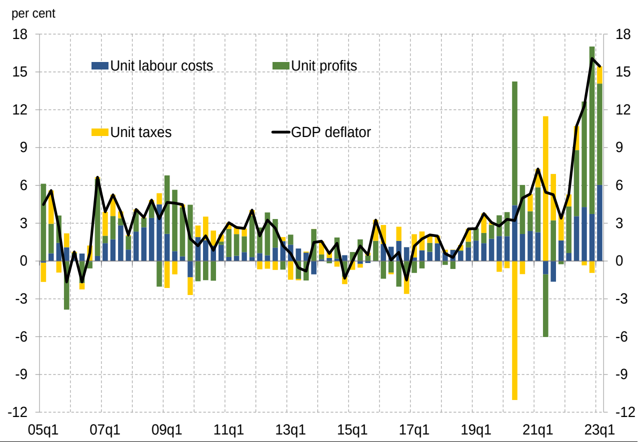
The decline in annual consumer price growth is driven by negative base effects (due to the rapid price growth following the outbreak of the Russian military aggression against Ukraine), the fall in global commodity prices (see Chapter 1.3 *Global commodity markets*) and the easing of tensions in global supply chains. The disruptions in these areas occurring in 2022 significantly increased the operating costs of enterprises, which – despite weakening demand growth – prompted firms to raise the prices of consumer goods. In some sectors these price hikes were higher than the scale of cost increases, which was reflected in significantly higher sales profitability in the enterprise sector as compared to previous years (Figure 2.2; see Chapter 2.2 *Demand and output*). This also contributed to growth in core inflation up to March 2023. In April and May 2023, in turn, core inflation declined.

**Figure 2.1** Composition of CPI inflation (y/y)




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

**Figure 2.2** Composition of GDP deflator growth (y/y)



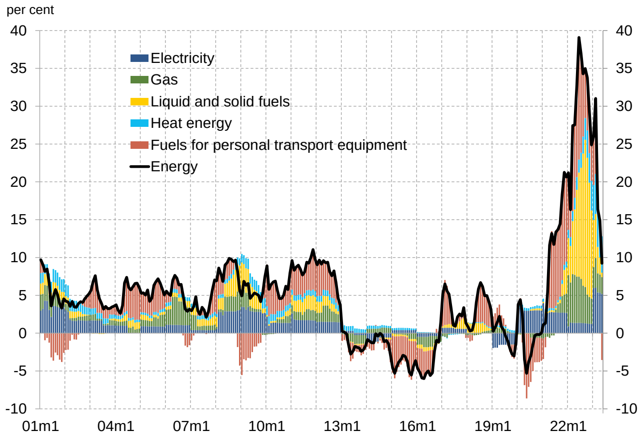

Source: Eurostat data, NBP calculations.
The GDP deflator is a measure of the level of final prices of goods and services produced in a given economy over a given period. Unit labour costs - compensation of employees, divided by real GDP; Unit profits - operating surplus and mixed income, divided by real GDP; Unit taxes - taxes on production and imports less subsidies, divided by real GDP.

[13] At the same time, since the beginning of 2023, the monthly consumer price growth has fallen significantly. In May and June 2023, it stood at 0.0% m/m (seasonally unadjusted data; data for June according to Statistics Poland flash estimate).

Inflation of food and non-alcoholic beverage prices remained at 24.0% y/y in February and March 2023, after which it declined to 18.9% y/y in May 2023. The high growth in prices of cereal and dairy products due to cost pressure related to high prices of energy, means of production, packaging and labour costs had a significant impact on food price inflation in 2023 Q1. Annual growth in prices of meat and vegetables was also markedly elevated as a result of limited supply. In addition, the positive base effect related to the introduction of lower VAT rates under the Anti-inflationary Shield in February 2022 also boosted food price inflation in February this year. However, the maintenance of the zero VAT rate on staple food products continues to lower the level of food prices. In April and May 2023, the decrease in the inflation rate was supported by gradually weakening cost pressure, an improvement in supply conditions (including in the vegetable market) and the fading of the impact of the strong price growth following the outbreak of the Russian military aggression against Ukraine on the index.

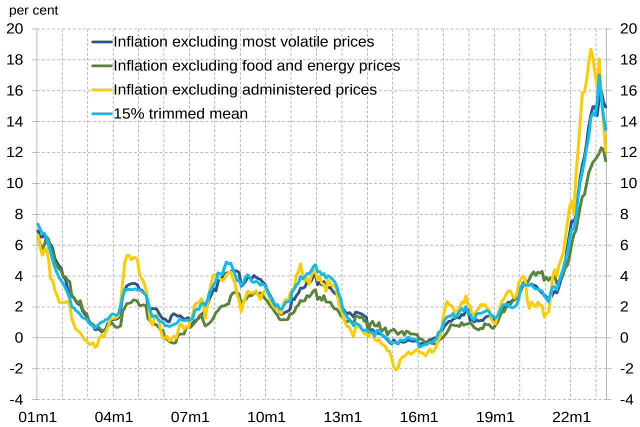
Energy price inflation declined from 31.0% y/y in February 2023 to 9.2% y/y in May 2023 (Figure 2.3). In February 2023, energy price inflation was boosted by the higher growth in prices of fuels for personal transport equipment, gas and heat energy as a result of the positive base effects related to the introduction of lower VAT rates in February 2022. In turn, the fall in annual energy price growth since March 2023 was largely due to the waving of the impact on the price index of the strong rise in prices of fuels and coal, following the outbreak of the Russian military aggression against Ukraine. In addition, lower prices of fuels, amid its selling by local governments at a statutory capped price and the fall in global prices of this commodity, contributed to the fall in energy prices. Lower energy price inflation was also supported by a decline in prices of fuels for personal transport equipment on the back of falling global oil prices, alongside an appreciation of the zloty.

**Figure 2.3** Energy price growth and its components (y/y)



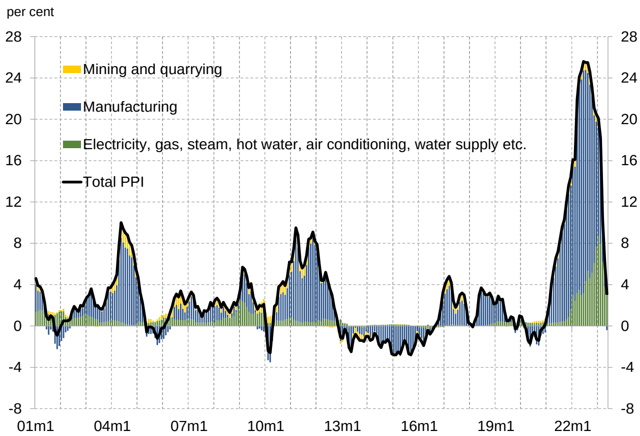

Source: Statistics Poland (GUS) data, NBP calculations.

**Figure 2.4** Core inflation indices (y/y)




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

**Figure 2.5** Composition of PPI inflation (y/y)



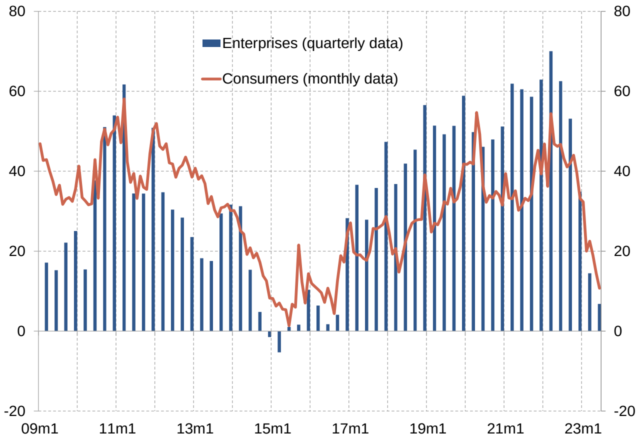

Source: Statistics Poland (GUS) and Eurostat data.

Inflation excluding food and energy prices peaked in March 2023 (to 12.3% y/y against 12.0% y/y in February 2023), and then declined to 12.2% y/y in April and 11.5% y/y in May 2023 (Figure 2.4). The fall in this measure of core inflation was the result of a decrease in annual growth in prices of both services and non-food products. The main causes of the decline in core inflation were weakening demand, making it difficult for firms to pass on production costs to final prices of goods, the subsiding of global supply chain disruption, the appreciation of the zloty and one-off factors (e.g. related to calendar effects). The decrease in CPI inflation excluding food and energy prices was accompanied by a fall in the remaining measures of core inflation.

The first months of 2023 saw a marked fall in the growth of industrial producer prices (to 3.1% y/y in May 2023 compared to 20.1% y/y in January 2023, with producer prices in manufacturing falling in May 2023 by 1.2% y/y; Figure 2.5). This was mainly the effect of a slowdown in the price growth of energy and supply goods due to the fall in global commodity prices and the appreciation of the zloty. Growth in prices of industrial goods also decelerated – although to a lesser extent – at the later stage of the value added chain, i.e. both durable and non-durable consumer goods and capital goods. From February to May 2023, the level of industrial producer prices was declining in monthly terms.

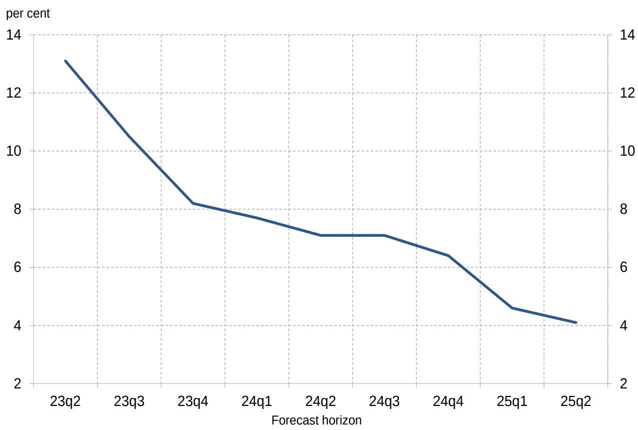
Inflation expectations of consumers and enterprises measured by balance statistics have gradually shifted towards lower values since 2022 Q2, and this process has markedly intensified since 2023 Q1 (Figure 2.6). The fall in balance statistics was mainly due to a significant decline in the percentage of entities expecting inflation to rise. The results of the NBP Survey of Professional Forecasters and the Refinitiv survey from June 2023 indicate that surveyed experts expect a further fall in inflation (Figure 2.7). At the same time, their short-term and medium-term (i.e. for 4 and 8

**Figure 2.6** Balance statistics of consumer and enterprise inflation expectations




Source: Statistics Poland (GUS) and NBP data, NBP calculations.
Balance statistics is defined as a difference between 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 2.7** Inflation forecasts of financial sector analysts in June 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: | | | | |
|---|---|---|---|---|---|
| | 22q2 | 22q3 | 22q4 | 23q1 | 23q2 |
| **Refinitiv Survey, inflation expected in 4 quarters** | 10.5 | 10.1 | 9.8 | 7.8 | 7.1 |
| **Refinitiv Survey, inflation expected in 8 quarters** | 5.6 | 5.9 | 5.3 | 4.3 | 4.1 |
| **NBP Survey, inflation expected in 4 quarters** | 9.7 (7.3-11.9) | 9.6 (7.5-12.2) | 9.6 (7.8-11.9) | 7.5 (5.9-9.7) | 7.1 (5.5-9.0) |
| **NBP Survey, inflation expected in 8 quarters** | 5.7 (3.5-8.4) | 6.1 (4.2-9.0) | 6.0 (4.1-8.7) | 4.8 (3.1-7.1) | 4.6 (3.1-6.9) |

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.
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.

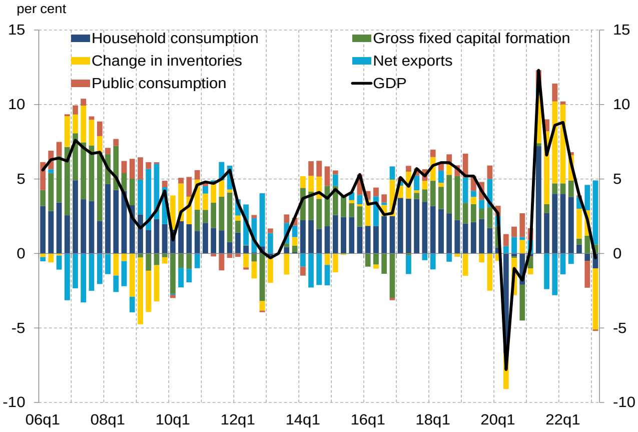
quarters) inflation expectations declined (Table 2.1). The range of typical scenarios considered by the experts remains wide, which is evidence of the persistence of the high level of uncertainty and differences of opinion.

## 2.2 Demand and output

In the recent period, amid weak global economic growth, Poland has also seen a slowdown in activity. In 2023 Q1, GDP growth stood at -0.3% y/y (compared to 2.3% y/y in 2022 Q4; Figure 2.8**,** Table 2.2), with a further reduction in consumer demand and a negative contribution of change in inventories.[14] At the same time, investment continued to expand and the contribution of net exports to GDP growth increased considerably. Available monthly data point to a continuation of the relatively weak economic activity growth in 2023 Q2.

In 2023 Q1, household consumption decreased in annual terms (by 2.0% y/y, following a fall of 1.1% y/y in 2022 Q4; Figure 2.9) amid the lingering effects of earlier negative supply shocks eroding the purchasing power of consumer income, the NBP interest rate rises and the persisting uncertainty related to the Russian military aggression against Ukraine. At the same time, consumers' assessments of the current situation were still pessimistic, despite a certain sentiment improvement in recent months (Figure 2.10). Meanwhile, consumption was supported by the continued good labour market conditions, reflected in low unemployment, a high number of employed persons and a rise in average nominal wage – although in recent months annual growth in both wages and the wage bill was negative in real terms (see also Chapter 2.4 *Labour market;* Figure 2.9).[15]

**Figure 2.8** GDP growth and its components (y/y)



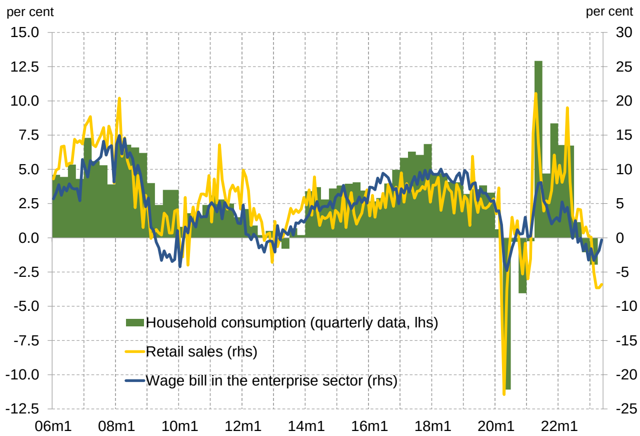

Source: Statistics Poland (GUS) data, NBP calculations.

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

| | 2020 | | | | 2021 | | | | 2022 | | | | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | q1 | q2 | q3 | q4 | q1 | q2 | q3 | q4 | q1 | q2 | q3 | q4 | q1 |
| **GDP** | **2.7** | **-7.8** | **-1.0** | **-1.8** | **0.3** | **12.3** | **6.6** | **8.6** | **8.8** | **6.1** | **3.9** | **2.3** | **-0.3** |
| Private consumption | 0.4 | -6.3 | -0.2 | -2.1 | -0.2 | 7.2 | 2.7 | 4.0 | 4.0 | 3.8 | 0.6 | -0.5 | -1.0 |
| Public consumption | 0.7 | 0.8 | 0.7 | 1.6 | 0.8 | 1.2 | 0.8 | 1.2 | 0.2 | 0.2 | 0.1 | -1.8 | -0.1 |
| Gross fixed capital | 1.4 | -0.4 | -0.1 | -2.4 | -0.8 | 0.2 | 0.6 | 0.7 | 0.7 | 1.1 | 0.4 | 1.2 | 0.6 |
| Change in inventories | -0.5 | -2.4 | -2.5 | 0.9 | -0.4 | 3.2 | 4.9 | 5.5 | 5.3 | 1.7 | 2.0 | 1.7 | -4.1 |
| Net exports | 0.7 | 0.5 | 1.1 | 0.2 | 0.9 | 0.5 | -2.4 | -2.8 | -1.4 | -0.7 | 0.8 | 1.7 | 4.3 |

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

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



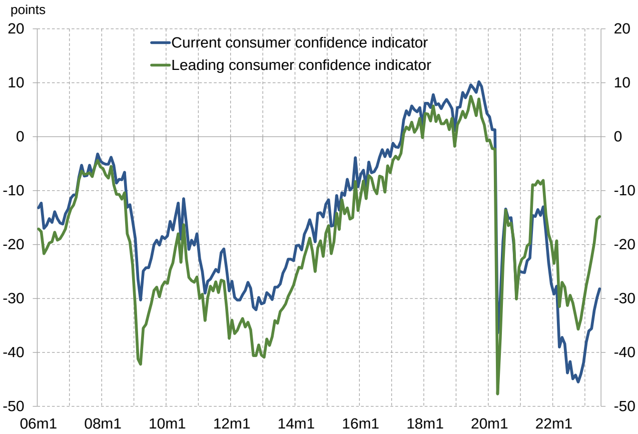

Source: Statistics Poland (GUS) data, NBP calculations.

[14] The contribution of change in inventories to GDP growth stood at -4.1 percentage points in 2023 Q1, reflecting the negative base effect related to a sharp increase in this category in 2022 Q1.
[15] In turn, retail sales declined by 6.8% y/y in May 2023, compared to a fall of 7.3% y/y in April 2023 and of 3.5% y/y in 2023 Q1.

Growth in gross fixed capital formation was running relatively high in 2023 Q1 (5.5% y/y compared to 5.4% y/y in 2022 Q4; Figure 2.11), which – according to NBP estimates – was due to higher corporate and public sector investment in annual terms, along with negative housing investment growth.[16] Financial statements data suggest that the sustained relatively robust corporate investment growth was driven primarily by considerable investment activity of large enterprises. The largest contribution to investment growth in medium-sized and large enterprises came from the energy, mining and water industries. The sharpest rise in corporate investment expenditure was seen in means of transport, with investment in machinery and equipment and construction growing at a slower rate.

