



NARODOWY
BANK POLSKI

Economic Analysis and Research Department

Inflation and economic growth projection of Narodowy Bank Polski based on the NECMOD model

Warsaw / 10th November 2023





Outline:

Projection 2023 – 2025

- Economic conditions abroad
- Economic perspectives for Poland
- Inflation

Uncertainty

Projection 2023-2025

Economic conditions abroad

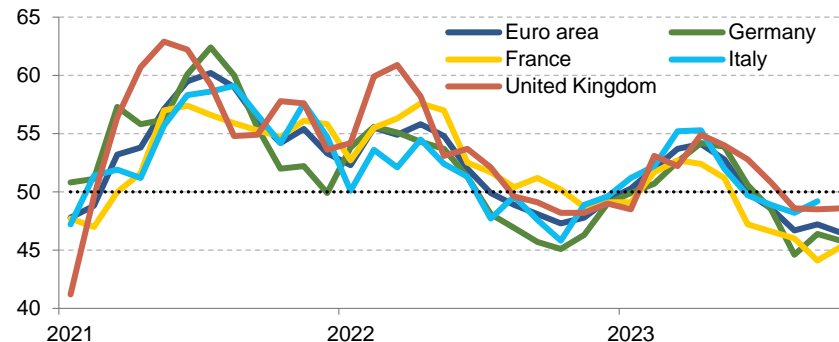
Economic activity abroad: weak growth perspectives among main trading partners in 2023, recovery in Euro area in 2024.

GDP growth in the main economies – NBP forecast (%)

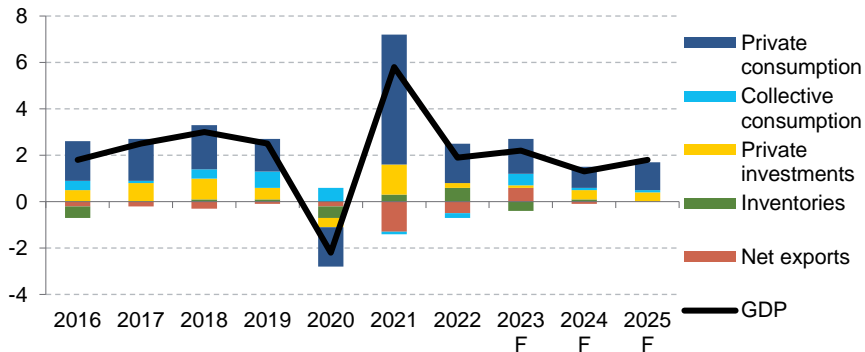
	2022	2023	2024	2025
Euro Zone	3.4	0.6 (0.7)	1.1 (1.5)	1.4 (1.5)
Germany	1.9	-0.4 (-0.1)	0.9 (1.4)	1.3 (1.5)
United Kingdom	4.3	0.6 (0.4)	0.5 (0.9)	1.1 (1.2)
USA	1.9	2.2 (1.4)	1.3 (0.8)	1.8 (1.9)
China	3.0	5.0 (5.3)	4.5 (4.9)	4.4 (4.8)

Values from the July projection are given in brackets (seasonally adjusted). Indicators with values higher than in the July projection are marked green, and indicators with lower values are marked red.

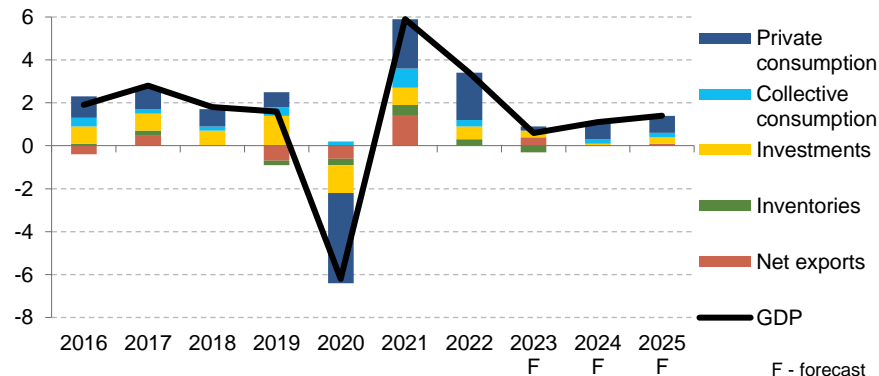
PMI indices in main European economies (pts)



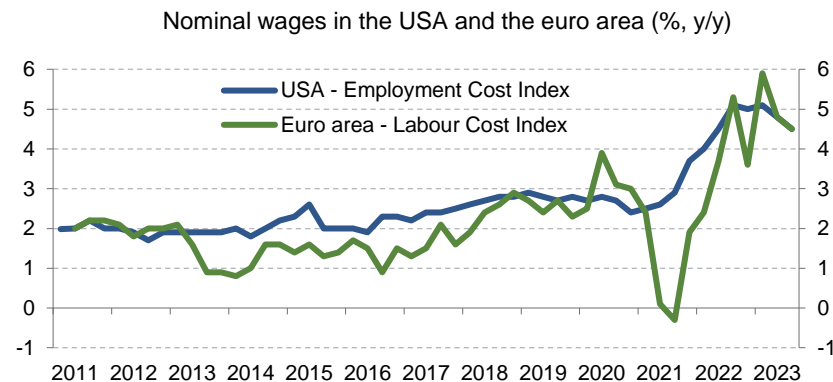
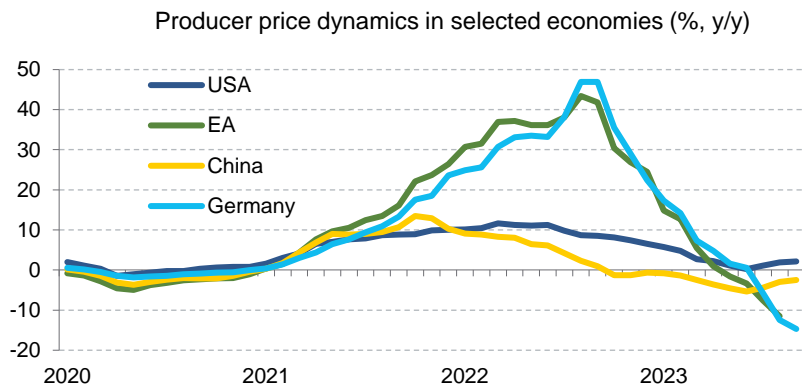
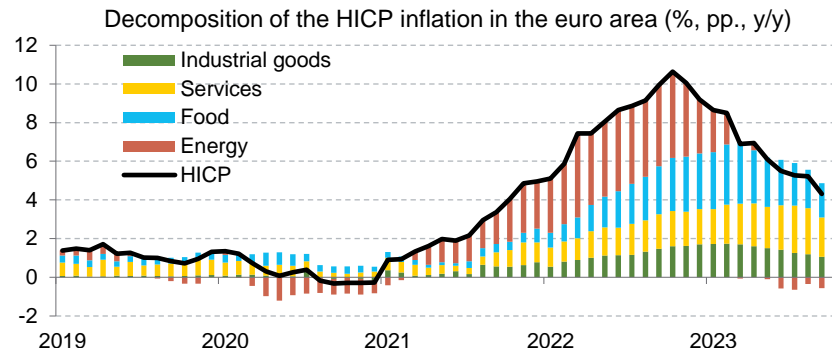
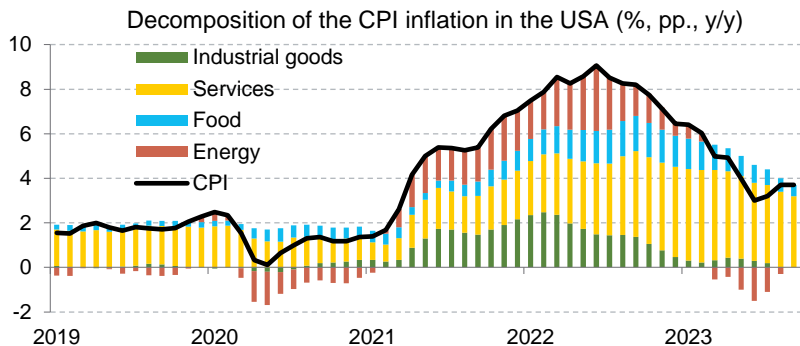
US real GDP growth decomposition (% and percentage points)



Euro area real GDP growth decomposition (% and percentage points)



Inflation abroad: in 2024-2025 inflation will continue to decrease, but slower due to the persistence of service price inflation





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Projection 2023-2025

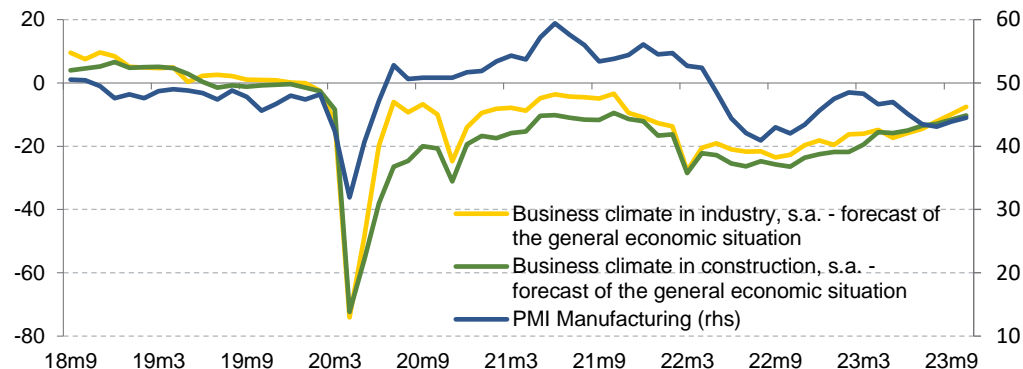
Economic perspectives for Poland

Moderate economic recovery in 2023 Q3, with high investment growth in (large) companies

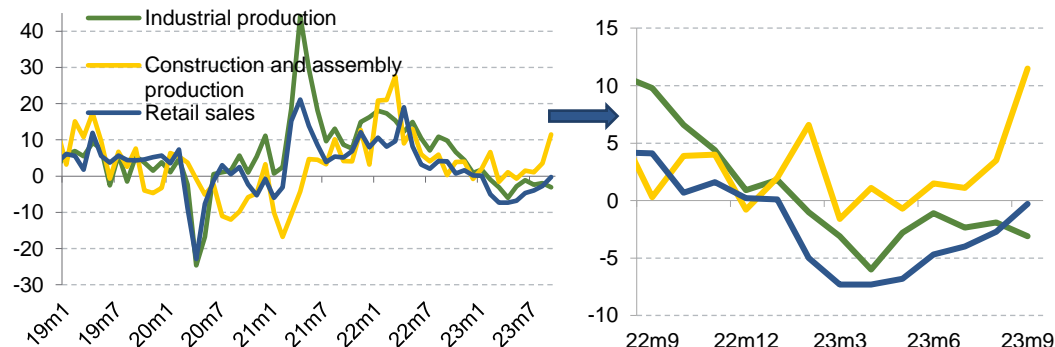
	23q2		23q3	
GDP (y/y, %)	-0.6	(-0.1)	0.4	(1.2)
Domestic demand (y/y, %)	-2.9	(-2.2)	-2.0	(-1.1)
Household consumption (y/y, %)	-2.8	(-2.7)	-1.4	(-1.9)
Public consumption (y/y, %)	2.2	(-0.4)	5.9	(4.3)
Gross fixed capital form. (y/y, %)	10.5	(3.2)	7.6	(1.3)
Change in inventories contrib. (y/y, pp.)	-3.0	(-1.0)	-3.5	(-1.0)
Net exports contribution (y/y, pp.)	2.1	(2.0)	2.4	(2.3)
Exports (y/y, %)	-3.2	(-0.6)	-4.3	(-0.6)
Imports (y/y, %)	-6.8	(-3.8)	-8.2	(-5.0)

Values from the July projection are given in brackets (seasonally adjusted). Indicators with values higher than in the July projection are marked **green**, and indicators with lower values are marked **red**.

Business climate indicators in industry and construction

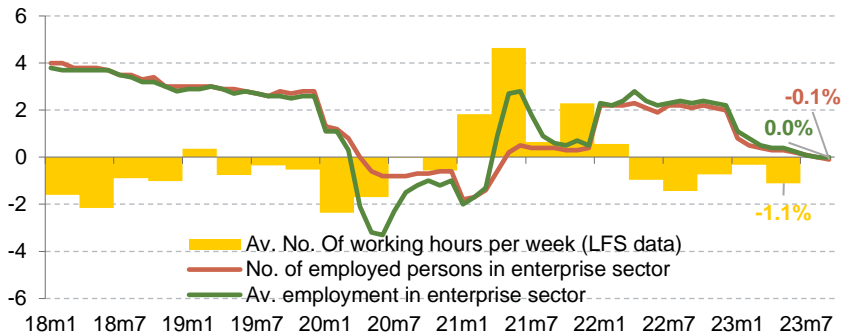


Growth rates of industrial production, construction and assembly production, and retail sales (constant prices, y/y, %)

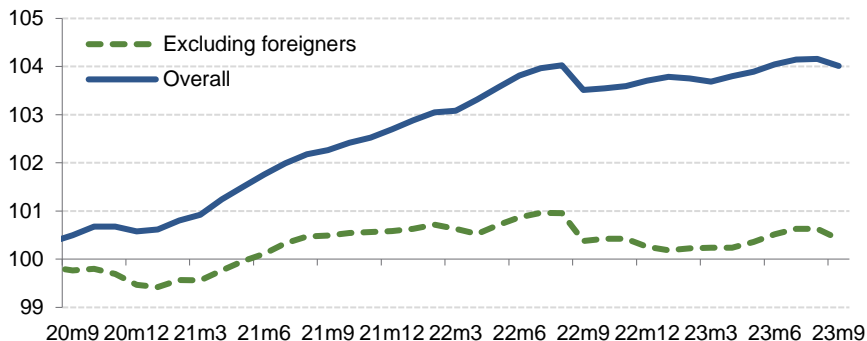


Favourable situation on the labor market, with slowing employment growth.