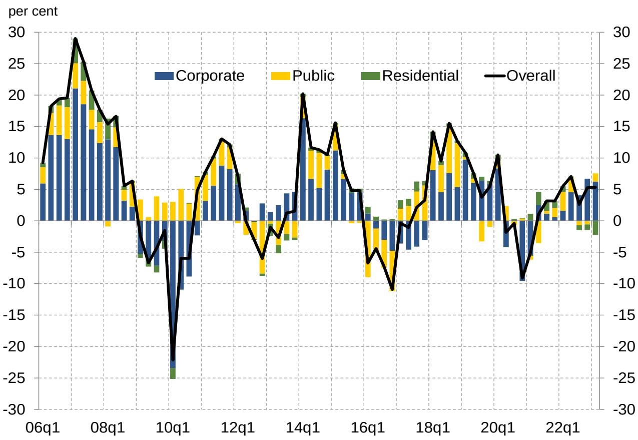
Corporate investment activity was supported by the relatively strong financial performance of firms, despite a certain recent deterioration. In 2023 Q1, real sales of the non-financial corporations (NFC) sector increased in annual terms, following a decline in the previous quarter. This was driven by a reduction in the scale of decline of domestic sales and a slower, albeit still relatively high, growth in external sales. A particularly sharp rise in real sales was seen among the producers of investment goods, which confirms the high activity level of the sector in this area of the economy. In contrast, a marked decline was observed among the producers of durable consumer goods. In 2023 Q1, gross financial result of the enterprise sector was, in nominal terms, approximately twice as high as before the onset of the COVID-19 pandemic, and slightly higher than in 2022 Q1, although the result from sales fell in annual terms (Figure 2.12). The annual growth in sales revenue lagged behind the growth in sales costs, indicating enterprises' narrowing capacity to pass through

**Figure 2.10** Consumer confidence indicators



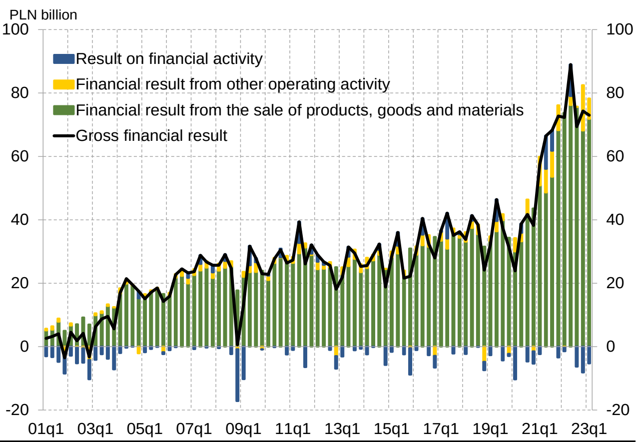

Source: Statistics Poland (GUS) data.

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




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

**Figure 2.12** 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] The weakened demand for real estate – also reflected in a marked decline in residential construction starts in annual terms – amid an earlier rise in interest rates on housing loans was conducive to lower housing investment in 2023 Q1 (see also Chapter 2.6 *Money and credit*).

their cost increases into the prices of final goods.[17] The largest contributions to cost-of-sales growth continued to come from the higher than a year before costs of commodities and raw materials as well as the expenditure on the purchase of goods for further resale.

In 2023 Q1, firms' profitability – measured both with the net turnover profitability indicator as well as sales profitability indicator – continued to run above the 2010-2019 average, although it was lower than in 2022 Q1 (Table 2.3). At the same time, businesses' profitability varied considerably across industries.

The liquidity position of firms also continued to be relatively sound in 2023 Q1. Liquidity ratios (the quick, financial and cash ratio) and the share of enterprises with safe cash ratio levels were above their long-term averages. At the same time, the cash liquidity ratio declined 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.

In light of the NBP Quick Monitoring Survey data,[18] the investment sentiment of most surveyed firms remained subdued, despite a certain improvement, while the investment sentiment of large enterprises was relatively favourable.

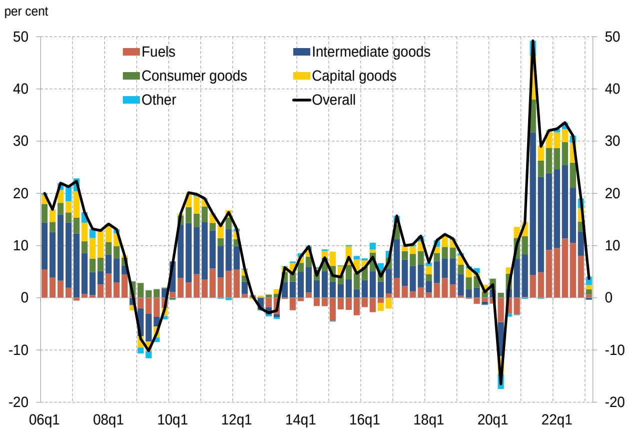
In 2023 Q1, the contribution of net exports to GDP growth was running at a firmly positive level and amounted to 4.3 percentage points (compared to 1.7 percentage points in 2022 Q4). Against the background of the weakened domestic demand, there was a significant decline in imports in real terms, accompanied by a positive – albeit somewhat lower than in 2022 Q4 – export growth. In nominal terms, goods import growth (Figure 2.13) declined markedly compared to 2022 Q4, driven primarily by slower growth in imports of

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

| | average 2010-2019 | 2020 | | | | 2021 | | | | 2022 | | | | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | q1 | q2 | q3 | q4 | q1 | q2 | q3 | q4 | q1 | q2 | q3 | q4 | q1 |
| Sales profitability indicator | 4.7 | 3.9 | 4.9 | 5.5 | 4.9 | 6.0 | 5.5 | 5.6 | 5.9 | 6.7 | 6.4 | 6.1 | 5.1 | 5.5 |
| Net turnover profitability indicator | 4.0 | 2.4 | 4.5 | 4.4 | 3.3 | 5.4 | 6.2 | 5.9 | 5.1 | 5.2 | 6.1 | 4.5 | 4.2 | 4.4 |
| Share of profitable enterprises | 73.4 | 74.4 | 73.4 | 75.7 | 74.4 | 76.3 | 78.0 | 78.9 | 78.3 | 77.7 | 77.4 | 76.7 | 77.0 | 77.6 |
| Share of enterprises with profitability above 5% | 34.2 | 37.8 | 39.0 | 41.4 | 41.8 | 42.9 | 45.4 | 45.4 | 46.4 | 43.7 | 42.1 | 41.5 | 42.3 | 43.4 |
| Cash ratio | 36.3 | 38.9 | 42.6 | 42.9 | 43.9 | 43.0 | 44.1 | 44.6 | 44.1 | 42.7 | 40.9 | 39.9 | 39.0 | 37.5 |
| Return on assets indicator | 1.2 | 0.7 | 1.1 | 1.2 | 1.0 | 1.5 | 1.8 | 1.8 | 1.8 | 1.7 | 2.1 | 1.5 | 1.5 | 1.5 |
| Share of bank credits and loans in the balance sheet total | 15.2 | 15.9 | 15.9 | 15.2 | 15.1 | 14.7 | 14.3 | 14.5 | 14.5 | 14.1 | 14.2 | 14.7 | 14.3 | 14.1 |

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 2.13** Contribution to import growth by product group (y/y)



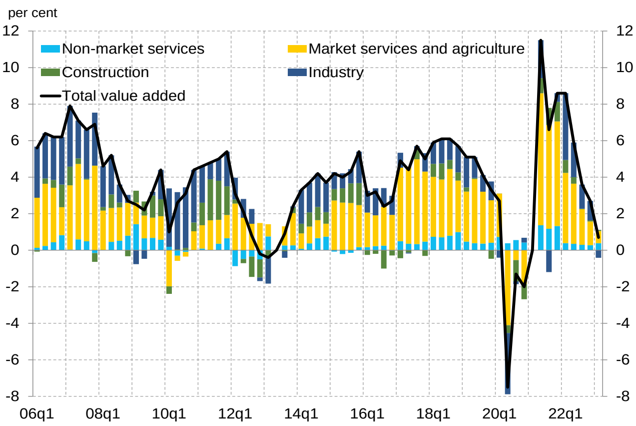

Source: Statistics Poland (GUS) data, NBP calculations.
Data based on Statistics Poland (GUS) classification of the main product categories for the value of Polish exports and imports in zlotys. "Other" comprises passenger cars and goods else not classified.

[17] Previously, between 2020 Q2 and 2022 Q3, the annual growth in sales revenue was higher than the growth in costs.
[18] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, April 2023.

fuel and intermediate goods amid falling global commodity prices (see also Chapter 1.3 *Global commodity markets*). In 2023 Q1, global economic slowdown led to the deceleration in nominal growth in goods exports, although it remained higher than the growth in goods imports. At the same time, exports to Ukraine continued to rise robustly.

Gross value added increased by 0.7% in 2023 Q1 (compared to a growth of 2.7% y/y in 2022 Q4; Figure 2.14). In industry, gross value added was lower in 2023 Q1 than a year before. At the same time, gross value added growth in market services, despite having declined compared to the previous quarter, remained positive. It was accompanied by higher than in 2022 Q4 growth in gross value added in construction.[19]

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

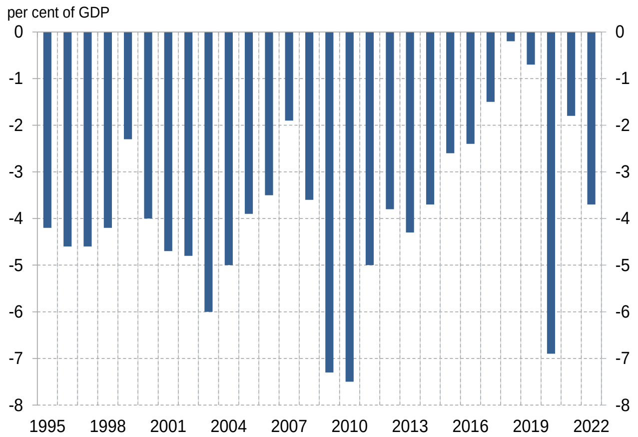



Source: Statistics Poland (GUS) data, NBP calculations.

## 2.3 Public finance

In 2022, the general government deficit in ESA2010 terms amounted to PLN 115.1 billion (3.7% of GDP), compared to PLN 48.2 billion (1.8% of GDP) in 2021 (Figure 2.15). This deterioration was primarily due to the adoption of shielding measures against energy price increases, in particular the payment of subsidies to households. According to government calculations presented in the *Convergence Programme* from April 2023, the total cost of all the shielding measures amounted to 2.4% of GDP in 2022. Furthermore, the performance of the general government in 2022 was affected by changes in the tax system (government revenues from PIT in 2022 were approx. 0.9 percentage points of GDP lower than in 2021), higher debt service costs (an increase of 0.5 percentage points of GDP in comparison with 2021), financing assistance to refugees from

**Figure 2.15** General government balance in ESA2010 terms




Source: Eurostat data.

[19] In 2023 Q1, industrial output declined by 0.6% (compared to a rise of 4.6% y/y in 2022 Q4), which was accompanied by a slowdown in construction and assembly output to 3.5% y/y from 6.2% y/y in 2022 Q4. In April 2023, industrial output declined by 6.0% y/y, while construction and assembly output rose by 1.1% y/y. In May 2023, in turn, industrial output fell by 3.2% y/y, while construction and assembly output by 0.7% y/y.

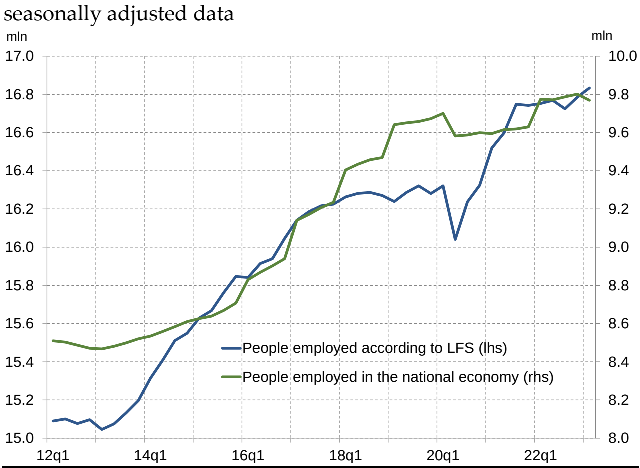
Ukraine (0.4% of GDP in 2022) and expenditure on the resolution of Getin Noble Bank S.A. (0.3% of GDP in 2022).

According to preliminary data of the Ministry of Finance (MF), after the first five months of 2023 the state budget deficit amounted to PLN 20.9 billion, against a PLN 12.1 billion surplus in the same period of 2022. The figure deteriorated primarily as a result of a decline of receipts from PIT (by 28.1%), which was due to changes in this tax since January and July 2022 (e.g. the reduction of the lower PIT rate from 17% to 12%, retroactively since the beginning of 2022). Following these changes, in the first half of 2023, the Ministry of Finance disbursed high tax returns to taxpayers as a part of PIT settlement for 2022. According to MF information from mid-June 2023, the combined amount of returns in 2023 reached over PLN 27 billion (against PLN 15.5 billion throughout 2022).

According to government estimates presented in the *Convergence Programme*, the general government deficit in 2023 is expected to run at 4.7% of GDP. Its increase is driven primarily by the weaker economic conditions – according to estimates from the *Programme*, the cyclical component of the balance will deteriorate by 1.1 percentage points of GDP y/y, while the structural balance, i.e. the balance adjusted for the cyclical component, will improve and increase from -4.8% GDP in 2022 to -4.5% GDP in 2023. Moreover, in 2023 the government continues to incur the cost of shielding measures (1.9% of GDP; in particular in the form of compensation to the sellers of gas, coal, heat and electrical energy for adhering to administered prices). According to government calculations presented in the *Programme*, debt service costs are also expected to increase (by 0.5 percentage points of GDP).

The general government debt in ESA2010 terms in 2022 markedly declined in relation to GDP and ran at 49.1% GDP, against 53.6% of GDP in 2021. According to government forecasts included in the *Convergence Programme*, this ratio is expected to

**Figure 2.16** Number of employed persons according to the LFS and according to reporting data from the national economy (NE), seasonally adjusted data

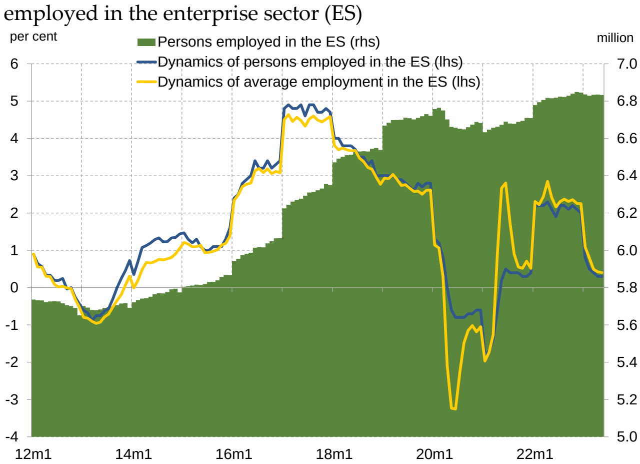



Source: Statistics Poland (GUS) data, NBP calculations.

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.

**Figure 2.17** 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.

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.

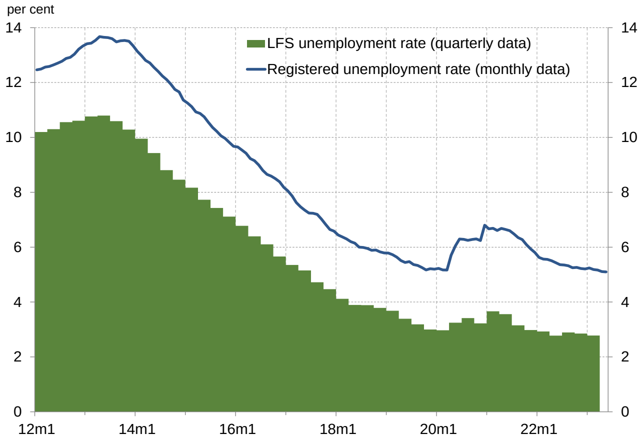
amount to 50.5% of GDP at the end of 2023 and will continue to increase in the horizon of the *Programme* (to 55.4% of GDP in 2026) on the back of the prefinancing of military investments, among other factors.

## 2.4 Labour market

The situation in the labour market remains good as evidenced by low unemployment rate, high employment and a further growth in average nominal wages. Alongside that, weaker economic activity is conducive to a decline in the number of vacancies and a slower employment and wage growth, with real wages recently remaining at a lower level than a year ago.

The LFS data for 2023 Q1 show that both the number of employed persons and the number of economically active people rose in the whole economy. The number of employed persons was 0.8% higher than a year before (compared to a rise by 0.1% y/y in 2022 Q4; Figure 2.16). In the public sector the number of employed persons significantly increased (a growth of 3.2% y/y in 2023 Q1 as compared to 3.0% y/y in 2022 Q4), while in the private sector it remained relatively stable (a growth of 0.1% y/y in 2023 Q1, against -0.8% y/y in 2022 Q4). Employment growth in the enterprise sector (ES), in companies employing 10 or more persons, recently markedly declined (from 2.9% y/y in 2022 Q4 to 0.9% y/y in 2023 Q1 and 0.4% y/y in April and May 2023; Figure 2.17). Data from the Social Insurance Institution (ZUS)[20] also point to a slowdown in the growth of the number of employed persons. Survey data from Statistics Poland and NBP suggest a further possible weakening of demand for labour in the economy in the coming quarters.[21]

**Figure 2.18** Unemployment rate, seasonally adjusted data



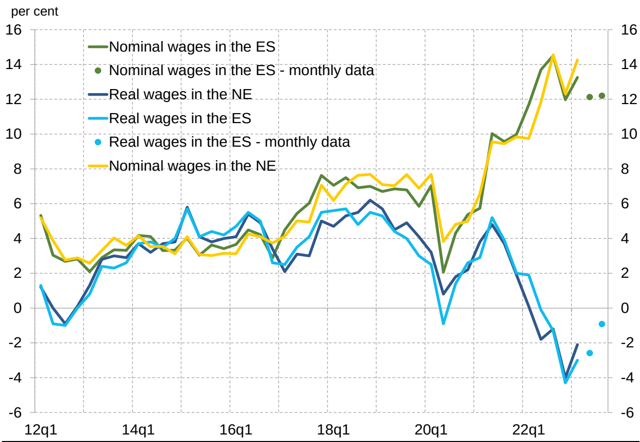

Source: Statistics Poland (GUS) data, NBP calculations.

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.

**Figure 2.19** 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.

The figure presents quartely data (lines) and monthly data for April and May 2023 (dots).

[20] According to the data from ZUS, in May 2023, the total number of the employed (who pay retirement and disability insurance contributions, excluding parenthood-related leaves) increased by 0.3% y/y compared to 0.5% y/y in April 2023 and 0.8% y/y on average in 2023 Q1.

[21] The results of the Statistics Poland survey on demand for labour in 2023 Q1 show a further decline in the number of job vacancies in the economy, and a further fall in the annual growth in the number of occupied jobs. In turn, surveys of enterprises conducted by NBP and surveys on economic climate conducted by Statistics Poland confirm a deterioration in the employment outlook for 2023

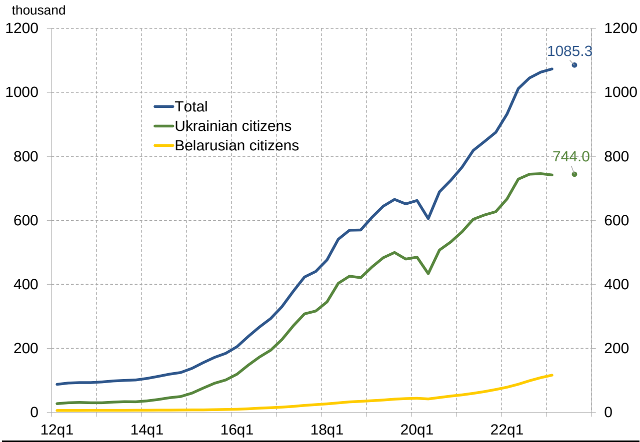
At the same time, the unemployment rate continues to run at a very low level. This is evidenced by both LFS data (2.8% in 2023 Q1, compared to 2.9% in 2022 Q4, seasonally adjusted data; Figure 2.18) and data from district labour offices (according to Statistics Poland data, the registered unemployment rate was 5.1% in April and May 2023 as compared to 5.2% in March 2023; seasonally adjusted data).