Average number of working hours, average employment in enterprise sector and hours worked in the economy according to LFS (y/y)

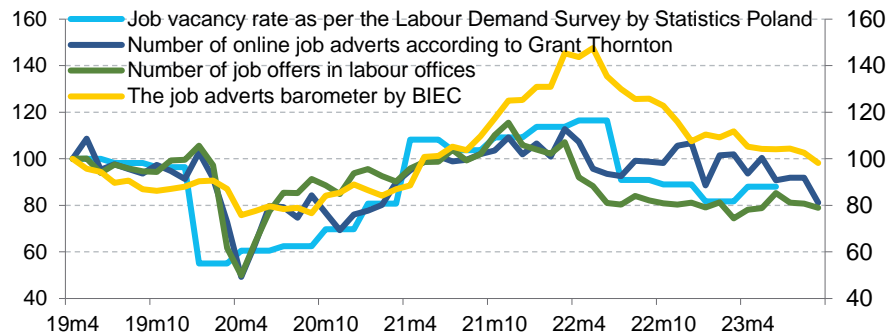


No. of employees registered for The Social Insurance Institution pension and disability insurance in total and excluding foreigners (Dec 2018 = 100, s.a.)

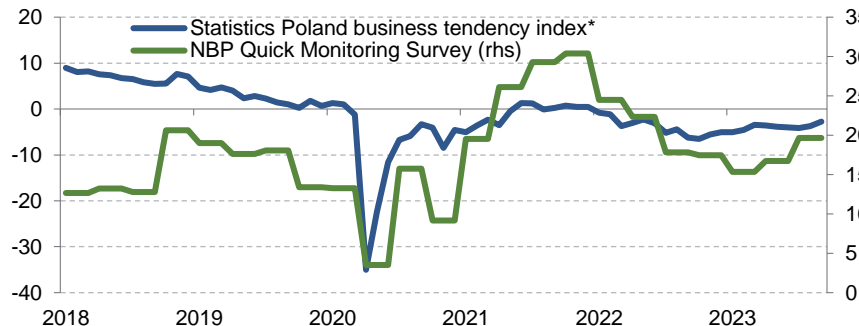


Source: Statistics Poland data, The Social Insurance Institution, MRiPS, NBP Quick Monitoring Survey, Eurostat, BIEC, Grant Thornton, NBP calculations.

Labour demand measures (Apr 2019 = 100, s.a.)



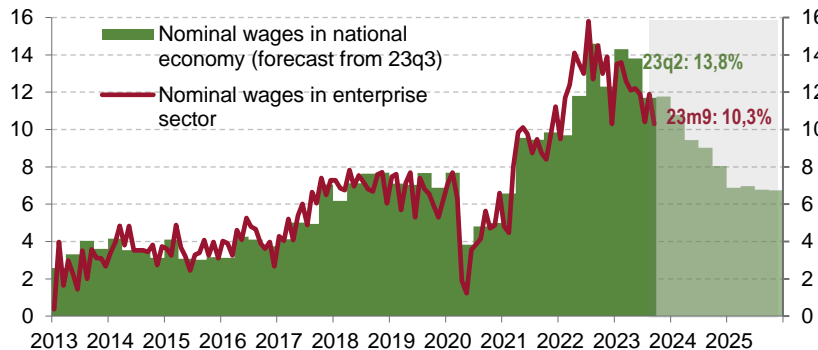
Index of expected changes in employment over the next 3 months (Statistics Poland business tendency survey) and in the next quarter (NBP Quick Monitoring Survey)



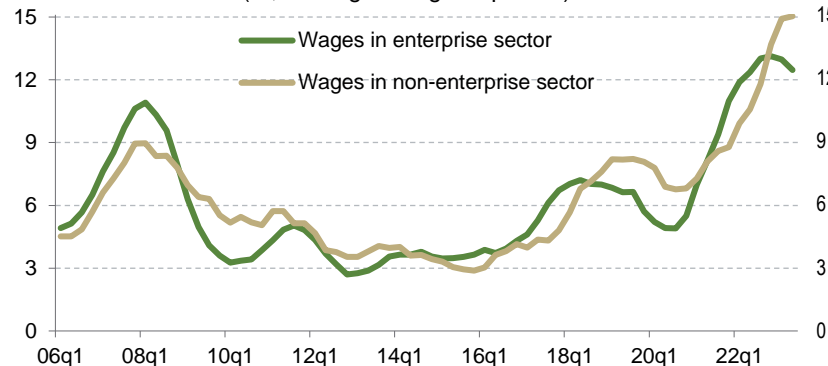
*Seasonally adjusted data. The index represents the difference between respective shares (in %) of answers indicating an increase and a decrease in expected employment.

Nominal wages will continue to grow at an elevated pace over the projection horizon, although there are already signs of adjustment of labor costs by enterprises to slower economic growth.

Nominal wage dynamics (% , y/y, national economy data as of 23q2, data from enterprise sector as of September 2023)



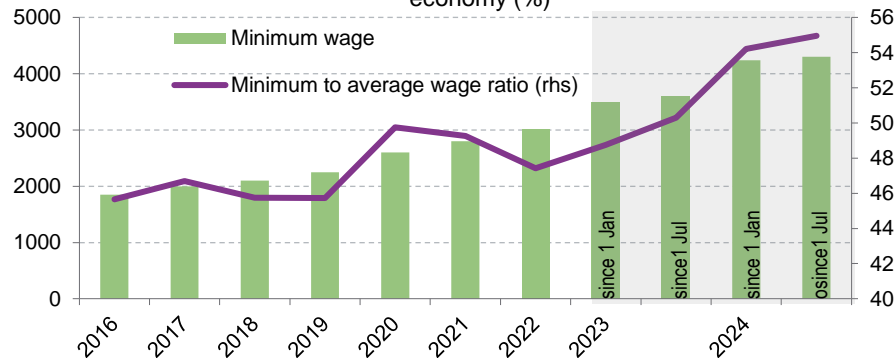
Annual growth rate of wages in enterprise and non-enterprise sector (% , moving average 4-quarters)



Nominal and real wages in national economy (% , y/y)

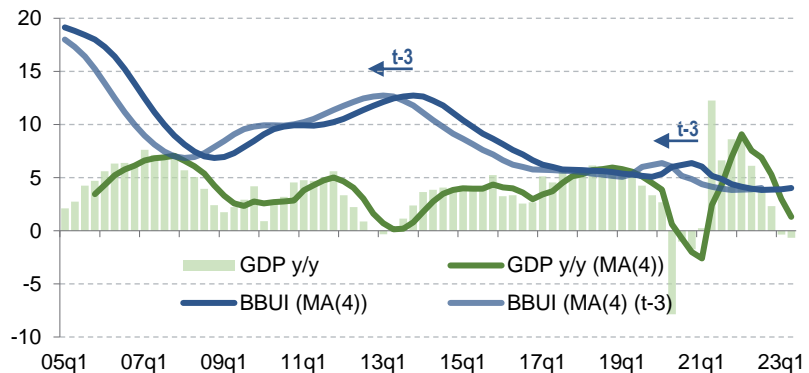


Minimum wage (PLN) and its ratio to average wage in national economy (%)

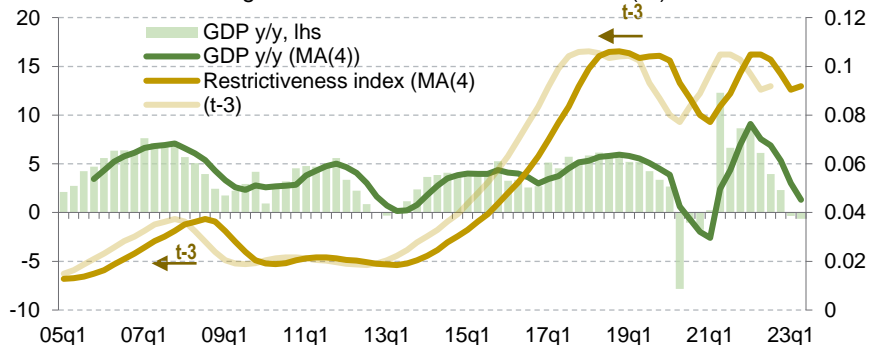


A delayed reaction of the labor market to the weakening of economic activity.

GDP growth rate vs. Bell & Blanchflower Underemployment Index (BBUI) (%)



GDP growth rate vs. restrictiveness index (%)



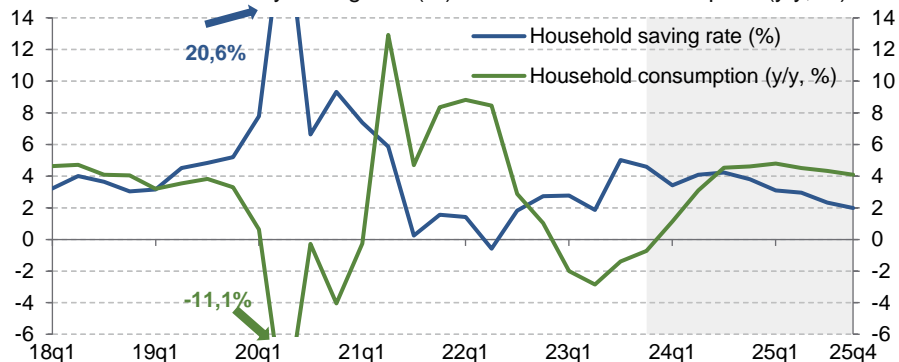
Correlation with lags (2005 Q1 – 2023 Q2)

Lag/ lead	GDP y/y vs restrictiveness index*		GDP y/y vs BBUI*	
		p-value		p-value
t - 3	0.215	0.072	-0.220	0.065
t - 2	0.206	0.083	-0.175	0.141
t - 1	0.149	0.208	-0.093	0.434
t	0.073	0.538	-0.007	0.952
t + 1	-0.008	0.946	0.092	0.441
t + 2	-0.075	0.532	0.180	0.131
t + 3	-0.117	0.333	0.237	0.047

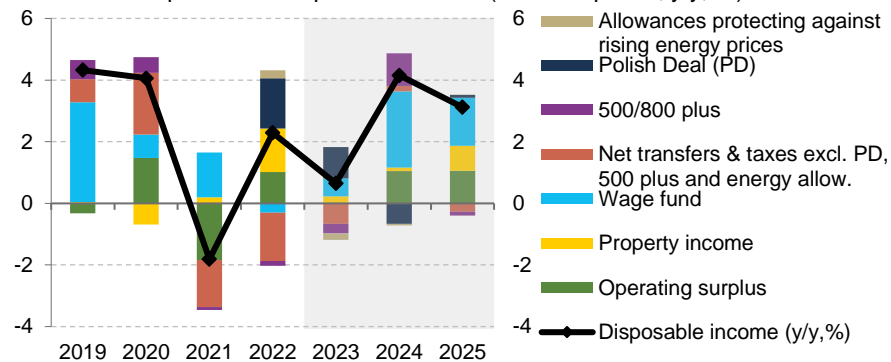
* 4 period moving average.

In 2024, household consumption growth will accelerate as a result of a more favourable development of their real disposable income

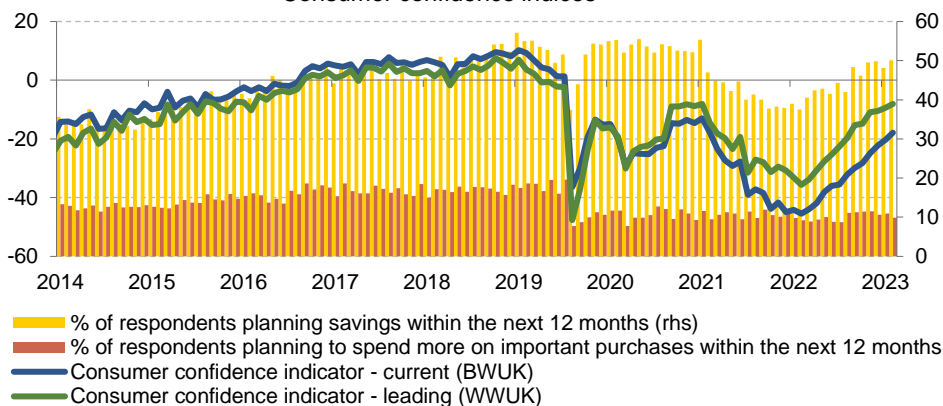
Household voluntary saving rate (%) and household consumption (y/y, %)