Amid the favourable situation of employees in the labour market and elevated inflation, as well as a rise in the minimum wage in January 2023 (by 15.9% y/y), the growth in nominal wages was still high. In 2023 Q1 the average wage in the national economy (NE) grew by 14.3% y/y (compared to 12.3% y/y in 2022 Q4; Figure 2.19), accompanied by a significant wage growth in public administration (13.5% y/y compared to 4.4% y/y in 2022 Q4) and in education (13.1% y/y compared to 8.0% y/y in the previous quarter).[22] Nominal wage growth in the enterprise sector stood at 13.3% y/y in 2023 Q1, 12.1% y/y in April and 12.2% y/y in May 2023 (compared to 12.0% y/y in 2022 Q4), however in real terms in remained negative (-3.0% y/y in 2023 Q1 compared to -4.3% y/y in 2022 Q4).

Unit labour costs rose by 15.6% y/y in 2023 Q1 (against 9.9% y/y in 2022 Q4), which primarily reflected slower annual GDP growth, with stronger growth in the number of people employed than in the previous quarter (according to LFS) and higher wage growth in the national economy.

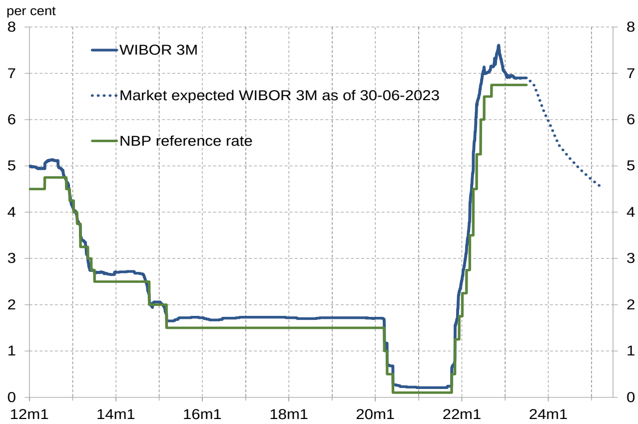
The results of the NBP Quick Monitoring Survey suggest that relatively high nominal wage growth may still continue in 2023 Q2. However, it should be mitigated due to the large number of immigrants active in the Polish labour market, related to, among other, the inflow of refugees from Ukraine (Figure 2.20). According to the data from the Social Insurance Institution, in May 2023 the

**Figure 2.20** Foreigners covered by retirement and disability insurance in the Social Insurance Institution (ZUS), the state at the end of quarter



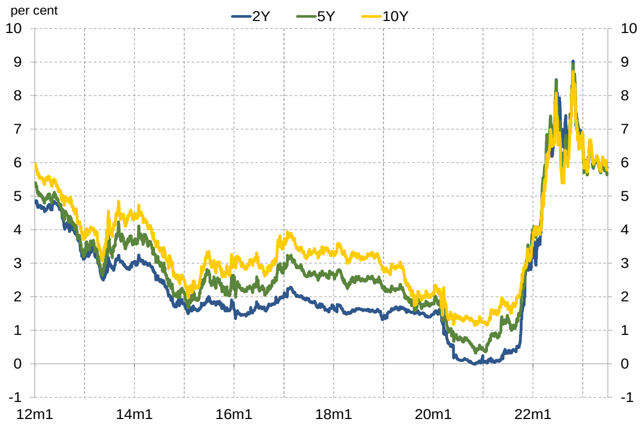

Source: the Social Insurance Institution (ZUS) data.
Data marked by dots indicates the state at the end of May 2023.

**Figure 2.21** NBP reference rate and WIBOR 3M with expectations based on FRA contracts




Source: NBP and Bloomberg data.

**Figure 2.22** Yields on Polish government bonds




Source: Bloomberg data.

Q2 and Q3 (see *The demand for labour in the first quarter of 2023*, Statistics Poland, June 2023; *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, April 2023; *Business tendency in manufacturing, construction, trade and services 2000-2023 (May 2023)*, Statistics Poland, May 2023).

[22] A stronger wage growth in 2023 Q1 in education could have been a result of entry into force of the Regulation of the Minister of Education and Science of 24 February 2023 on the minimum renumeration of teachers, which stipulates that salaries were raised with an adjustment from the start of the year.

number of foreigners covered by retirement and disability insurance due to their work in Poland amounted to 1,085,300. Among those foreigners, 744,000 persons were Ukrainian citizens, whereas over 200,000 persons were refugees from Ukraine[23] covered by ZUS insurance.

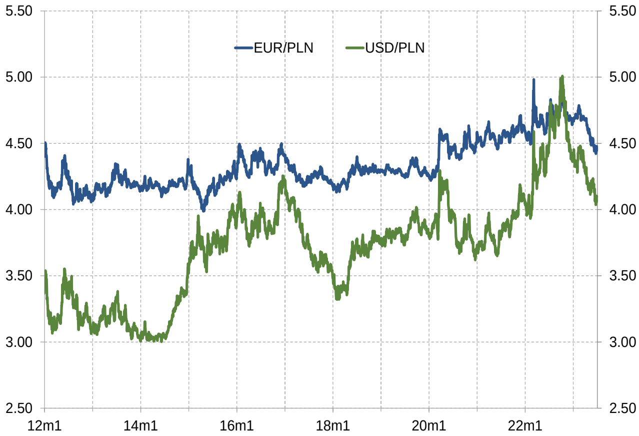
## 2.5 Financial markets and asset prices

Amid the relatively stable government bond yields in major economies (see also Chapter 1.5 *International financial markets*) and the observed, as well as forecast, decline in inflation, along with the continued market expectations of the possible interest rates decrease over the next few quarters (Figure 2.21), in recent months yields on Polish government bonds have run close to the level recorded at the beginning of 2023 (Figure 2.22).

In the recent period, the zloty exchange rate has strengthened markedly against the main currencies (Figure 2.23). As a result, in June 2023, the monthly average of the zloty exchange rate against the euro was at its strongest since August 2020, and against the US dollar - since February 2022.

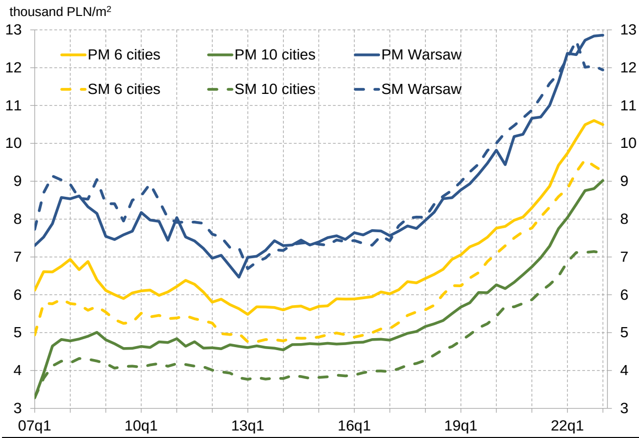
In the housing market, transaction prices continued to rise in annual terms in 2023 Q1, largely due to the higher costs of housing construction than a year ago (Figure 2.24).[24] According to NBP data,[25] growth in average housing transaction prices stood at 5.1% y/y in 2023 Q1 (compared with 9.8% y/y in 2022 Q4).[26]

**Figure 2.23** Exchange rates of the euro and the US dollar in zloty




Source: Bloomberg data.

**Figure 2.24** 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.

[23] The number of legally employed refugees in Poland is estimated on the basis of data from ZUS. The possibility to take up employment by the citizens of Ukraine (on the basis of notification) was introduced by the Act of 12 March 2022 on assistance to Ukrainian citizens due to the armed conflict on the territory of Ukraine.

[24] 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*.

[25] The discussed data on prices do not fully correspond to the quarters of the calendar year. In particular, data referring to 2023 Q1 cover transactions concluded between December 2022 and February 2023.

[26] 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 -0.5% q/q in 2023 Q1 (compared to 0.3% q/q in 2022 Q4.)

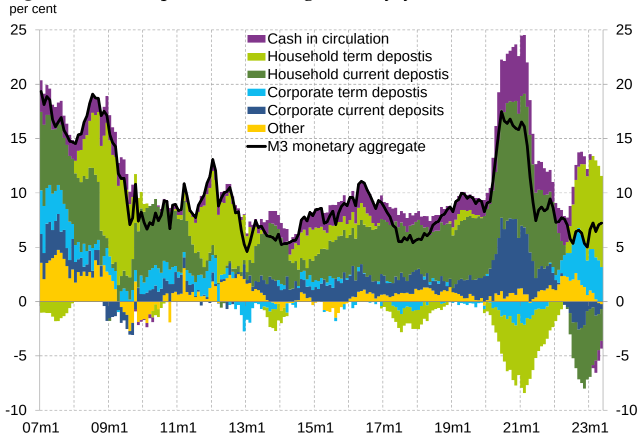
## 2.6 Money and credit[27]

In 2023 Q1, given the earlier strong monetary policy tightening undertaken by NBP, the annual growth rate of the M3 aggregate was still considerably below its long-term average, with current deposits shrinking and term deposits expanding. Alongside that, the annual growth in corporate loans slowed down again, while the decline in household loans deepened yet another time.

The M3 aggregate growth stood at 6.8% y/y in 2023 Q1 (against 5.6% y/y in 2022 Q4; Figure 2.25).[28] It was supported primarily by a strong increase in corporate and household term deposits (their volumes more than doubled in annual terms), with the markedly higher interest rates offered on those deposits than in previous years (Figure 2.26).[29] At the same time, the M3 aggregate growth was curbed by a further decline in current deposits (in 2023 Q1, household current deposits shrank by 11.8% y/y, and corporate current deposits – by 5.0% y/y), as well as a fall in cash in circulation (by 1.6% y/y in 2023 Q1).

In 2023 Q1, the stock of household lending declined again (by 4.9% y/y as opposed to a fall by 3.6% y/y in 2022 Q4; Figure 2.27)[30], amid the relatively high interest on loans, the negative real annual wage growth and the still relatively weak consumer sentiment (see also Chapter 2.4 *Labour market* and 2.2 *Demand and output*). In particular, the stock of housing loans decreased by 5.3% y/y in 2023 Q1 (against a fall by 3.2% in 2022 Q4), given the still subdued demand for those loans.[31] At the same

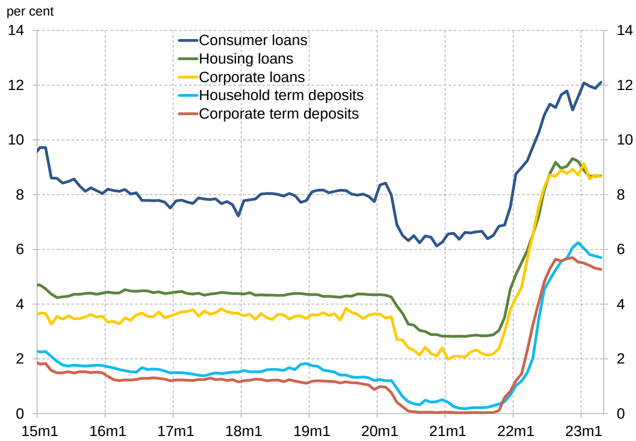
**Figure 2.25** Composition of M3 growth (y/y)




Source: NBP data.

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

**Figure 2.26** Average interest rates on new and renegotiated business, PLN denominated




Source: NBP data.

[27] In this chapter, the growth in the broad money aggregate M3, deposits and loans is defined as the annual growth resulting from transaction changes, on average in a given quarter. The data refer to monetary financial institutions.
[28] In April and May 2023, the M3 aggregate growth stood at 7.1% and 7.2% y/y respectively.
[29] Since 2022 Q1 the term structure of deposits have changed substantially. At the end of 2023 Q1, term deposits accounted for approx. 30% of household and corporate deposits, while at the end of 2021 Q4 it was less than 15%.
[30] In April and May 2023, growth in household loans stood at -4.7% and -4.5% y/y respectively.
[31] In 2023 Q1, according to the Credit Information Bureau (BIK) data, the value of housing loans applications fell by 50.4% y/y on average (compared to a fall by 64.8% on average in 2022 Q4). At the same time, credit underwriting criteria on housing loans were eased due to, among others, the recommendations of the Office of the Polish Financial Supervision Authority (UKNF) on the procedures relating to the assessment of the borrowers' minimum creditworthiness (see also *Senior loan officer opinion survey on bank lending practices and credit conditions – 2nd quarter 2023*, NBP, May 2023).

time, growth in consumer loans remained negative (-1.3% y/y in 2023 Q1 compared to -1.7% y/y in 2022 Q4), while lending standards in this segment were tightened again.[32]

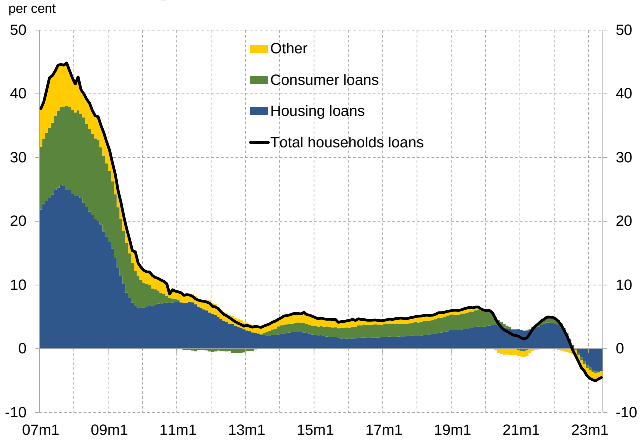
Over the recent past, growth in corporate loans continued to slow down (to 8.4% y/y in 2023 Q1 from 12.2% in 2022 Q4; Figure 2.28)[33], with lower growth in both loans on current account (11.7% y/y in 2023 Q1 compared to 19.2 y/y in 2022 Q4) and – albeit to a lesser extent – investment loans (6.7% y/y in 2023 Q1 compared to 7.5% in 2022 Q4).

## 2.7 Balance of payments[34]

In 2023 Q1, the current account balance improved considerably (it stood at -1.2% of GDP, compared with -3.0% of GDP in 2022 Q4; Figure 2.29).[35] This mainly reflected an improvement in the balance of trade in goods (to -2.1% of GDP, from -3.7% of GDP in 2022 Q4), which was supported by a smaller decline in export growth than in import growth, given the fall in the global prices of energy commodities (see Chapter 1.3 *Global commodity markets).* At the same time, the surplus of trade in services continued (amounted to 5.6% of GDP in 2023 Q1 and in 2022 Q4). There was also a slight improvement in the balance of the primary income account (it stood at -4.4% of GDP in 2023 Q1 against -4.5% of GDP in 2022 Q4), yet this balance remained negative primarily due to the high income of foreign direct investors in Poland.[36]

Alongside that, the balance of the financial account improved significantly (standing at -0.6% of GDP in 2023 Q1, compared with -2.4% of GDP in 2022 Q4; Figure 2.30).[37]

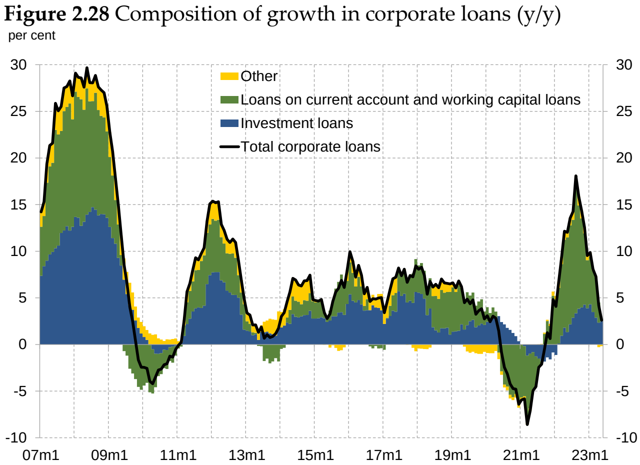
**Figure 2.27** Composition of growth in household loans (y/y)




Source: NBP data.

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

**Figure 2.28** Composition of growth in corporate loans (y/y)



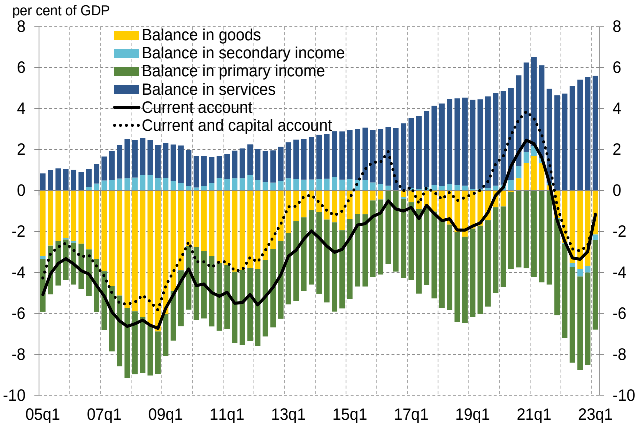

Source: NBP data.

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.

[32] In 2023 Q1, banks tightened their standards on consumer loans to households due to, among other things, the deterioration in the economic outlook.
[33] In April and May 2023, corporate loan growth stood at 4.2% and 2.6% y/y respectively.
[34] In this chapter, data on the balance of payments in relation to GDP are presented in terms of a four-quarter rolling sum.
[35] In April 2023, according to preliminary estimate, the current account balance stood at PLN 1.7 billion.
[36] In turn, the surplus on the capital account declined to 0.0% of GDP in 2023 Q1, from 0.3% of GDP in 2022 Q4.
[37] In April 2023, according to preliminary estimate, the balance of the financial account stood at PLN 8.6 billion.

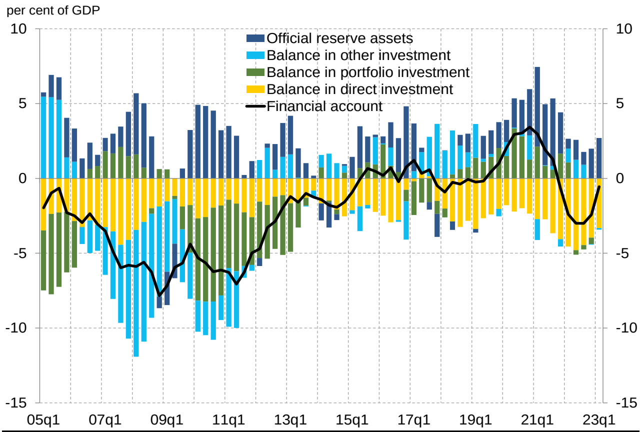
External imbalance indicators evidence that the Polish economy is well balanced (Table 2.4). In 2023 Q1, Poland's net international investment position (in relation to GDP) was at the highest level (-32%) since at least 2004, simultaneously being at a level compliant with the criterion indicating an absence of imbalances relating to this indicator (-35% of GDP), as laid down by the European Commission. At the same time, the external debt to GDP ratio was at its lowest (52%) since 2008.

**Figure 2.29** Current account balance (4-quarter rolling sum)




Source: NBP data.

**Figure 2.30** Financial account balance (4-quarter rolling sum)




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

**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 |
| Current account balance/GDP | 2.3 | 1.6 | 0.4 | -1.4 | -2.5 | -3.3 | -3.4 | -3.0 | -1.2 |
| Current and capital account balance/GDP | 3.5 | 2.7 | 1.4 | -0.7 | -1.9 | -2.8 | -3.0 | -2.7 | -1.1 |
| Trade balance/GDP | 6.0 | 5.9 | 4.9 | 3.3 | 2.2 | 1.6 | 1.6 | 1.9 | 3.5 |
| 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 |
| Foreign debt/GDP | 61 | 57 | 58 | 56 | 56 | 56 | 56 | 53 | 52 |
| Net international investment position/GDP | -42 | -41 | -40 | -39 | -38 | -36 | -33 | -34 | -32 |
| Official reserve assets/short-term foreign debt minus forecast current account balance | 110 | 102 | 109 | 117 | 108 | 114 | 122 | 136 | 117 |
| Official reserve assets/short-term foreign debt | 124 | 122 | 130 | 140 | 116 | 116 | 118 | 126 | 110 |

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

# 3. Monetary policy in March – July 2023

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

**Minutes of the Monetary Policy Council decision-making meeting held on 8 March 2023**

At the meeting it was pointed out that global economic activity growth remained subdued. It was also observed that in the euro area – despite a certain improvement in recent months – economic conditions remained weak.

The Council members pointed out that in the recent period global negative supply shocks had gradually eased. It was emphasized that in recent months prices of energy commodities had fallen, although they remained considerably higher than before the pandemic. At the same time, disruptions in global value chains were easing. It was pointed out that the fading of these shocks was supporting global economic activity and reducing inflationary pressures. Nevertheless, according to available forecasts, in 2023 GDP growth in major economies would be relatively weak. At the same time, attention was drawn to the uncertainty about the global macroeconomic outlook due, among others, to the consequences of China's departure from the restrictive epidemic policy.

It was pointed out that in the recent period CPI and HICP inflation had declined in the United States and in the euro area, respectively, whereas in certain Central and Eastern European countries consumer price growth had picked up. Global inflation is forecast to fall due to the easing of the negative supply shocks and a slowdown in consumption growth observed in many countries. It was also emphasised that according to forecasts, inflation would decline gradually, especially core inflation, which remained high and in many countries had not yet started to fall. Certain Council members also drew attention to the uncertainty about the pace of disinflationary processes in the euro area and future developments of service prices in the United States.

At the meeting it was pointed out that the Federal Reserve of the United States and the European Central Bank continued to increase their interest rates, while certain Council members pointed out that representatives of those central banks were indicating that it was necessary to bring inflation down relatively fast. Other Council members underlined, however, that these banks had launched interest rate hikes much later than NBP, and that the total scale of the monetary policy tightening so far in the United States and the euro area was significantly smaller than in Poland. At the same time, it was indicated that central banks in Central and Eastern Europe – following the earlier strong monetary policy tightening – were now keeping interest rates unchanged. It was observed that amid weaker economic conditions and the forecast decline in inflation, an increasing number of central banks were putting monetary policy tightening on hold.

While analysing the situation in Poland, the Council members pointed out that – amid the weakening of economic growth around the world – activity in Poland had also slowed down. In 2022 Q4, real GDP growth declined to 2.0% y/y. Economic growth was lowered by reduced consumption demand. At the same time, investment activity continued to increase. In this context the majority of the Council members judged that the observed structure of GDP growth should support the disinflationary processes. It was pointed out that the available data for January 2023 – including data on industrial output and retail sales – corroborated the weakening of economic conditions.

While discussing the outlook for economic activity, Council members pointed out that according to the March projection in 2023 GDP growth would be low amid weaker consumption. It was observed that economic activity would continue to be curbed by the consequences of the earlier negative supply shocks, slowdown in the global economy and the monetary policy tightening implemented so far. In line with this projection, in the years 2024-2025 economic growth would pick up, however, it was observed that this would be a gradual process. It was emphasised that throughout the entire projection horizon the output gap would be negative. Attention was also drawn to the uncertainty about the forecast growth in economic activity. In this context some members of the Council pointed to a higher likelihood of GDP growth running below the central path of the projection, although certain Council members stressed that higher economic growth was possible.

The Council members pointed out that the robust labour market situation continued, although employment growth in the enterprise sector had slowed down slightly. According to the LFS data, the number of working persons in the economy in 2022 Q4 remained close to the level recorded a year before, while it declined in the private sector. It was pointed out that the annual growth in average nominal wages in the enterprise sector had increased in January 2023. Certain Council members pointed out that the rise in nominal wages exceeded labour productivity growth. At the meeting it was assessed that labour market adjustment to the weakened economic conditions occurred through real wages rather than rising unemployment which was a favourable scenario from the point of view of macroeconomic stability and long-term growth.

At the meeting it was pointed out that according to the Statistics Poland preliminary data – not taking into account the annual change in the weights in the basket of consumer goods and services – annual CPI inflation in January 2023 had increased compared to December 2022 due to a rise in VAT rates on energy products and the adjustment of some prices of energy carriers. It was pointed out that core inflation might also have increased slightly, yet this was judged not to be an effect of accelerating demand as demand growth was on the decline. By contrast, annual food price growth had declined again. At the same time, it was pointed out that in the recent period inflation expectations of consumers and businesses had fallen considerably, although certain Council members indicated that the structure of responses to the survey questions had improved only recently.

While discussing the outlook for inflation in Poland, it was pointed out that according to the available forecasts, February 2023 probably saw the peak of CPI inflation. According to the March projection and other forecasts, in 2023 Q2 price growth would start to systematically decline. It was emphasised that the decline in inflation would be driven not only by the statistical base effect, but also by weakening price pressures. It was also observed that, on the one hand, demand was weakening, limiting the room for price increases, and, on the other hand, the growth in costs was slowing down, which was reflected, among others, in falling PPI inflation. At the same time, it was pointed out that the effects of the earlier shocks would fade away gradually, given the nature and the scale of these shocks.

According to the projection, CPI inflation in Poland will continue to decline also in the coming years. Certain Council members stressed that the projection was prepared under the assumption of unchanged NBP interest rates. The majority of the Council members underlined that at the end of the projection horizon price dynamics should be consistent with the NBP inflation target. It was also observed that core inflation would decrease in the projection horizon. Certain Council members pointed out, however, that from mid-2023 core inflation would account for most of the overall inflation. Some Council members pointed to the uncertainty about the outlook for inflation, with certain Council member highlighting the possibility of price growth running above the central path of the projection, while others were flagging the possibility of a faster decline in inflation.

During the meeting the impact of NBP's strong monetary policy tightening on monetary conditions was highlighted. It was pointed out that growth in monetary and credit aggregates had slowed down considerably, including a decline in households lending stock. Certain Council members pointed out that the value of newly granted loans was significant in their view. At the same time, some Council members remarked that the easing of the supervisory recommendations regarding credit underwriting criteria for certain types of loans might contribute to a slight rebound in lending.

The majority of the Council members assessed, that the weakening of the external economic conditions, together with a decline in commodity prices, would continue to curb global inflation, which would contribute to lower price growth in Poland. Decline in domestic inflation would be supported by the weakening in GDP growth, including consumption, amid significant decrease in credit growth. As a result, the majority of the Council members assessed that the earlier strong monetary policy tightening undertaken by NBP would lead to a decline in inflation in Poland towards the NBP inflation target. At the same time, given strength and persistence of the recent shocks that remain beyond the impact of domestic monetary policy, the return of inflation to the NBP inflation target would be gradual. Such an assessment was supported by the March projection of inflation and GDP. 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 decrease in inflation would be faster if supported by appreciation of the zloty exchange rate, which, in the Council's assessment, would be consistent with the fundamentals of the Polish economy. In the opinion of the Council, considering the expected scenario of the gradual return of inflation to the NBP inflation target in the coming years, amid the deterioration in domestic economic conditions, including in the labour market, and the incoming signals of the global inflationary pressure slowing down, it was justified to keep the NBP interest rates unchanged.

Certain Council members expressed the opinion that given the persistently high price growth and elevated inflation expectations, the hitherto scale of interest rate hikes by NBP was insufficient 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. In the opinion of those Council members, the disinflation process as foreseen by the forecasts, and particularly the decline in core inflation, would be too slow.

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 members 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 5 April 2023**

At the meeting it was pointed out that global economic conditions remained subdued. In particular, it was indicated that economic growth in the euro area had probably been close to zero in 2023 Q1, and according to available forecasts would remain low throughout the whole of the year. However, attention was drawn to the fact that the scale of the slowdown in global activity was smaller than previously expected.

The Council members pointed out that in recent months global commodity prices – including both energy and agricultural commodities – had fallen, although oil prices had risen in response to the decision of the OPEC+ at the beginning of April to reduce oil production. Moreover, it was underlined that the global supply chain disruptions were easing, which supported global economic activity, and at the same time lowered inflationary pressure.

Some Council members drew attention to the turmoil in the banking sector in the United States and Europe as a new risk factor for the economic conditions abroad. This turmoil might translate into an additional tightening of bank lending in the affected countries, which could adversely impact their GDP growth prospects. As a result, in the past weeks market expectations regarding interest rate developments in the coming quarters, among others in the United States and the euro area, had declined significantly, which was consistent with a certain softening of communication by the Federal Reserve of the United States and the European Central Bank regarding their monetary policy prospects.

It was noted that in the recent period consumer price growth in the United States and the euro area had declined, although – as certain Council members pointed out – due to the scale of the earlier shocks, their secondary effects and relatively fast nominal wage growth, the process of inflation returning to central banks' targets in the major economies would be slow, as signalled also by the still high core inflation in most economies. In this context, it was underlined that inflation in 2024 would also be above the inflation targets of the Fed and the ECB. Certain Council members judged that – particularly in view of the lower market expectations regarding interest rate developments in the major economies and the increase in oil prices in the past days – this might lower the anti-inflationary impact of the decline in inflationary pressure abroad on prices in Poland. Some Council members highlighted that inflation – despite its decline – remained exceptionally high in the countries of Central and Eastern Europe.

When referring to the current economic situation, some Council members judged that the incoming data confirmed the economic slowdown. They observed that, in particular, in February industrial output had declined and retail sales were 5% lower than a year ago, which – although partly resulted from base effects – signalled a further and perhaps stronger than previously expected fall in consumption at the beginning of 2023. These Council members also drew attention to the slight decline of the PMI for Polish manufacturing in April, which had been running below 50 points for many months. Meanwhile, certain Council members were of the opinion that already in 2023 Q2 a gradual recovery in economic activity could be expected that may accelerate in 2023 Q3.

It was pointed out that the labour market situation remained good and the unemployment rate in Poland was among the lowest in the European Union (second lowest). However, some Council members observed that gradually weakening demand for labour was reflected in a significant fall in the number of new jobs and vacancies in the economy in 2022 Q4 as well as in a slowdown in annual growth of employment in the enterprise sector in February 2023. Alongside that, in February nominal wage growth in the enterprise sector was close to the January figure, which was partly the result of further payments of bonuses in mining and the increase in the minimum wage. Real wages, however, continued to decline, which should support disinflation. Other Council members pointed out that although February had seen a fall in employment in the enterprise sector (also in seasonally adjusted month-to-month terms), the fall had been small. These Council members also judged that nominal wage growth – even excluding mining and the increase in the minimum wage – was still high, particularly in certain sections.

At the meeting it was pointed out that – according to Statistics Poland preliminary data – in March 2023 annual CPI inflation declined by over 2 percentage points compared to February (to 16.2% from 18.4% in February), which largely reflected the fall in energy price growth. In turn, limited supply of vegetables and meat continued to boost food prices. As a result, in March the growth in food prices had not yet fallen, although some Council members expressed the opinion that food price growth should soon slow down. It was underlined that preliminary estimates also indicated an increase in core inflation, which – according to NBP forecasts – should soon begin to gradually decline. Certain Council members emphasised that the CPI index in month-to-month terms and the estimated level of core inflation in March remained high. Moreover, these Council members drew attention to the fact that the fall in the annual inflation rate in March 2023 had been driven by the base effect.

When assessing the inflation outlook, the majority of the Council members were of the opinion that price growth would keep declining markedly, continuing the initiated process of gradual disinflation. It was underlined that in view of the significant fall in consumption, half of the firms surveyed by NBP had declared difficulties in passing on rising costs to the prices of final goods, whilst until now some enterprises had conducted a price policy aimed not only at compensating rising costs, but also at increasing margins. However, some Council members argued that the price dynamics of certain services could be a factor that would hamper the fall in inflation. At the same time, it was underlined that inflation expectations of enterprises had been declining for some time, which should support expectations of a fall in inflation in the following quarters. In addition, certain Council members pointed to the further decline in annual growth of producer prices, which would also support the disinflation process. Alongside that, other Council members observed that some of the incoming data signalled greater persistence of inflation, which increased the risks to lowering it towards the target in the following years. These Council members pointed out that in month-to-month terms, the PPI index excluding goods related to energy was slightly positive.

During the discussion attention was drawn to the significant impact of the strong monetary policy tightening by NBP on the monetary conditions. It was pointed out that as a result of the marked increase in the cost of debt, a very substantial decline in lending growth had taken place, including a fall in the stock of household loans, as well as a decline in the M1 monetary aggregate alongside an increase in term deposits. In this context, certain Council members observed that the interest rate hikes conducted so far were significantly impacting the financial situation of borrowers. In effect, keeping interest rates at their current levels should mitigate the risk of excessive growth of debt in the economy. However, certain Council members underlined that the estimated real interest rates were negative, which – in the opinion of these Council members – might hamper the lowering of inflation. Other Council members also pointed out that in previous months – following the earlier strong growth – interest rates on certain types of loans had declined somewhat.

The majority of the Council members assessed that the weakening of the external economic conditions, together with a decline in commodity prices, would continue to curb global inflation, which would contribute to lower price growth in Poland. The decline in domestic inflation would be supported by the weakening of GDP growth, including consumption, amid a significant decrease in credit growth. As a result, the majority of the Council members assessed that the earlier strong monetary policy tightening undertaken by NBP would lead 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 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 expected gradual decline in inflation, the weakening of the domestic economic conditions, including the fall in consumer demand, decline in inflation expectations, low growth in monetary aggregates, including low lending growth, 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 justified to keep the NBP interest rates unchanged.

Certain Council members expressed the opinion that given the persistently high price growth and elevated inflationary expectations, the hitherto scale of interest rate hikes by NBP was insufficient 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. In the opinion of those Council members, the disinflation process as foreseen by the forecasts, and particularly the decline in core inflation, would be too slow.

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 10 May 2023**

At the meeting, it was pointed out that global economic conditions remained subdued, as confirmed by GDP growth data for 2023 Q1 in the United States and the euro area. In particular, it was observed that economic growth in the euro area was only slightly positive. In contrast, economic activity had accelerated in China after the country's departure from its previous zero-Covid policy. However, the Council drew attention to the fact that according to the forecasts by international institutions, global GDP growth would run below its long-term average in 2023 and was expected to remain moderate in 2024. At the same time, some Council members argued that while the energy shock was fading, turmoil in the US banking sector had become a risk factor to global economic conditions.

The Council members indicated that concerns about global activity levels were reflected in the declining prices of many energy commodities, including oil – despite the decision of OPEC+ to reduce its output. Some Council members also observed that the prices of agricultural commodities had fallen in recent months, with certain council members judging that further developments in food prices were subject to considerable uncertainty.

The Council members pointed out that in early May 2023, the US Federal Reserve and the European Central Bank raised interest rates by 25 bps. Certain Council members were of the opinion that the Fed and the ECB, while probably approaching the end of the monetary policy tightening cycle – in particular, due to the turmoil in the US banking sector – were concerned about the persistence of inflation.

It was emphasised that global inflation was declining, but that the process was gradual, which was associated with the hitherto high level of core inflation in most countries, including the United States and many European economies. The high core inflation was judged to result from both the earlier sharp cost increases and from an increase in corporate margins, as, amid favourable labour market conditions and demand growth, some businesses had raised prices by more than was implied by the rising costs. The majority of the Council members expressed the opinion that, as the supply shocks receded and demand growth slowed down, core inflation might be expected to gradually decline. Certain Council members argued that price-setting processes, including the frequency and characteristics of price changes, were presently different than before the pandemic – i.e. during a period of low inflation – which might add to the persistence of inflation in many countries. In their view, a similar effect could materialise due to higher demand for services, entailing an increase in demand for workers in this sector, reflected in the steep growth of their wages and high services price inflation. These members observed, however, that it was not known how persistent these processes would prove to be.

When referring to domestic economic conditions, some Council members judged that incoming data for 2023 Q1 confirmed a slowdown in GDP growth, including a marked fall in consumer demand. They observed, in particular, that the declines in retail sales and industrial output had deepened in March, and a further decrease in the manufacturing PMI in April suggested a weakening in the industrial sector. These members pointed out that construction and assembly output had also fallen in March. At the same time, the majority of the Council members were of the opinion that economic recovery could be expected in the second half of 2023.

It was pointed out that the labour market situation continued to be good, yet some Council members emphasised that employment growth in the enterprise sector was gradually slowing down, and nominal wage growth had declined in March. Alongside that, certain Council members observed that employment in the service sector was mostly rising, and in its selected sections – as well as in manufacturing – nominal wage growth was still very high in their opinion. At the same time, the increase of the minimum wage since the beginning of 2023 had boosted household income. According to these Council members, the ratio of wages to labour productivity continued to be high, as did the share of businesses experiencing wage pressure, despite having fallen somewhat.

At the meeting, it was pointed out that according to Statistics Poland preliminary data, annual CPI inflation had declined to 14.7% in April (from 16.1% in March and 18.4% in February), which was primarily due to the slower annual food price growth. The annual growth in energy prices also slowed down, yet again, and preliminary estimates suggested that core inflation (excluding food and energy prices) had decreased slightly in April as well. The Council members observed that disinflation was evident in industrial producer prices, whose growth had declined markedly in recent months. The majority of the Council members also highlighted the continued decline in households' inflation expectations as well as firms' declarations, according to which it was increasingly difficult for businesses to raise prices in response to the rising costs. According to these

Council members, the above factors were behind a further expected decline in inflation, including core inflation. The majority of the Council members judged in this context that the disinflation process was supported by the recently observed appreciation of the zloty.

Certain Council members were of the opinion that price-setting processes in Poland, like in other countries, were currently following a different pattern than in a low inflation period, and that these processes were affected by the rising role of the service sector, which increased the risk of inflation persistence. In the opinion of these Council members, the decline in the annual CPI index reflected the base effects, and the impact of the previous NBP interest rate hikes was not sufficient, particularly as a considerable share of businesses and consumers were still expecting high inflation.

When assessing the inflation outlook, the majority of the Council members were of the opinion that consumer price growth would keep declining markedly, continuing the initiated process of disinflation. Alongside that, some Council members expressed the opinion that the decline in inflation might be somewhat slower than the path outlined in the March projection. In this context, these Council members drew attention to many persisting uncertainty factors. At the same time, the majority of the Council members judged that the prospect of inflation returning to the target over the projection horizon had not changed. However, certain Council members argued that, in their opinion, inflation would not fall to the level of the NBP inflation target by the end of 2025.