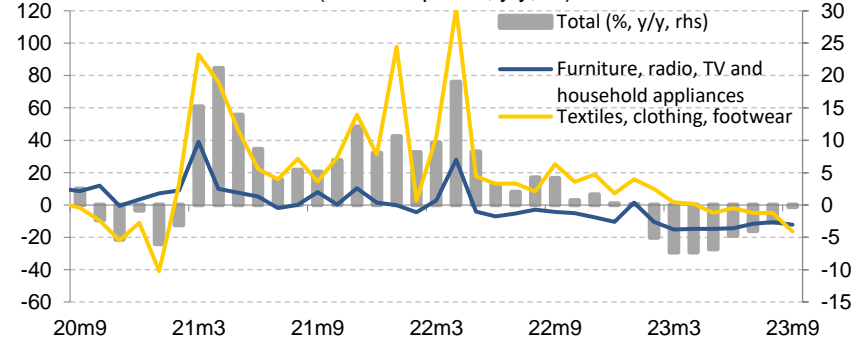
Decomposition of disposable income (constant prices, y/y, %)



Consumer confidence indices

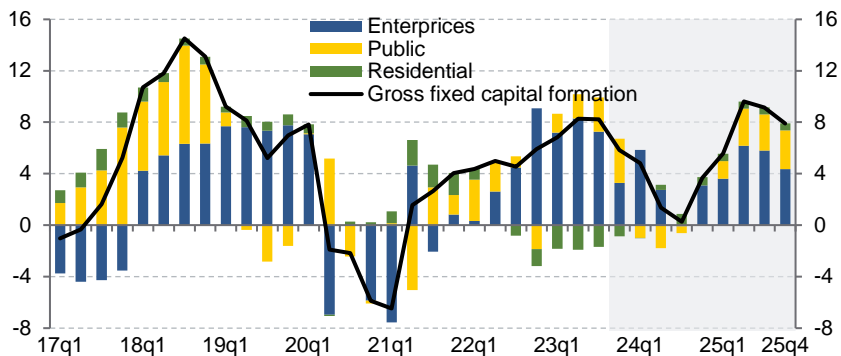


Retail sales of selected categories of goods against total retail sales (constant prices, y/y, %)

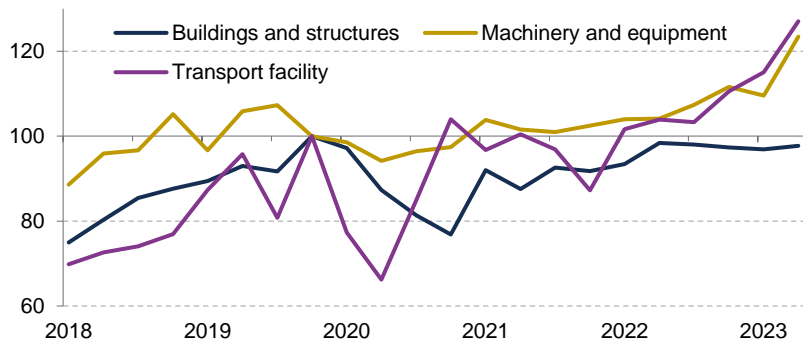


Continued high growth rate of gross fixed capital formation in Q2 2023 due to still strong increase in investment by (large) enterprises

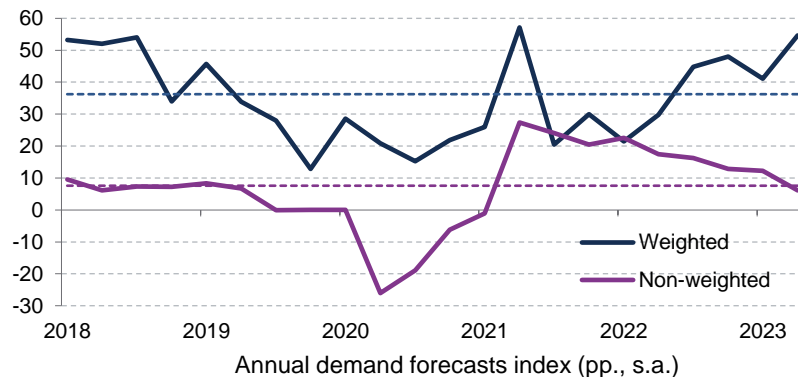
Decomposition of gross fixed capital formation (y/y, %)



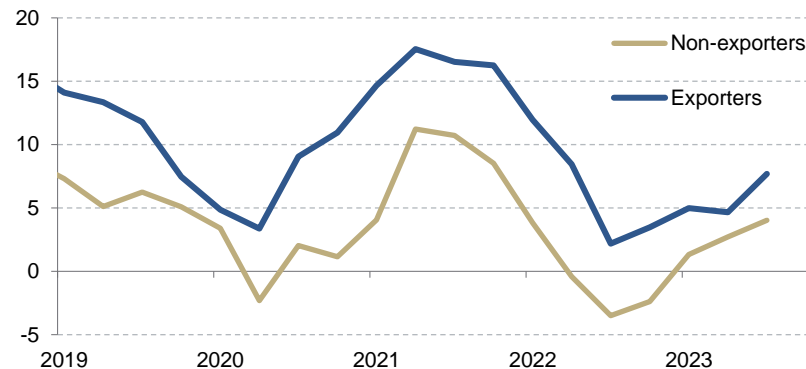
Real investments growth rate by types of outlays
(2019=100, s.a., deflated by NBP)



Average (median) investments growth rate
(current prices, %, quarterly data F-01/I-01, weighting by employment size)

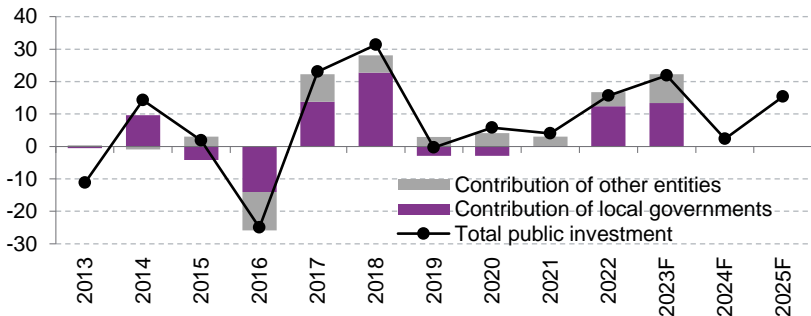


Annual demand forecasts index (pp., s.a.)