Some Council members underlined that the high level of NBP interest rates – alongside the earlier price increases – was a factor limiting the propensity to spend. The effects of high interest rates could be seen, among others, in the marked decline in the M1 monetary aggregate and slower growth of credit debt, including the fall in stock of housing loans. In the opinion of these Council members, this confirmed the strong impact of NBP's monetary policy on the economy. These Council members judged that the credit channel was effective, despite a slight increase in newly granted housing loans in the recent period, which, however, largely stemmed from the relaxation of supervisory recommendations regarding creditworthiness assessment conditions. Certain Council members expressed the opinion that a significant portion of household assets was very liquid, and thus could be used to finance consumption, and that overpayment of loans taken out earlier in response to the increase in interest rates reduced the strength of the impact of the credit channel. These Council members also pointed out that, following the earlier strong growth, interest rates on certain types of loans and deposits had declined somewhat. In addition, certain Council members argued that along with the expected economic recovery in 2023 Q2, lending should be expected to accelerate.

The majority of the Council members assessed that the weakening of the external economic conditions, together with a decline in commodity prices, would continue to curb global inflation, which would contribute to lower price growth in Poland. The decline in domestic inflation would be supported by the weakening of GDP growth, including consumption, amid a significant decrease in credit growth. As a result, the majority of the Council members assessed that the earlier strong monetary policy tightening undertaken by NBP would lead 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 Council members recognised that, taking into account the above conditions, and in particular the expected gradual decline in inflation, the weakening of the domestic economic conditions, including the fall in consumer demand, decline in inflation expectations, low growth in monetary aggregates, including low lending growth, 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 justified to keep the NBP interest rates unchanged.

Certain Council members expressed the opinion that given the persistently high price growth and elevated inflation expectations, the hitherto scale of interest rate hikes by NBP was insufficient 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. In the opinion of those Council members, the disinflation process as foreseen by the forecasts, and particularly the decline in core inflation, would be too slow.

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 June 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, annual growth in activity continued to slow down in 2023 Q1. At the same time, in Germany GDP contracted and the level of economic activity was lower than before the outbreak of the pandemic. It was underlined that in the United States the economic conditions remained better than in Europe, although growth in activity was lower than the long-term average for the US economy in 2023 Q1. Some Council members also pointed out that the economic recovery in China after the country's departure from its previous zero-Covid policy had so far been limited.

It was pointed out that the effects of the commodity shock continued to have a negative impact on the global economic situation, while it was underlined that this shock was gradually subsiding. Nevertheless, its lagged effects were still having an adverse impact on the economies, particularly in the euro area and countries of the Central-Eastern Europe region. In particular, it was pointed out that the annual growth in prices remained high, which was causing a decline in real household income. As a result, retail sales were falling significantly in many economies. The Council members underlined that global monetary tightening, which was slowing down credit growth, was also having a negative impact on global economic activity.

Forecasts indicated that GDP growth in the euro area would be relatively low in 2023. At the same time, GDP growth in the United States was to remain moderate in 2023. It was emphasised that the global economic activity outlook remained uncertain, among others, due to tensions in the banking sector in the United States, with certain Council members pointing to somewhat easing of these tensions.

The Council members pointed out that global inflation was declining. Recently, inflation had fallen in both the euro area and the United States, as well as in the Central-Eastern Europe region. At the same time, it was underlined that in all these economies inflation remained high, and in the

Central-Eastern Europe region it was still in double digits. At the same time, attention was drawn to a fall in core inflation in the environment of the Polish economy. In May, it declined for the second time in a row in the euro area. It was pointed out that core inflation had also begun to decline in the countries of the Central-Eastern Europe region, although in most of them it was still over 10%.

The Council members emphasised that the decline in global inflation was supported by the fading away of the supply shocks, including in the commodities market and in global trade, as well as by the limited demand for goods by households. As a result, producer price growth is quickly declining around the world. Despite this, the fall in inflation in many economies is gradual, since the rapid growth in nominal wages, the relatively good economic situation in services, as well as the pass through of the earlier sharp increases in production costs on consumer prices and the relatively high corporate profits are supporting further price growth.

At the Council meeting, it was pointed out that recently the central banks in some advanced economies had raised interest rates. In turn, many central banks of the emerging economies, including in the Central-Eastern Europe region, are keeping interest rates unchanged.

Amid the weakening of economic growth around the world, activity growth had also slowed down in Poland. Annual GDP growth stood at -0.3% in 2023 Q1. It was underlined that the data on a slowdown of GDP growth was consistent with the March projection. The base effect due to the sharp growth in inventories in 2022 Q1 contributed to lower annual GDP growth. It was pointed out that the slowdown in economic activity supported disinflation. Moreover, the majority of Council members pointed out that the structure of GDP growth was favourable from the point of view of a fall in price growth. In particular, the decline in consumption was giving enterprises less leeway for price increases. At the same time, some Council members pointed out that investment growth was supporting the expansion of production capacity, which in the medium term should additionally support disinflation. At the same time, attention was drawn to the fact that monthly data for April 2023 showed a deeper fall in industrial output. Retail sales also decreased, falling again by over 7% y/y in April. As a result, some Council members judged that growth in economic activity in 2023 Q2 might be lower than earlier expected. Certain Council members underlined in this context that a fuller assessment of the economic outlook would be possible after getting acquainted with the results of the July inflation and GDP projection.

The Council members pointed out that despite a slowdown in economic activity growth, the labour market situation continued to be good and unemployment was low. However, the majority of Council members underlined that the monthly data confirmed a gradual slowdown in demand for labour. The employment growth in annual terms in the enterprise sector in recent months was decelerating, although the LFS data showed that the number of employed persons is high. It was underlined that according to the Social Insurance Institution (ZUS), in April 2023 the number of employment contracts had declined in annual terms for the first time in two years. At the same time, annual nominal wage growth in enterprises slowed down once again in April, which translated into a further fall in real wages. Certain Council members drew attention to the high growth in unit labour costs. In this context, these Council members also pointed to the further increase in the minimum wage in 2023, which would boost wage growth in the economy.

The Council members underlined that in line with earlier forecasts, inflation in Poland was decreasing. According to the Statistics Poland flash estimate, CPI inflation fell to 13.0% y/y in May 2023 and was the lowest for over a year. It was emphasised that in the last three months inflation had fallen by over 5 percentage points. At the same time, in May 2023 the overall level of consumer prices was unchanged as compared to April 2023. In this context, the majority of the Council members drew attention to the fact that the still high annual inflation rate was therefore not evidence of current growth in the overall level of prices, but was the result of the history of price changes in previous months. It was pointed out that while in previous months the fall in the annual inflation rate had been almost exclusively due to a decline in the annual growth in food and energy prices, it could be estimated that in May 2023 core inflation had also fallen. It was underlined that growth in both prices of services and non-food products had most likely declined. 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 opinion of these Council members, the decline in the annual CPI index mainly reflected the base effects and the fall in commodity prices, and the impact of the previous NBP interest rate hikes was not sufficient.

The Council members judged that in line with the available forecasts, price growth, including core inflation, would proceed to fall. It was pointed out that price growth would adjust to the weakened economic conditions, and at the same time the fading away of the global supply shocks and cost pressure would have a disinflationary effect. It was emphasised that the sharp slowdown in producer price inflation, which stood at 6.8% y/y in April, while in the summer of 2022 was over 25%, indicated a weakening of cost pressure. The majority of the Council members underlined that NBP's strong monetary policy tightening, which had contributed to a decline in credit debt in the Polish economy and in the M1 monetary aggregate, had also contributed to the decrease in inflation. The majority of the Council members therefore pointed out that the high level of NBP interest rates was still having anti-inflationary effects. Moreover, these Council members also drew attention to the continuation of the fall in the measures of inflation expectations, including of consumers and enterprises. It was also judged that the disinflation process was supported by the marked appreciation of the zloty observed in recent months. Some Council members pointed out that a squeeze on corporate margins, which had been relatively high in some sectors in previous quarters, would also be conducive to a fall in inflation. At the same time, certain Council members were of the opinion that the decrease in inflation in the coming quarters might be faster than current forecasts indicated.

However, certain Council members judged that a significant portion of enterprises and consumers still expected relatively high inflation and that the median of price growth forecasts made by market analysts had remained stable in the recent period. At the same time, they judged that the pace of decline in inflation might be slower than the path outlined in the March projection.

The majority of the Council members assessed that the weakening of the external economic conditions, together with a decline in 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 consumption, amid a significant decrease in credit growth. As a result, the majority of the Council members assessed that the earlier strong monetary policy tightening undertaken by NBP would lead 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 Council members recognised that, taking into account the above conditions, and in particular the expected gradual decline in inflation, the weakening of the domestic economic conditions, including the fall in consumer demand, decline in inflation expectations, low growth in monetary aggregates, including low credit growth, 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 justified to keep the NBP interest rates unchanged.

Certain Council members expressed the opinion that given the persistently high price growth and elevated inflation expectations, the hitherto scale of interest rate hikes by NBP was insufficient 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. In the opinion of those Council members, the disinflation process as foreseen by the forecasts, and particularly the decline in core inflation, would be too slow.

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.

**Information from the meeting of the Monetary Policy Council held on 5-6 July 2023**

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

The global economic conditions remain weakened. At the same time, uncertainty about global economic activity outlook persists. In the euro area, following the contraction of the economic activity in the previous quarters, GDP growth in 2023 Q2 probably stayed low.

This is accompanied by globally declining inflation, however, in most economies annual price growth remains elevated. The fall in commodity prices together with the easing of global supply chain disruptions reduce price pressures, which is reflected in the significant decrease of growth in producer prices. At the same time, core inflation in most economies is still elevated, although it gradually declines.

Amid the weakening of economic growth around the world, activity growth also slowed down in Poland. Retail sales, industrial output as well as construction and assembly output decreased in annual terms in May 2023. Despite the slowdown in activity growth, the labour market situation remains good and unemployment is low. The number of working persons continues to be high, although this is accompanied by the low annual growth in employment in the enterprise sector.

According to Statistics Poland flash estimate, annual CPI inflation declined again, falling to a level of 11.5% y/y in June 2023 (compared to 13.0% y/y in May 2023). At the same time, for the second consecutive month, the overall price level did not change. The decrease in inflation in annual terms was driven mainly by a fall in annual price growth of energy, and – although to a lesser extent – of food and non-alcoholic beverages and of some other categories of goods. Taking into account the available data by Statistics Poland, it can be estimated that core inflation decreased again in June, as well. At the same time, the producer price growth is still decreasing strongly, which signals a further easing of external supply shocks. Together with the lower 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 July projection of inflation and GDP based on the NECMOD model. In line with the projection, prepared under the assumption of unchanged NBP interest rates and taking into account data available until 22 June 2023, there is a 50-percent probability that the annual price growth will be in the range of 11.1 – 12.7% in 2023 (against 10.2 – 13.5% in the March 2023 projection), 3.7 – 6.8% in 2024 (compared to 3.9 – 7.5%) and 2.1 – 5.1% in 2025 (compared to 2.0 – 5.0%). At the same time, the annual GDP growth – according to this projection – will be with a 50-percent probability in the range of -0.2 – 1.3% in 2023 (against -0.1 – 1.8% in the March 2023 projection), 1.4 – 3.3% in 2024 (compared to 1.1 – 3.1%) and 2.1 – 4.4% in 2025 (compared to 2.0 – 4.3%).

The Council assesses that the weakening of the external economic conditions, together with a decline in commodity prices, will continue to curb global inflation, which will still contribute to lower price growth in Poland. The decline in domestic inflation will be supported by a weakening of GDP growth, including consumption, amid a significant decrease in credit growth. The Council assesses that the strong monetary policy tightening undertaken by NBP is 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 remain beyond the impact of domestic monetary policy, the return of inflation to the NBP inflation target will be gradual. 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.

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, in particular to limit fluctuations of the zloty exchange rate that are inconsistent with the direction of monetary policy.

# 4. Projection of inflation and GDP

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

The July projection based on the NECMOD model covers the period from 2023 Q2 to 2025 Q4. The starting point for the projection is 2023 Q1.

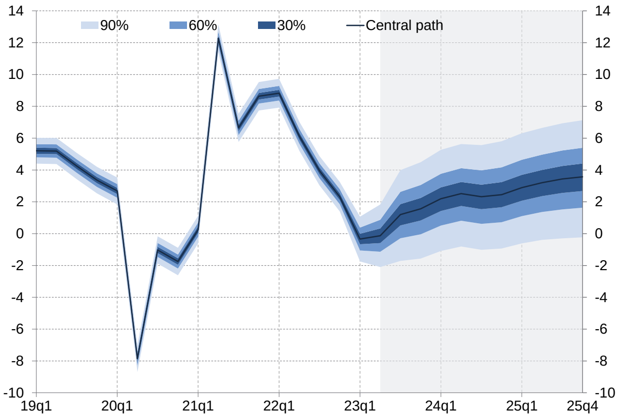
The projection was prepared under the assumption of the unchanged NBP interest rates. The cut-off date for the data used in this projection is 22 June 2023.

## 4.1 Summary

The central scenario of the projection continues to be significantly affected by the impact – spread over time – of the disruptions impacting on the global economy, largely in the form of negative supply shocks. These disruptions have been particularly amplified following the Russian military aggression against Ukraine in 2022 and were reflected in the persistence of high global prices of energy and agricultural commodities. The functioning of many economies around the world, including the Polish economy, are negatively affected by the high level of uncertainty, and also the tightening of global monetary conditions. Domestic price-setting processes also continue to be affected by the high costs of $CO_2$ emission allowances and tensions in global supply chains. These factors, combined with a large increase in labour costs, are leading to a pass-through of external price shocks in the energy and food market to other price categories, alongside a simultaneous significant increase in profitability of enterprises.

However, the impact of the above-mentioned supply shocks on inflation has recently eased, and global energy commodity prices have declined compared to the assumptions of the previous forecasting rounds. This has led to a fall in CPI inflation, which reached its highest level in February 2023. According to the current projection, in the coming years the process of disinflation will continue, amid a changing contribution of factors responsible for its intensity. In the coming quarters, the effects of the earlier falls in energy and agricultural commodity prices – spread over time – which lower domestic energy and food price inflation, will contribute the most to lowering inflation. In the years 2024-2025, consumer price inflation will fall due to the slowdown in growth of aggregate demand in the economy, which is illustrated by a negative output gap, and a fall in

**Figure 4.1** GDP (y/y, %)




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

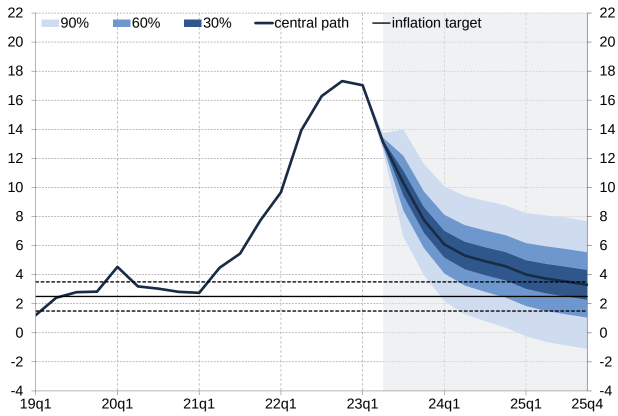
Fan charts depict the probability distribution of possible outcomes of GDP growth (Figure 4.1) and inflation rate (Figure 4.2). The part of the chart in the grey background illustrates forecast uncertainty of these variables over the projection horizon. It was assumed that the probability distribution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

growth of payroll costs, which is related to this. As a result, in the longer projection horizon the fall in core inflation will make a larger contribution in lowering CPI inflation.

Under the assumption of unchanged NBP interest rates (including the reference rate at 6.75%), CPI inflation will only 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 period of inflation running at the highest level for many years increases its persistence by boosting short-term inflation expectations translating into greater acceptance of price rises in many sectors of the economy. Although over the projection horizon a decline in growth in unit labour costs is expected, in the years 2024-2025 it will still run at an elevated level. Despite increasing signs of a deterioration of the domestic economic conditions, the situation in the labour market remains favourable, which indicates that in the nearest quarters the pass-through of the slowdown in economic activity to the unemployment rate will be moderate. At the same time, the scale of the fall in wage growth is limited by the high increases in the level of the minimum wage in 2023 and 2024.

Following a strong rebound in economic activity, GDP growth in 2023 will decline significantly. The domestic economic conditions continue to be affected by strong supply shocks reflected in a high level of prices of many commodities, goods and services. The marked slowdown in GDP growth in the major advanced economies and the materialising consequences of the earlier NBP interest rate hikes are also having an unfavourable impact on economic activity. In the years 2024-2025, an acceleration of GDP growth is expected, although against the long-term average for the Polish economy it will remain low. The realisation of this scenario is suggested by the limited scale of the recovery abroad, the decline in the absorption of EU funds in 2024 with the transition to the new financial framework and the adopted assumption of unchanged NBP interest rates. On the other

**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.

hand, the negative impact of high prices on the situation of households, vulnerable entities and enterprises is mitigated by the fiscal policy measures. Additional fiscal instruments, including raising the level of child benefit (the "Family 500 plus" allowance) from PLN 500 to PLN 800 at the beginning of 2024, the introduction of a permanent 14th pension payment and support by the state for the first-time purchase of an apartment, i.e. the "Safe Credit 2%" programme, will have a positive impact on economic growth in the years 2024-2025.

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. The future monetary policy of the major central banks is also a significant source of risk for the economic conditions abroad. The balance of uncertainty factors indicates a close to symmetric distribution of risks for CPI inflation and a slight downward asymmetry of risks for GDP growth over the projection horizon (Figure 4.1, Figure 4.2).

## 4.2 External environment

### Economic growth

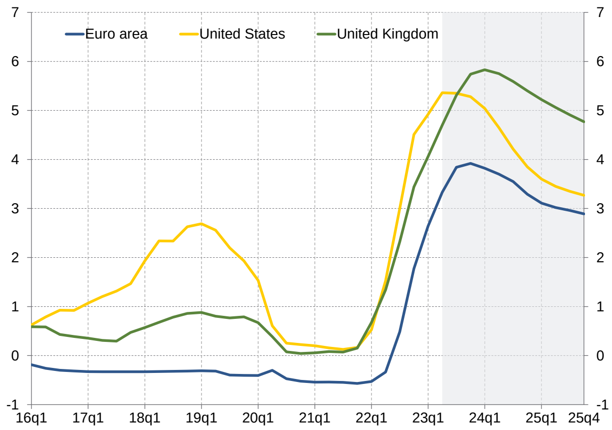
GDP growth in the countries which are Poland's main trading partners remains low. The economy of the euro area was in a technical recession following a fall in GDP in two consecutive quarters (i.e. in 2022 Q4 and 2023 Q1), while the growth rate in the United States is still running below the long-term average (see Chapter 1.1 *Economic activity abroad*). Economic activity in the main developed economies remains under the negative influence of the earlier strong rise in the prices of many commodities, monetary policy tightening, and heightened uncertainty. The effects of the above-mentioned factors will also impact on the economic conditions in the environment of the Polish economy in the coming quarters of 2023, although in a slightly smaller scale than expected in the previous forecasting round (Table 4.1). The normalization of the situation in the energy and

**Table 4.1** GDP abroad – July projection versus March projection

| | 2023 | 2024 | 2025 |
|---|---|---|---|
| **GDP in Euro Area (y/y, %)** | | | |
| **July 2023** | 0.7 | 1.5 | 1.5 |
| **March 2023** | 0.7 | 1.5 | 1.6 |
| **GDP in Germany (y/y, %)** | | | |
| **July 2023** | -0.1 | 1.4 | 1.5 |
| **March 2023** | 0.2 | 1.6 | 1.6 |
| **GDP in United States (y/y, %)** | | | |
| **July 2023** | 1.4 | 0.8 | 1.9 |
| **March 2023** | 1.3 | 1.6 | 1.9 |
| **GDP in United Kingdom (y/y, %)** | | | |
| **July 2023** | 0.4 | 0.9 | 1.2 |
| **March 2023** | -0.2 | 1.0 | 1.4 |

Source: NBP calculations.

**Figure 4.3** Interest rates abroad (%)




Source: Bloomberg data, NBP calculations.

agricultural commodities markets is proceeding faster than expected, and is accompanied by an improvement in business and consumer sentiment.

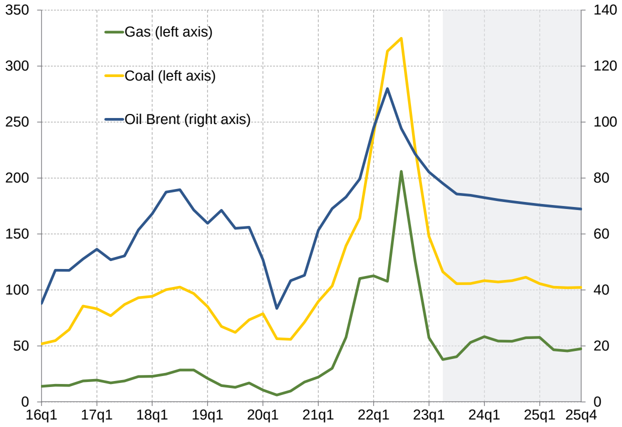
In the subsequent years of the projection horizon, the GDP growth rate in the economic environment of Poland will increase, and will be supported by the fading – spread over time – of the effects of the earlier supply shocks and the accompanying expected easing of monetary policy in the main developed economies (Figure 4.3). In the euro area, growth will additionally be supported by the measures taken under the NextGenerationEU recovery programme.

**Inflation and commodity markets**

Despite a fall in recent months, the global prices of many commodities still significantly exceed the level from before the outbreak of the pandemic (see Chapter 1.3 *Global commodity markets*). The sanctions imposed on Russia, Russia's retaliatory actions against the West, and in the case of oil, also the policies of OPEC aimed at reducing its supply, are still having an impact on the supply of commodities. On the other hand, demand for commodities is limited by the weak economic conditions in the global economy and – in the case of natural gas and hard coal – by the higher than average temperatures in recent months.

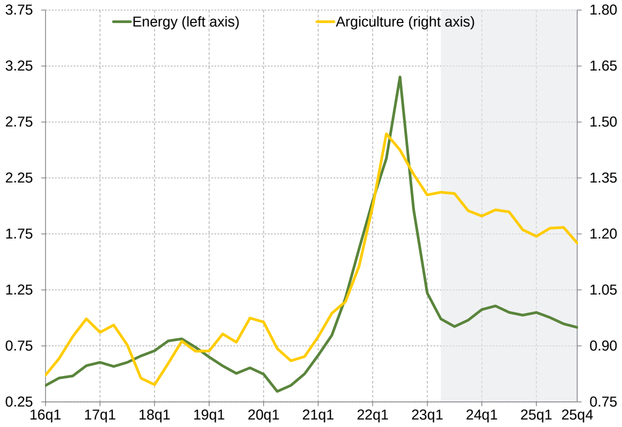
Futures quotes suggest that global prices of energy commodities will run at a relatively stable level in the coming years, below the expectations of the previous projection (Figure 4.4, Figure 4.5). The global economic recovery, resulting in higher demand for oil, will be accompanied by an increase in production of this commodity in non-OPEC countries, including the United States. In the case of natural gas, the impact of the improving economic conditions on price of this commodity in the European market will to a large extent be limited by measures aimed at reducing its consumption whilst at the same time increasing the

**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.

possibility to import natural gas from other sources than Russia.

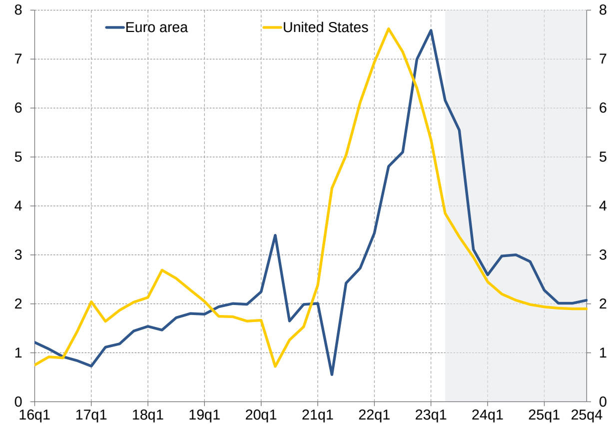
The fall in prices of energy commodities in the recent period contributed to a reduction in cost pressure in the agricultural commodities market, among others, through their impact on lowering the prices of artificial fertilizers. Moreover, the extension of the agreement enabling the export of wheat and rapeseed from Ukraine via the Black sea is contributing to lowering the prices of these commodities (see Chapter 1.3 *Global commodity markets*). Futures quotes indicate a continuation of the gradual decline in the global prices of agricultural products over the projection horizon, following the further easing of the scale of disruptions resulting from the Russian aggression (Figure 4.5).

Global price growth is declining, supported by a fall in energy and food price inflation (see Chapter 1.2 *Inflation developments abroad*). Over the projection horizon, the further fading of the impact of supply factors currently boosting price growth and lower economic activity will contribute to a continuation of the disinflation process in the global economy. However, due to the second-round effects of earlier rises in production costs, alongside continued high nominal wages growth and the price-setting power of enterprises, the decline in inflation in the major developed economies will proceed gradually (Figure 4.6).

**Uncertainty**

Europe and the whole world continue to see heightened geopolitical risks related to the Russian military aggression against Ukraine and tensions in certain other regions of the world. The further course of the aggression, as well as the future political decisions regarding retaliatory actions will affect the global economy as well as the prices and supply of energy and agricultural commodities in global markets. This is accompanied by uncertainty regarding the assessment of the impact of the significant monetary policy tightening by the major

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




Source: Bloomberg, Eurostat data, NBP calculations.

central banks on the global economy. The above risks are more extensively discussed in Chapter 4.5 *Forecast uncertainty sources*.

## 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, the government is undertaking shielding measures to protect households and firms from the impact of rising commodity prices. These measures have a significant impact on the projected paths of CPI inflation and GDP.

The key government measures shaping the path of energy prices this year are the withdrawal of most indirect tax rate cuts along with the simultaneous statutory regulation of tariffs of selected energy carriers, combined with compensation payments to their providers and distributors.

These regulations include the introduction of a cap on electricity prices for households, public utility units and micro, small and medium-sized firms. In accordance with the current legislation, this solution is to remain in force until the end of 2023 and will be partly financed by electricity producers and trading companies. Since January 2023 gas prices for households and vulnerable entities have also been frozen at the level of 2022 prices. Retailers will receive compensation partly financed by gas extraction companies. A statutory cap has also been introduced on the increase in tariffs for heating and hot water for households and public utility units which will be in place until the end of 2023. In October 2022, regulations were also adopted which allow households to purchase coal from local governments at preferential prices, with the financial support provided to coal importers. According to NBP estimates based, among others, on government documents and forecasts, the total value of compensation payments resulting from the regulation of tariffs on gas, coal, heating and

**Table 4.2** Fiscal costs of the government shielding measures taken in response to disruptions in the global energy carrier markets caused by Russian aggression on Ukraine (impact on the general government balance, in % of GDP)

| | 2023 |
|---|---|
| Tax cuts within the Anti-inflation Shield | 0.3 |
| Compensation payments to natural gas distributors/heating providers/electricity providers for tariff freezes for households and certain public entities, compensation payments to coal distributors due to preferential prices for households | 1.7 |
| Subsidies to energy intensive industry to compensate for electricity and gas prices | 0.1 |
| Energy cost allowances targeted at vulnerable households, heating cost allowances targeted at households (coal, wood, heating oil, pellet, electricity), VAT refunds for certain households related to purchase of natural gas for heating | 0.1 |
| Support to the agricultural sector (including subsidies to fertilisers prices for farmers, support for wheat and corn producers) | 0.2 |
| Mechanism capping profits of certain electricity producers and companies extracting natural gas | -0.9 |
| **Total fiscal costs** | **1.5** |

Source: NBP calculations based on the government estimates.

electricity will amount to 1.7% of GDP this year, while a large part of this sum – 0.9% of GDP – will be financed by electricity producers and extractors of natural gas (Table 4.2).

The projection assumes that in the years 2024-2025 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 completely phased out due to the fall in its prices.

The government will also support energy-intensive enterprises by partially financing their electricity and gas bills. In 2023, the cost of this support for the general government sector will run at the level of 0.1% of GDP (Table 4.2).

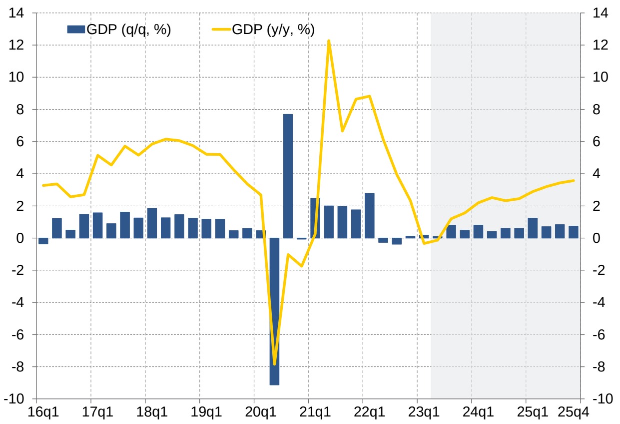
Under the Anti-Inflation Shield, the government extended for 2023 the period of zero VAT rate on staple food products together with the fuels sales exemption from retail sales tax, and lowered VAT rates on selected agricultural products. The cost of this tax cut for the general government sector will amount to 0.3% of GDP (Table 4.2).

The projection also takes into account the impact of the increase in social transfers due to the indexation of the attendance allowance in 2023 and in subsequent years, and the indexation of the "Family 500 plus" allowance to PLN 800 per child from 2024, as well as the introduction of a permanent 14th pension payment and a new allowance supporting disabled people. Housing demand, meanwhile, will be supported by the launch of the government's mortgage subsidy program, "Safe Credit 2%" starting this July.

**Economic activity**

According to the Statistics Poland preliminary estimate, economic growth once again decreased in year-on-year terms in 2023 Q1, reaching a level just below zero. Current monthly data indicate that in 2023 Q2 GDP growth remained close to zero, with a smaller negative contribution of inventory changes to growth, but a decline in consumption

**Figure 4.7** Economic growth



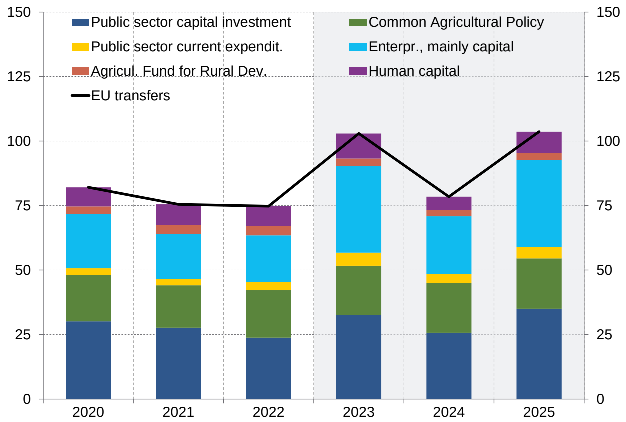

Source: Statistics Poland (GUS) data, NBP calculations.

and investment growth (Figure 4.7, Figure 4.9). Domestic economy continues to be affected by strong negative shocks, including a commodity shock amplified by the consequences of Russia's aggression against Ukraine. Economic activity in Poland is also adversely affected by the marked slowdown abroad, as well as the materialisation of the effects of the implemented NBP interest rate hikes. At the same time, the scale of the decline in domestic economic conditions is mitigated by a range of protective measures for households and entities vulnerable to increases in the prices of energy carriers (see also section *Legislative changes affecting the projected paths of GDP and CPI inflation*).

As the negative supply shocks gradually fade away and activity abroad recovers, economic growth will begin to accelerate significantly from the second half of 2023. The scale of the recovery in 2024 will be constrained by the expected substantial temporary decline in the inflow of EU funds after spending of funds under the 2014-2020 EU framework has ended (Figure 4.8). The assumption made in the projection that NBP interest rates will remain unchanged (with the reference rate at 6.75%) over the whole of the projection horizon will also be a factor curbing the projected acceleration of GDP growth.

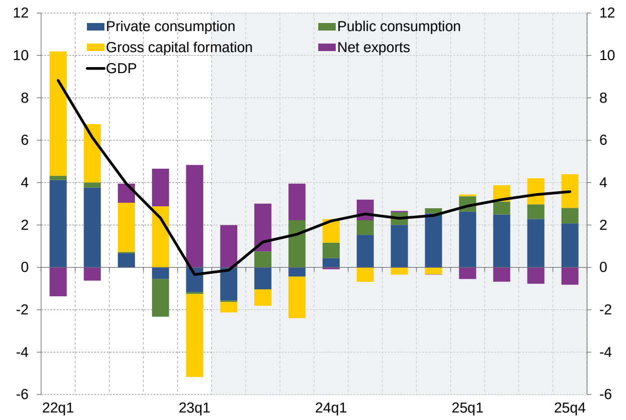
In 2023, household consumption is expected to decline in year-on-year terms (Figure 4.10). In the coming quarters, consumer expenditure will continue to be constrained by high CPI inflation, which will reduce the purchasing power of the population, weak consumer sentiment, and by the effects of the NBP interest rate hikes implemented so far. On the other hand, the fiscal policy measures will have a favourable impact on consumer expenditure. In particular, the PIT (personal income tax) refunds for 2022, which result from the shape and mode of implementation of the Polish Deal programme, and the support for people repaying mortgages in Polish zloty, which includes the suspension of some instalments, will improve the financial situation of households in

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



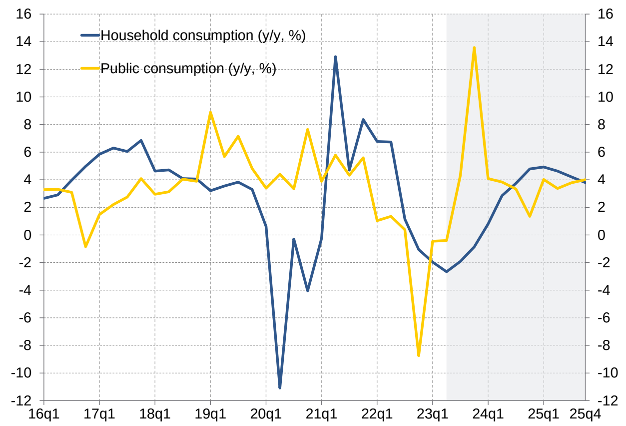

Source: NBP calculations.

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




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

**Figure 4.10** Household and public consumption



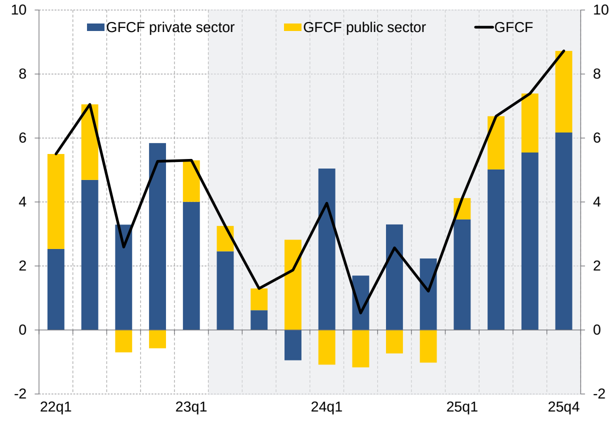

Source: Statistics Poland (GUS) data, NBP calculations.

2023. In 2024, growth in household consumption will accelerate due to the more favourable development of real household disposable income. This will be the result of the relatively high nominal wages growth amid falling inflation, as well as the increase in the value of child benefit from PLN 500 to PLN 800 and the introduction of a 14th pension as a permanent benefit starting from next year. The markedly positive growth rate of consumption will continue until the end of the projection horizon.

In the coming quarters, private investment will continue to be affected by the negative repercussions of Russia's aggression against Ukraine. However, this impact will gradually fade, which is reflected in the reduction of uncertainty assessments formulated by enterprises.[38] The high global commodity prices, which increase the costs of enterprises, continue to adversely affect investment demand, but the negative impact of this factor is declining. According to NBP surveys, the level of investment optimism of enterprises improved in 2023 Q1 on the back of an increase, although from a very low level, in the quarterly assessment of the demand outlook.[39] On the basis of the above-mentioned indications, it is expected that corporate investment growth will decelerate over the whole of 2023, albeit only to a limited extent (Figure 4.11). The effects of the NBP interest rate hikes implemented so far, limiting the availability of credit and increasing its cost, have a stronger impact on housing demand, which is deteriorating more significantly, than on corporate demand. However, the impact of this factor will be mitigated by the introduction of the "Safe Credit 2%" programme by the government starting in July 2023.

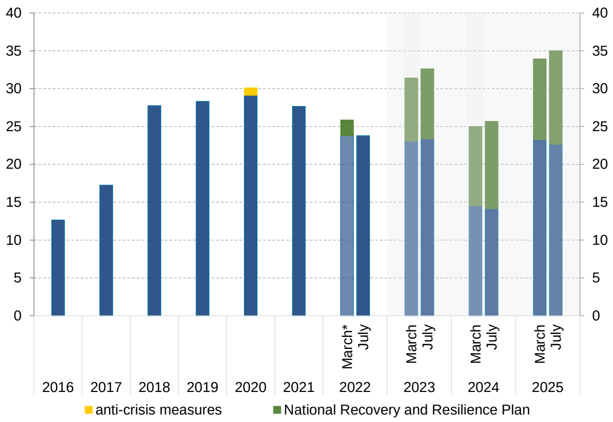
A more marked acceleration of corporate investment demand is expected in 2025, driven by the need to increase the stock of corporate productive capital after the reduced investment

**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.

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




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

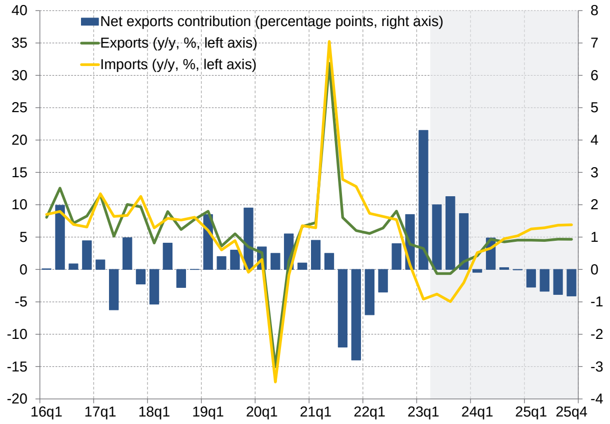
[38] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, April 2023.
[39] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, April 2023.

rate during the pandemic, and given the low degree of automation and robotisation of Polish industry as well as rising labour costs. At the same time, the housing sector will see a slight recovery in demand – compared to its sharp fall in 2023 – due to the increased demand generated by the "Safe Credit 2%" programme and an improvement in the financial situation of households.