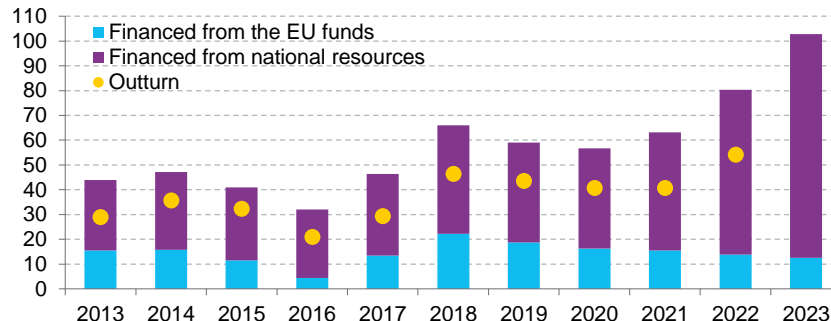


In 2023 planned strong increase in local government investments, in 2024 the expected slowdown in public investment due to the initial phase of the new EU perspective

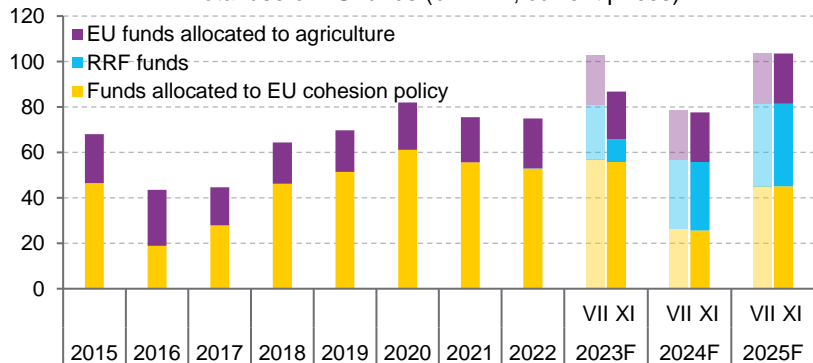
Nominal growth rate of public investment and contribution of its main components (y/y,% and pp.)



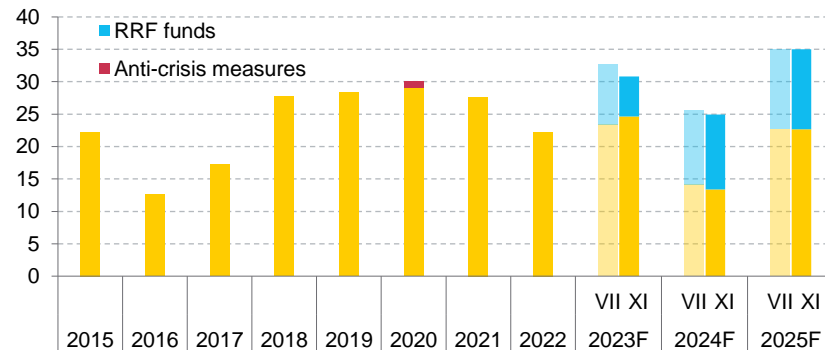
Planned local governments investment spending (as of 2023 Q2, bn PLN, current prices)



Total use of EU funds (bn PLN, current prices)

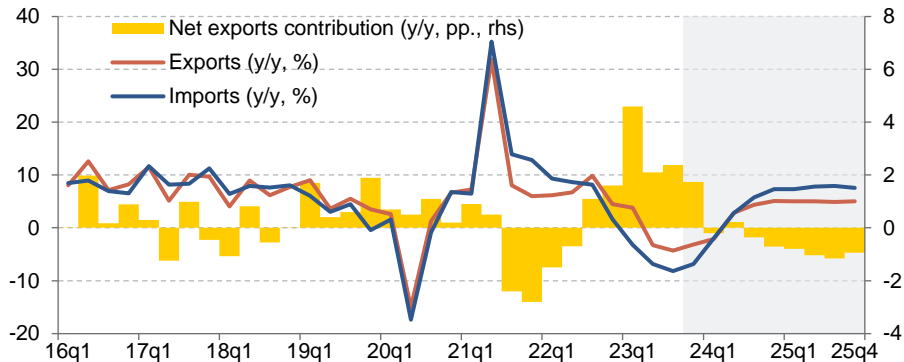


EU funds used for public investments (bn PLN, current prices)

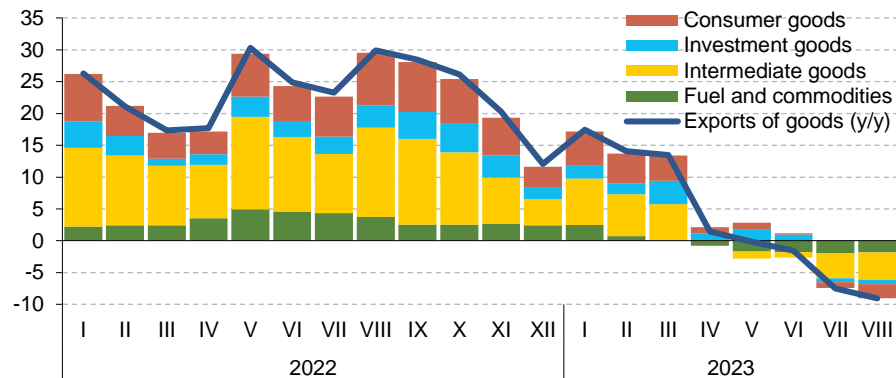


In 2023 slower exports growth due to weakening demand from the EA. The contribution of net exports to GDP growth rate positive due to a stronger cyclical reaction of imports, in 2024-2025 negative again.

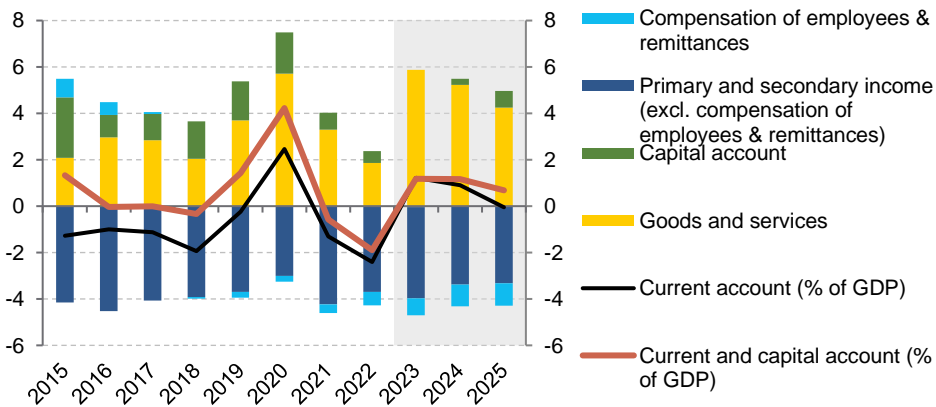
Net exports contribution to GDP growth rate



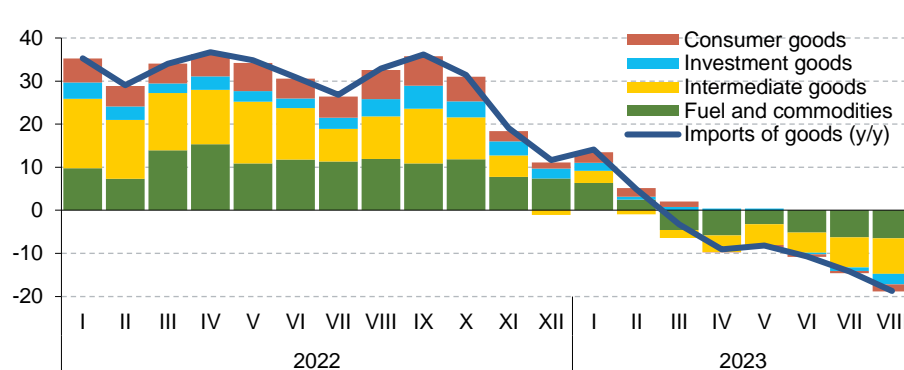
The value of goods exports growth rate (y/y, %)



Current and capital account balance (% of GDP)

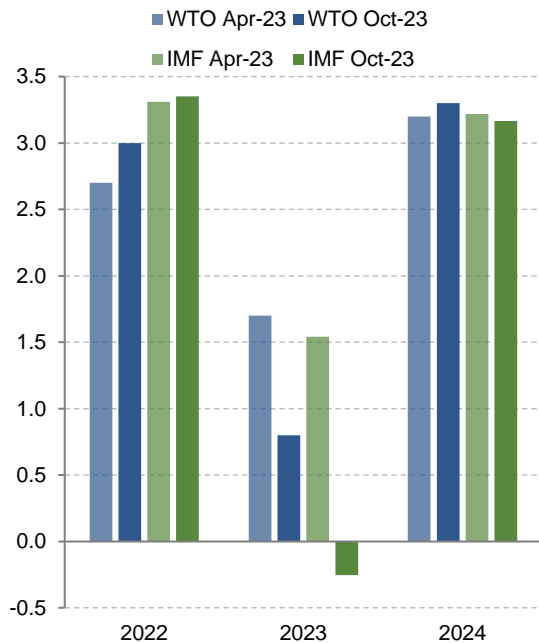


The value of goods imports growth rate (y/y, %)

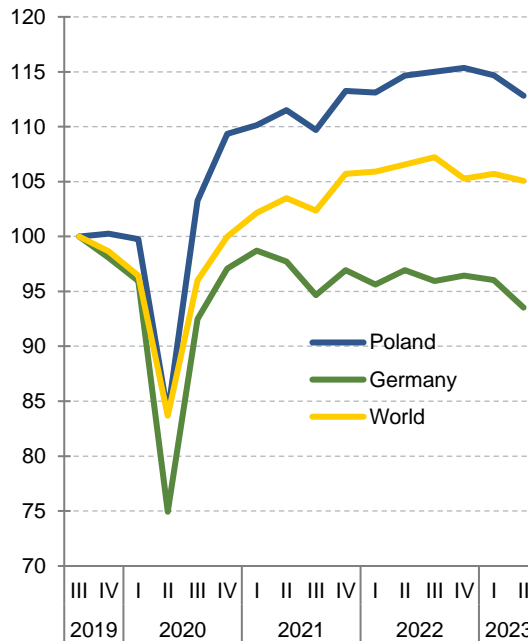


Deterioration of Polish exports amid weakening foreign trade in the region and globally

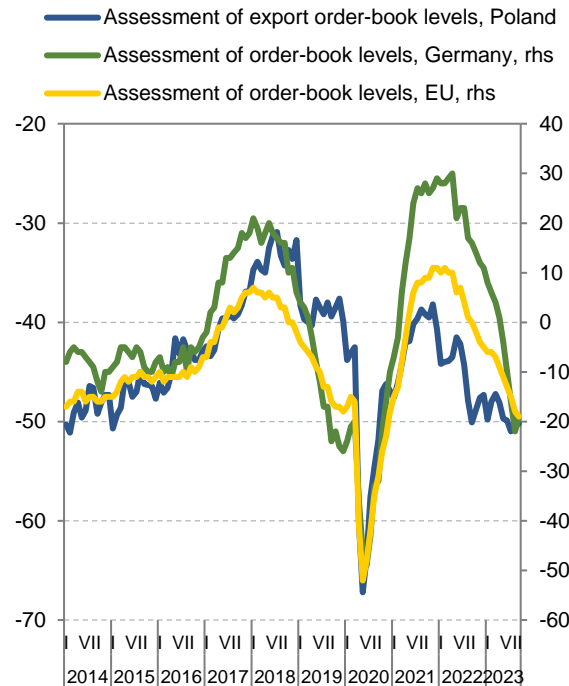
World goods trade forecast, constant prices (y/y, %)



Goods exports, constant prices (2019 Q3 = 100)

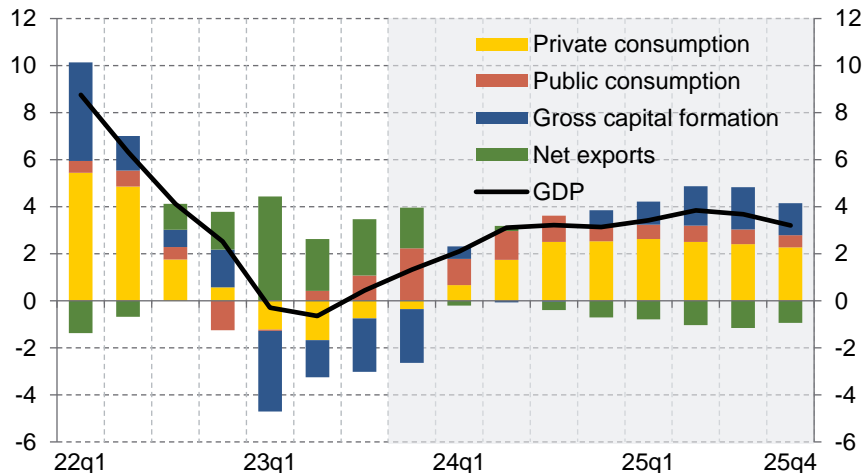


Assessment of the order portfolio in industry (balance of positive and negative responses)



GDP slightly increased in Q3 2023. GDP growth rate in 2023 a bit lower than in July projection, but stronger rebound in 2024-2025.