The projected path of public investment is largely determined by the level of absorption of EU funds (Figure 4.12). With regard to the funds for Poland under the Recovery and Resilience Facility (RRF), it was assumed that in 2023-2025 the amounts drawn will increase, in line with the government's assumptions of the Convergence Programme of April 2023. At the same time, due to the application process for EU funds allocated for expenditure under the RRF being suspended, the implementation of projects that have already started under this programme is temporarily financed by domestic funds. In 2024, on the back of falling EU capital transfers as expenditure under the 2014-2020 EU framework comes to an end, public investment will decline significantly (Figure 4.11). As a result of the increasing absorption of EU funds under the 2021-2027 framework, public investment growth will pick up again in 2025. At the same time, capital expenditure of the public sector in 2023-2025 will be boosted by the planned increase in defence spending. An additional factor supporting investment growth in the local government subsector in 2023 will be the use of funds from the Government Polish Deal Fund: The Strategic Investment Programme and the upcoming local government elections.

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 lower growth rates of exports and imports (Figure 4.13). At the same time, on account of the significant slowdown in domestic demand growth and the stronger cyclical response

**Figure 4.13** Foreign trade




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

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 the domestic economic conditions, the contribution of net exports to GDP growth will decline, reaching negative values in 2025.

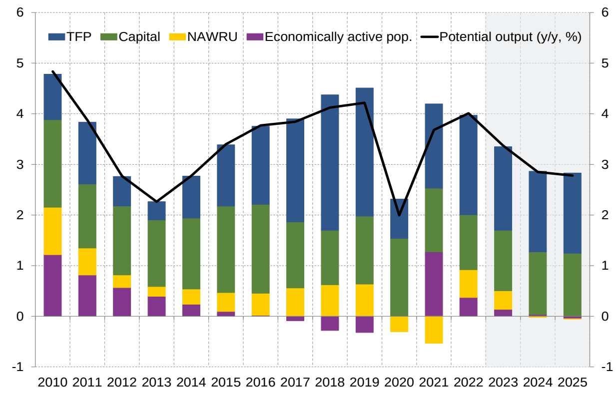
### Potential output and the output gap

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 – both capital and labour – in the coming years its growth will slow down (Figure 4.14). The deteriorating demographic situation, reflected in a decline in the number of the working age population, reducing the number of economically active population, will also have an unfavourable impact on potential output growth.

On the other hand, the productive capacity of the Polish economy in the projection horizon is boosted by the increase in the labour supply following the activation of refugees from Ukraine and the inflow of migrants from other countries.[40] The scale of the fall in potential output growth will also be limited by the rising corporate investment rate, which increases the growth rate of productive capital.

As a result of the fall in the GDP growth rate in recent quarters, the positive output gap, which is a synthetic measure of demand pressure in the economy, has narrowed significantly and was already negative in 2023 Q2 (Figure 4.16). The relatively low economic activity growth in the years 2023-2024 means that the output gap will remain negative until the end of the projection horizon. This implies that demand pressure will be

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



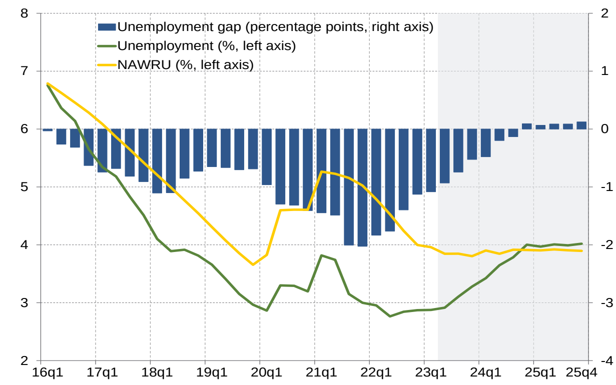

Source: NBP calculations.

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.

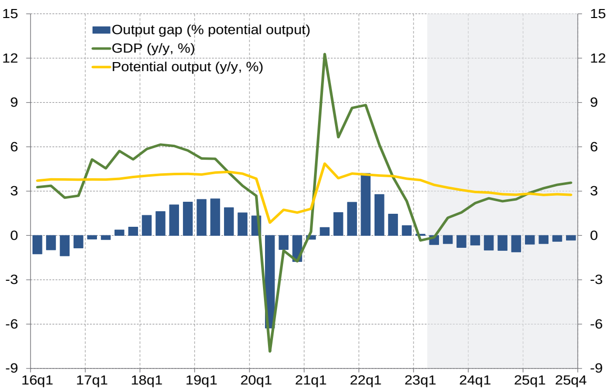
**Figure 4.15** Unemployment




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

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

**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.

[40] 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).

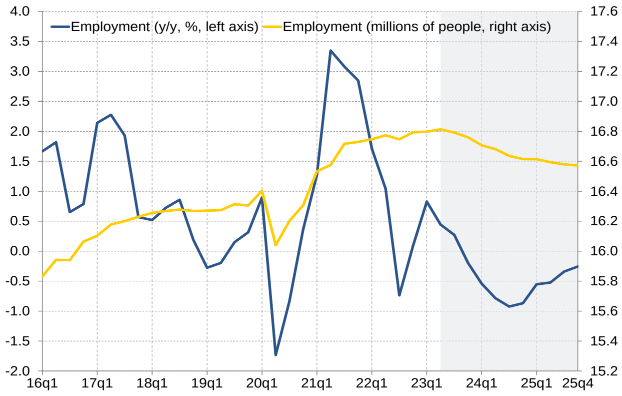
at a reduced level, contributing to a decline in CPI inflation.

## Labour market

Over the projection horizon, the unemployment rate will rise (although on a relatively moderate scale) on the back of the slowdown in economic activity, which will be spread out over time (Figure 4.15).[41] This scenario is confirmed by NBP surveys, which indicate that the planned employment level in enterprises, although still relatively high, has declined in recent quarters (Figure 4.17).[42] The scale of the increase in the unemployment rate will be limited by so-called labour hoarding by enterprises in view of the difficulty in finding new employees and the potential costs related to onboarding new employees. In the years 2024-2025, the slowly decreasing labour force participation, which results from the negative impact of demographic trends, will also act in the same direction (Figure 4.18).

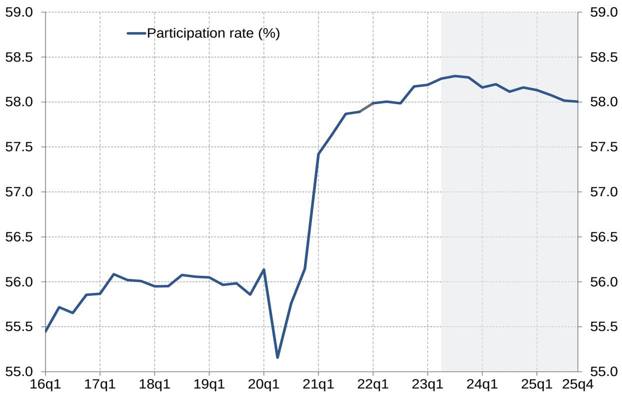
Amid faster price growth and noticeable staff shortages in many sectors, nominal wages in the national economy will continue to see double-digit growth in 2023 (Figure 4.19). However, it is expected that from 2023 Q2 onwards it will begin to decline due to the slowdown in economic growth, increase in unemployment rate, and the fall in the inflation rate. This assessment is confirmed by NBP surveys, according to which the percentage of enterprises planning to raise wages decreased slightly in 2023 Q1, as did the planned average level of wage rises.[43] The scale of the fall in wage growth is limited by the double increases in the level of the minimum wage, in 2023 and in 2024, amounting to an annual average of 17.8% y/y and 20.5% y/y respectively (according to the announcements of government representatives). However, after taking inflation into account, the

**Figure 4.17** Employment



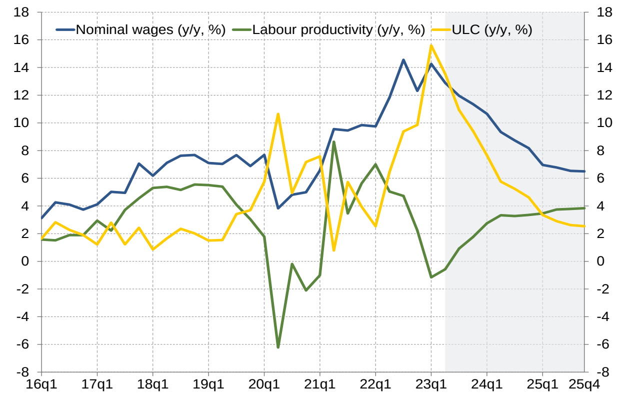

Source: Statistics Poland (GUS) data, NBP calculations.

**Figure 4.18** Labour force participation




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

**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.

[41] The projection uses historical LFS series recalculated by Statistics Poland (GUS) in accordance with the new methodology in force since the beginning of 2021. Despite the adjustment, the series of employment, labour force participation and unemployment show discontinuity in 2021 Q1 as recalculation does not take into account the impact of changes in the survey itself, nor the changes in the method of interviewing and recruiting respondents.
[42] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, April 2023.
[43] *NBP Quick Monitoring Survey. Economic climate in the enterprise sector*, NBP, April 2023.

purchasing power of wages throughout 2023 will rise only slightly. The years 2024-2025 will see stronger growth in real wages, although on average they will grow in this period somewhat below the rate of labour productivity growth. Over the projection horizon wage pressure will be mitigated by the presence of immigrants from Ukraine and other countries.

## CPI inflation

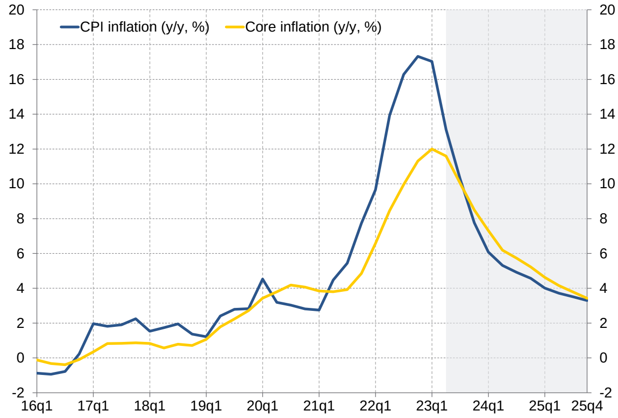
The fading of the effects of the strong negative supply shock amplified by the effects of Russia's military aggression against Ukraine leads to the decline in CPI inflation, which reached its highest level in February 2023. Disinflation will continue over the projection horizon with a changing contribution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

In the coming quarters, the effects – spread over time – of the declines in global energy commodity prices, and to a lesser extent, global agricultural commodity prices, will contribute the most to lowering inflation. The process of easing the global supply chain tensions will also be continued. The marked decline of inflation in the external environment of the Polish economy and of growth in import prices over 2023 is a reflection of these processes (Figure 4.22). This translates in particular into a fall in the growth rate of domestic energy and – and to a lesser extent – food prices over 2023 (Figure 4.21, Figure 4.23).

In the years 2024-2025, consumer price inflation to larger extent will decline due to the slowdown in growth of aggregate demand in the economy, reflected in a negative output gap, and related fall in growth rate of labour costs. As a result, in this period the fall in core inflation will play a greater role in lowering CPI inflation (Figure 4.20).

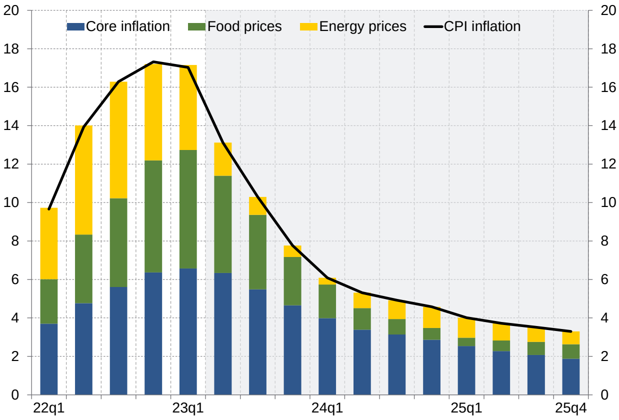
Under the assumption of unchanged NBP interest rates (including the reference rate at 6.75%), CPI inflation will only return to the band of deviations from the NBP inflation target defined as 2.5% +/-1 p.p. at the end of the projection horizon (Figure

**Figure 4.20** CPI and core inflation



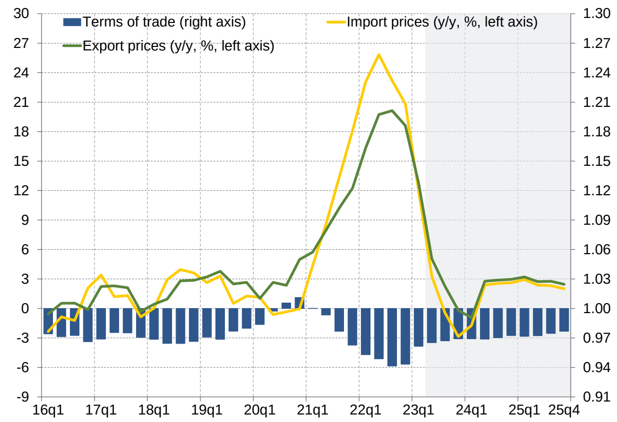

Source: Statistics Poland (GUS) data, NBP calculations.

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




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

**Figure 4.22** Export and import prices




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

4.20, Figure 4.21). The highest inflation in many years increased its persistence by raising short-term inflation expectations, translating into elevated wage pressure and increased tolerance of price growth. Additionally, due to the tariffication process and delayed adjustment to the earlier increases in prices of commodities, with $CO_2$ emission allowances several times higher than before the pandemic, the decline in energy price growth for households, electricity and heating in particular, will be spread over time.

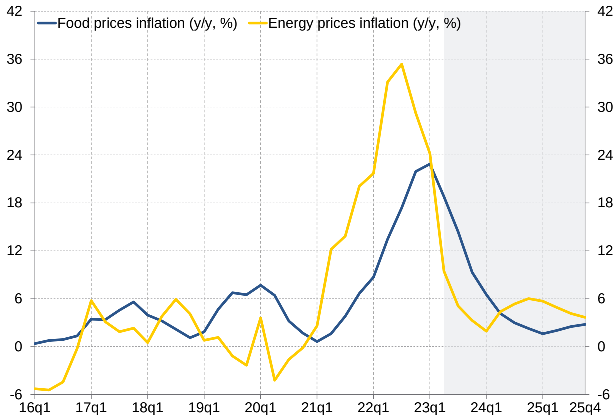
The path of consumer prices will be affected by the government's shielding policies (see also section *Legislative changes affecting the projected paths of GDP and CPI inflation*). In 2023, these include, in particular, the freezing of gas prices and partial freezing of electricity prices, while simultaneously withdrawing from most of the cuts in indirect tax rates. Due to the recent decline in energy commodity prices, it is assumed that the scale of the government's shielding measures will be reduced in the years 2024-2025, which will also curb the speed of the decline in the inflation rate.

## 4.4 Current versus previous projection

Data and information released after the cut-off date of the March projection have contributed to a slight downward revision of the economic growth forecast in 2023 and its upward revision in the years 2024-2025. On the other hand, in 2023 CPI inflation will run at the same annual average level as during the previous forecasting round, in 2024 it has been revised downwards, and in 2025 slightly upwards (Table 4.3, Figure 4.24**,** Figure 4.25, Figure 4.26, Figure 4.27).

The slight downward revision of the forecast for domestic economic growth in 2023 is the result of the interaction of several multidirectional factors. On the one hand, the lower than expected household consumption in 2023 Q1 and unfavourable retail sales data for April and May 2023 caused a marked downward revision of the forecast of consumption for the whole of 2023. This

**Figure 4.23** Food and energy price inflation



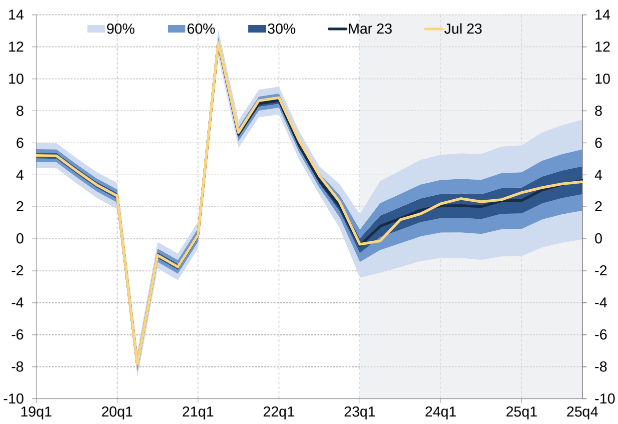

Source: Statistics Poland (GUS) data, NBP calculations.

**Table 4.3** July projection versus March projection

| | 2023 | 2024 | 2025 |
|---|---|---|---|
| **GDP (y/y, %)** | | | |
| **July 2023** | 0.6 | 2.4 | 3.3 |
| **March 2023** | 0.9 | 2.1 | 3.1 |
| **CPI inflation (y/y, %)** | | | |
| **July 2023** | 11.9 | 5.2 | 3.6 |
| **March 2023** | 11.9 | 5.7 | 3.5 |

Source: NBP calculations.

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




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

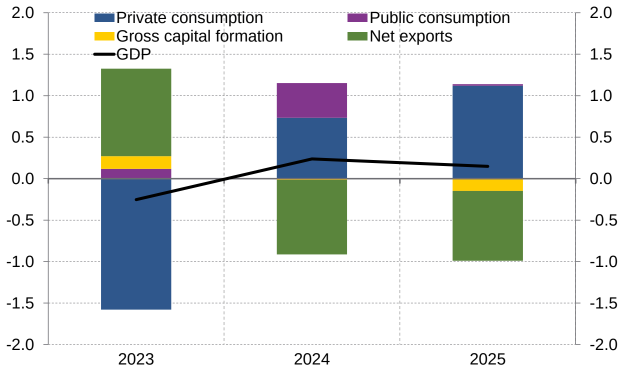
impact is partially offset by the contribution of net exports which is higher than in the March projection, in accordance with its countercyclical nature. The scale of the downward revision of domestic economic growth in 2023 is also mitigated by the higher gross fixed capital formation. Data for this category for 2023 Q1 and Q2 indicate a higher resilience of investment outlays to monetary tightening and the need to increase the stock of productive capital of enterprises, largely due to the lower investment rate during the pandemic and surging labour costs. The forecast of gross fixed capital formation this year is also favourably influenced by higher expected public investment, related to the greater than previously assumed local government absorption of funds under the Government Fund "Polish Deal": Strategic Investment Programme.

The upward revision of economic growth in the years 2024-2025 stems mainly from including the planned increase in fiscal expenditure from 2024 in the July projection (see *Legislative changes affecting the projected paths of GDP and CPI inflation*). New government measures, combined with a more favourable labour market situation than expected in the March projection, lead to faster growth in household disposable income and, consequently, to a higher consumption path. The increase in imports caused by higher domestic demand partially neutralises the impact on GDP growth of the above-mentioned revision of consumption.

The CPI inflation path is shaped by the downward revision of energy prices over the whole of the projection horizon, with a faster increase in food prices this year and a slight upward revision of core inflation in 2023-2025.

Energy price inflation decreased compared to the March projection under the influence of markedly lower global energy commodity prices and an appreciation of the zloty. The impact of these factors on the expected level of individual components of energy prices is spread out over

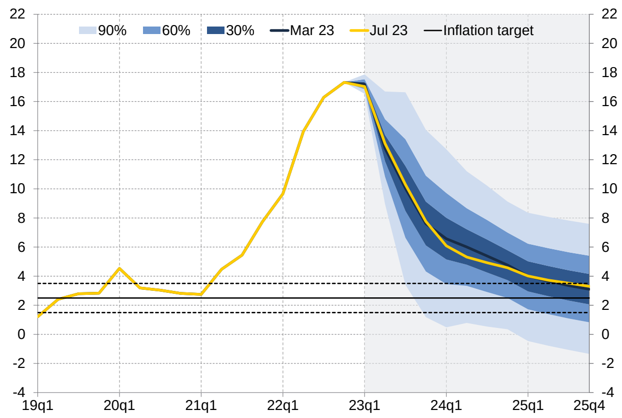
**Figure 4.25** Decomposition of deviations between July and March projection: GDP growth (percentage points)




Source: NBP calculations.

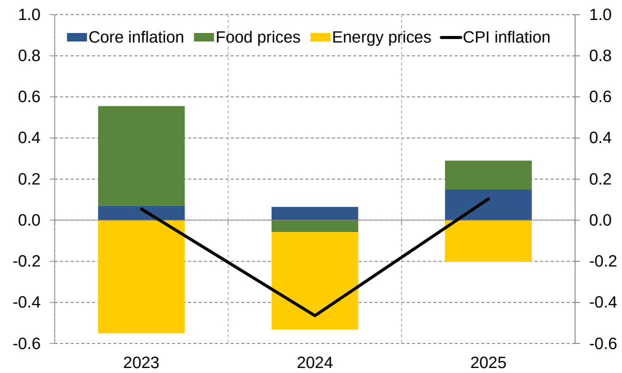
The data presented in the chart may vary slightly from those in Table 4.3, due to rounding of numbers to one decimal place.

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




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

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




Source: NBP calculations.

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

time and dependent on the way of their tariffication for households.

In 2023, the impact on CPI inflation of the adjustment of energy prices is balanced by the upward revision of food prices and core inflation. A significant factor boosting the path of food prices in 2023 is higher meat prices, in particular, of pork due to the fall in its production in Europe as a result of its low profitability amid high prices of feed and energy as well as the persistence of the risk of the spread of African Swine Flu (ASF). The increase in vegetable prices as a result of low supply in Europe due to the wave of frosts in the Mediterranean basin at the beginning of 2023 also acts in the same direction. The revision of core inflation in 2023 is largely related to the marked increase in the prices of alcoholic products due to the sharp increase in their production costs. It is also a consequence of an annual update of the measures used to calculate the CPI index by Statistics Poland (GUS), which increased the weight of prices of services, that are growing visibly faster than the remaining components of core inflation in 2023.

Due to the persistence of price developments, the higher than expected forecast of core inflation in 2023 translates into a higher forecast level in the subsequent years. In addition, core inflation and, to a lesser extent, the remaining components of CPI inflation, are influenced throughout the July projection horizon by a more favourable labour market situation than expected in the March projection, which through higher wage growth, causes faster growth in unit labour costs. The planned increase in fiscal spending from 2024, which is included in the current projection, acts in the same direction (see *Legislative changes affecting the projected paths of GDP and CPI inflation*).

## 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

**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%) |
|---|---|---|---|---|---|
| **23q2** | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 |
| **23q3** | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 |
| **23q4** | 0.00 | 0.01 | 0.03 | 0.50 | 0.03 |
| **24q1** | 0.03 | 0.07 | 0.14 | 0.50 | 0.11 |
| **24q2** | 0.06 | 0.12 | 0.23 | 0.50 | 0.17 |
| **24q3** | 0.09 | 0.17 | 0.28 | 0.50 | 0.20 |
| **24q4** | 0.12 | 0.21 | 0.34 | 0.50 | 0.22 |
| **25q1** | 0.17 | 0.28 | 0.42 | 0.50 | 0.26 |
| **25q2** | 0.20 | 0.32 | 0.47 | 0.50 | 0.27 |
| **25q3** | 0.23 | 0.35 | 0.50 | 0.50 | 0.27 |
| **25q4** | 0.25 | 0.38 | 0.53 | 0.50 | 0.28 |

Source: NBP calculations.

outlook and CPI inflation path in Poland still depend to the greatest extent on the macroeconomic effects of Russia's military aggression against Ukraine. Significant risk factors in the external environment of the Polish economy also include the impact on economic activity in the euro area and the United States of monetary policy tightening by the ECB and the Fed as well as the disruptions in the financial system in these economies. Apart from external conditions, an important source of risk for the projection is the scale and scope of the government's future shielding measures. The balance of uncertainty factors indicates an approximately symmetric distribution of risks for CPI inflation and a slightly higher probability of GDP growth running below the central path over the projection horizon (Table 4.4).

**Further course of Russia's military aggression against Ukraine**

The most important risk factor for the future path of economic activity and inflation processes in Poland continues to be the Russian aggression against Ukraine. Uncertainty is related to the further course of the aggression and the effects of the economic sanctions against Russia that have already been imposed and the scope of any possible new sanctions as well as Russian retaliatory actions against the West. These factors have a significant impact on the conditions of international trade over the projection horizon, although currently it is judged that the scale of the negative impact of the global supply chain disruptions and the level of global energy commodity prices has decreased. However, high uncertainty remains about the possibility of further exports of cereals and oilseeds from the territory of Ukraine via the Black Sea.

The prolongation of the war may cause an increase in uncertainty in the global economy, which would lead to a significant increase in the scale of geopolitical tensions and a fragmentation of international trade. 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 military aggression materialise, the negative effects of the supply shock currently affecting the European economy would be less severe, which could support the acceleration of the 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 future 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 prices 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.

In turn, cuts in oil production by the major oil producers, combined with worse meteorological conditions in the future heating season, would result in higher global prices 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 and disruptions in the financial system**

The next significant risk factors in the environment of the Polish economy are related to the effects of monetary policy tightening around the world and the scale of the disruptions in the international financial system. 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 amid high private and public sector debt. 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. An intensification of the problems of the banks and other financial institutions, leading to a deterioration of financing conditions and consumer and producer sentiment, could also result in slower economic growth abroad. 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 impact 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 due to the maintenance of high interest rates by the ECB and the Fed would add to inflationary inertia in the Polish economy through higher import price growth. On the other hand, an economic downturn abroad and lower demand pressure in Poland than assumed in the central projection scenario would support a faster pace of disinflation in the domestic economy.

**Government shielding measures**

The scale and scope of the fiscal shielding measures taken by the government to mitigate the negative effects of high commodity prices and inflation on households (see section *Legislative changes affecting the projected paths of GDP and CPI inflation*) continue to be among the most important domestic risk factors in the projection. The materialisation of this risk largely depends on the future path of global prices of energy commodities and the length of time that the legislative solutions regarding shielding measures will remain in force. A further fall in the prices of these commodities could prompt the government to reduce the scale and scope of expenditure on support for consumers and other vulnerable entities. The complete withdrawal of government support in 2024-2025 is also possible. However, should commodity prices run at a higher level than assumed in the central scenario, this could result in a temporary increase in the scale of subsidies to electricity and gas prices as well as other forms of support, which would mitigate the negative impact of external supply disruptions on the domestic path of CPI inflation and economic activity.

**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 | 10.3 | 7.8 | 6.1 | 5.3 | 4.9 | 4.6 | 4.0 | 3.7 | 3.5 | 3.3 | 14.4 | 11.9 | 5.2 | 3.6 |
| **Core inflation (CPI net of food and energy prices, %, y/y)** | 6.6 | 8.5 | 10.0 | 11.3 | 12.0 | 11.6 | 10.0 | 8.5 | 7.3 | 6.2 | 5.7 | 5.2 | 4.6 | 4.2 | 3.8 | 3.4 | 9.1 | 10.5 | 6.1 | 4.0 |
| **Food prices (%, y/y)** | 8.7 | 13.4 | 17.4 | 21.9 | 22.9 | 18.8 | 14.4 | 9.3 | 6.5 | 4.2 | 3.0 | 2.3 | 1.6 | 2.0 | 2.5 | 2.8 | 15.4 | 16.0 | 4.0 | 2.2 |
| **Energy prices (%, y/y)** | 21.7 | 33.1 | 35.4 | 29.2 | 24.2 | 9.5 | 5.1 | 3.3 | 1.9 | 4.4 | 5.3 | 6.0 | 5.7 | 4.9 | 4.2 | 3.7 | 29.9 | 9.9 | 4.4 | 4.6 |
| **GDP (%, y/y)** | 8.8 | 6.1 | 3.9 | 2.3 | -0.3 | -0.1 | 1.2 | 1.6 | 2.2 | 2.5 | 2.3 | 2.5 | 2.9 | 3.2 | 3.4 | 3.6 | 5.1 | 0.6 | 2.4 | 3.3 |
| **Domestic demand (%, y/y)** | 10.8 | 7.2 | 3.1 | 0.6 | -5.2 | -2.2 | -1.1 | -0.2 | 2.5 | 1.6 | 2.4 | 2.7 | 3.7 | 4.2 | 4.5 | 4.7 | 5.1 | -1.9 | 2.3 | 4.3 |
| **Household consumption (%, y/y)** | 6.8 | 6.7 | 1.1 | -1.1 | -2.0 | -2.7 | -1.9 | -0.9 | 0.8 | 2.8 | 3.7 | 4.8 | 4.9 | 4.6 | 4.2 | 3.8 | 3.3 | -1.8 | 3.0 | 4.4 |
| **Public consumption (%, y/y)** | 1.0 | 1.3 | 0.4 | -8.7 | -0.5 | -0.4 | 4.3 | 13.6 | 4.1 | 3.8 | 3.3 | 1.3 | 4.0 | 3.4 | 3.8 | 4.0 | -2.0 | 3.9 | 3.1 | 3.8 |
| **Gross fixed capital formation (%, y/y)** | 5.4 | 7.1 | 2.5 | 5.4 | 5.5 | 3.2 | 1.3 | 1.9 | 4.0 | 0.5 | 2.6 | 1.2 | 4.1 | 6.7 | 7.4 | 8.7 | 5.0 | 2.8 | 2.1 | 6.7 |
| **Contribution of net exports (percentage points, y/y)** | -1.4 | -0.7 | 0.8 | 1.7 | 4.3 | 2.0 | 2.3 | 1.7 | -0.1 | 1.0 | 0.1 | 0.0 | -0.5 | -0.7 | -0.8 | -0.8 | 0.2 | 2.5 | 0.2 | -0.7 |
| **Exports (%, y/y)** | 5.6 | 6.4 | 9.0 | 3.9 | 3.2 | -0.6 | -0.6 | 1.2 | 2.1 | 4.7 | 4.3 | 4.5 | 4.5 | 4.5 | 4.7 | 4.7 | 6.2 | 0.9 | 3.9 | 4.6 |
| **Imports (%, y/y)** | 8.7 | 8.2 | 7.7 | 0.7 | -4.6 | -3.8 | -5.0 | -2.0 | 2.6 | 3.3 | 4.8 | 5.2 | 6.3 | 6.4 | 6.8 | 6.9 | 6.2 | -3.8 | 4.0 | 6.6 |
| **Gross wages (%, y/y)** | 9.7 | 11.8 | 14.6 | 12.3 | 14.3 | 12.9 | 12.0 | 11.4 | 10.7 | 9.3 | 8.7 | 8.2 | 7.0 | 6.8 | 6.5 | 6.5 | 12.1 | 12.6 | 9.2 | 6.7 |
| **Total employment (%, y/y)** | 1.7 | 1.0 | -0.7 | 0.1 | 0.8 | 0.4 | 0.3 | -0.2 | -0.5 | -0.8 | -0.9 | -0.9 | -0.6 | -0.5 | -0.3 | -0.3 | 0.5 | 0.2 | -0.8 | -0.4 |
| **Unemployment rate (%)** | 3.0 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 3.1 | 3.3 | 3.4 | 3.6 | 3.8 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 2.9 | 3.0 | 3.7 | 4.0 |
| **NAWRU (%)** | 4.8 | 4.5 | 4.2 | 4.0 | 4.0 | 3.8 | 3.8 | 3.8 | 3.9 | 3.8 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.4 | 3.9 | 3.9 | 3.9 |
| **Labour force participation rate (%, y/y)** | 58.0 | 58.0 | 58.0 | 58.2 | 58.2 | 58.3 | 58.3 | 58.3 | 58.2 | 58.2 | 58.1 | 58.2 | 58.1 | 58.1 | 58.0 | 58.0 | 58.0 | 58.3 | 58.2 | 58.1 |
| **Labour productivity (%, y/y)** | 7.0 | 5.0 | 4.7 | 2.2 | -1.2 | -0.6 | 0.9 | 1.8 | 2.8 | 3.3 | 3.3 | 3.3 | 3.5 | 3.7 | 3.8 | 3.8 | 4.6 | 0.5 | 3.2 | 3.7 |
| **Unit labour cost (%, y/y)** | 2.5 | 6.5 | 9.4 | 9.9 | 15.6 | 13.5 | 10.9 | 9.4 | 7.7 | 5.8 | 5.2 | 4.6 | 3.4 | 2.9 | 2.6 | 2.5 | 7.2 | 12.1 | 5.8 | 2.8 |
| **Potential output (%, y/y)** | 4.1 | 4.1 | 4.0 | 3.8 | 3.8 | 3.4 | 3.2 | 3.1 | 2.9 | 2.9 | 2.8 | 2.8 | 2.8 | 2.7 | 2.8 | 2.8 | 4.0 | 3.4 | 2.9 | 2.8 |
| **Output gap (% potential GDP)** | 4.2 | 2.8 | 1.5 | 0.7 | 0.1 | -0.6 | -0.6 | -0.8 | -0.6 | -1.0 | -1.0 | -1.1 | -0.6 | -0.6 | -0.4 | -0.3 | 2.3 | -0.5 | -0.9 | -0.5 |
| **Index of agricultural commodity prices (EUR; 2011=1.0)** | 1.27 | 1.47 | 1.42 | 1.36 | 1.30 | 1.31 | 1.31 | 1.26 | 1.25 | 1.26 | 1.26 | 1.21 | 1.19 | 1.22 | 1.22 | 1.18 | 1.38 | 1.30 | 1.25 | 1.20 |
| **Index of energy commodity prices (USD; 2011=1.0)** | 2.05 | 2.42 | 3.15 | 1.97 | 1.22 | 0.99 | 0.92 | 0.98 | 1.07 | 1.11 | 1.05 | 1.02 | 1.05 | 1.00 | 0.95 | 0.91 | 2.40 | 1.03 | 1.06 | 0.98 |
| **Gross value added deflator abroad (%, y/y)** | 3.6 | 4.9 | 5.1 | 6.4 | 6.7 | 5.4 | 4.6 | 2.7 | 2.3 | 2.6 | 2.9 | 2.8 | 2.1 | 1.9 | 1.9 | 1.9 | 5.0 | 4.8 | 2.7 | 2.0 |
| **GDP abroad (%, y/y)** | 5.6 | 3.6 | 2.2 | 1.4 | 0.7 | 0.5 | 0.4 | 0.8 | 1.1 | 1.3 | 1.4 | 1.5 | 1.6 | 1.6 | 1.5 | 1.4 | 3.2 | 0.6 | 1.4 | 1.5 |
| **Current account balance (% GDP)** | -2.5 | -3.3 | -3.4 | -3.0 | -1.2 | -0.3 | 0.6 | 1.3 | 1.1 | 1.2 | 1.1 | 1.0 | 0.8 | 0.6 | 0.4 | 0.2 | -3.0 | 1.3 | 1.0 | 0.2 |
| **WIBOR 3M (%)** | 3.50 | 6.24 | 7.08 | 7.29 | 6.93 | 6.90 | 6.95 | 6.95 | 6.95 | 6.95 | 6.95 | 6.95 | 6.95 | 6.95 | 6.95 | 6.95 | 6.03 | 6.93 | 6.95 | 6.95 |

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

For the majority of variables, the values up to 2023Q1 are determined on the basis of raw quantities, while in the projection horizon are presented seasonally adjusted data. In the case of the unemployment rate, the NAWRU rate, the labour force participation rate, potential output growth, the output gap, the agricultural commodity price index, the energy commodity price index, inflation abroad and GDP growth abroad only seasonally adjusted data are presented, while the WIBOR 3M rate and import price growth are not seasonally adjusted series.

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

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

## Date: 8 February 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: | | Against: | |
|---|---|---|---|
| | J.B. Tyrowicz | | A. Glapiński<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>L. Kotecki<br>P. Litwiniuk<br>G. Masłowska<br>H.J. Wnorowski |

## Date: 8 February 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: | | Against: | |
|---|---|---|---|
| | L. Kotecki<br>P. Litwiniuk | | A. Glapiński<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>G. Masłowska<br>J.B. Tyrowicz<br>H.J. Wnorowski |

[44] This chapter does not include voting on resolution no. 2/2023, 3/2023 and 4/2023 of 9 May 2023, which will be published in the Court and Commercial Gazette (*Monitor Sądowy i Gospodarczy*) within the statutory period of time i.e. by 8 August 2023. Voting on these resolutions will be included in the next Inflation Report – November 2023.

## Date: 8 March 2022

**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<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>L. Kotecki<br>P. Litwiniuk<br>G. Masłowska<br>H.J. Wnorowski |

## Date: 8 March 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<br>P. Litwiniuk | **Against:** | A. Glapiński<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>G. Masłowska<br>J.B. Tyrowicz<br>H.J. Wnorowski |

## Date: 4 April 2023

**Subject matter of motion or resolution:**

Resolution no. 1/2023 on approving the annual financial report of Narodowy Bank Polski prepared as of 31 December 2022.

**Voting of the MPC members:**

| | | | |
|---|---|---|---|
| **For:** | A. Glapiński<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>L. Kotecki<br>P. Litwiniuk<br>G. Masłowska<br>J.B. Tyrowicz<br>H.J. Wnorowski | **Against:** | No-one |

## Date: 5 April 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<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>L. Kotecki<br>P. Litwiniuk<br>G. Masłowska<br>H.J. Wnorowski |

■ Date: 5 April 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<br>P. Litwiniuk<br>J.B. Tyrowicz | **Against:** | A. Glapiński<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>G. Masłowska<br>H.J. Wnorowski |

■ Date: 10 May 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<br>I.K. Dąbrowski<br>I. Duda<br>W.S. Janczyk<br>C. Kochalski<br>L. Kotecki<br>P. Litwiniuk<br>G. Masłowska<br>H.J. Wnorowski |

- Date: 10 May 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 | **Against:** | A. Glapiński |
| | P. Litwiniuk | | I.K. Dąbrowski |
| | J.B. Tyrowicz | | I. Duda |
| | | | W.S. Janczyk |
| | | | C. Kochalski |
| | | | G. Masłowska |
| | | | H.J. Wnorowski |

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