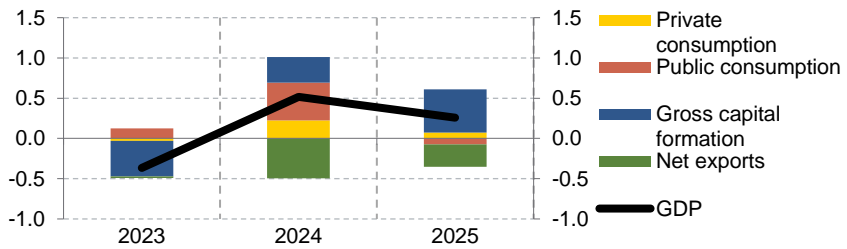
GDP growth rate and its decomposition (y/y, %, pp.)



Factors determining domestic activity over the projection horizon:

- ⇓ **negative supply shocks** reinforced by the consequences of Russia's aggression against Ukraine
- ⇓ **economic slowdown abroad**
- ⇓ in 2024 **significant decrease in the inflow of EU funds** related to the end of spending under the EU 2014-2020 perspective
- ⇑ **fiscal changes**, including valorisation of Family 500 Plus benefits
- ⇑ **NBP interest rates cuts**
- ⇑ good situation in **labour market**
- ⇑ **fading away of the negative effects of supply shocks and economic recovery abroad** (on a limited scale) in **2024-2025**

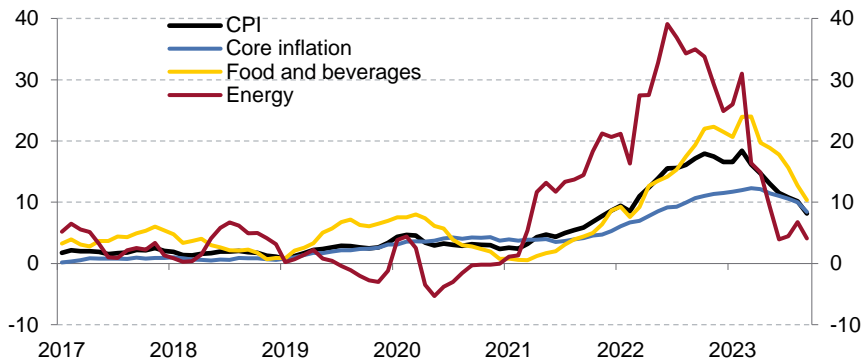
Decomposition of changes in GDP growth rate between projection rounds (y/y, pp.)



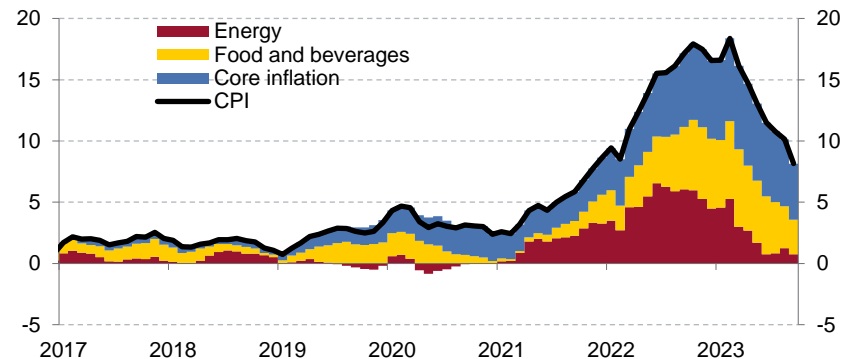
GDP, y/y, %	2021	2022	2023	2024	2025
November 2023	6.9	5.3	0.3	2.9	3.5
July 2023	6.9	5.1	0.6	2.4	3.3

Significant decrease in CPI inflation in Poland

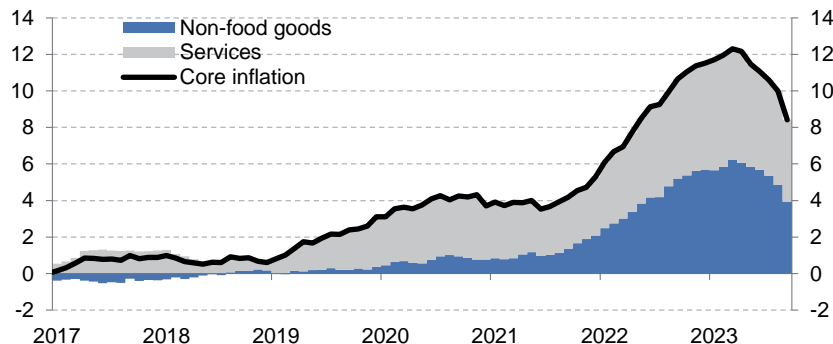
Consumer inflation (y/y, %, monthly data)



CPI decomposition (y/y, pp., monthly data)



Decomposition of core inflation (CPI inflation excl. food and energy y/y, pp., monthly data)



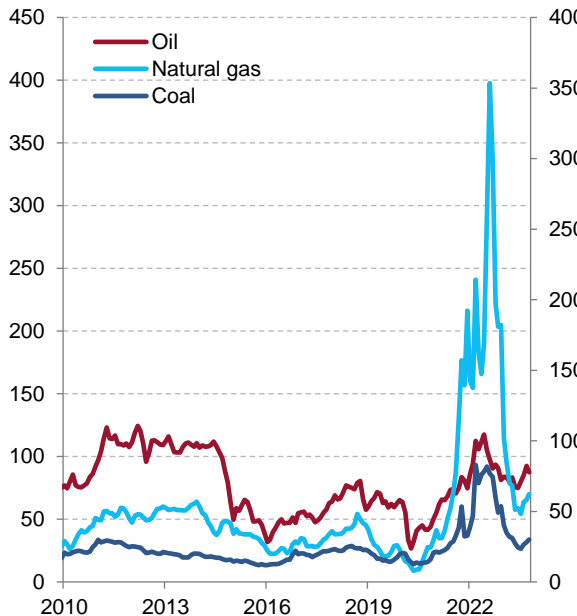
Inflation in 2023 Q3 and 2023 Q4 in November projection against July projection (y/y, %)

y/y, %	23Q3		23Q4	
CPI inflation	9.7	(10.3)	6.7	(7.8)
Core inflation	9.7	(10.0)	7.6	(8.5)
Food prices inflation	12.9	(14.4)	7.0	(9.3)
Energy prices inflation	5.0	(5.1)	3.6	(3.3)

Values from the July projection are given in brackets (seasonally adjusted). Indicators with values higher than in the July projection are marked green, and indicators with lower values are marked red.

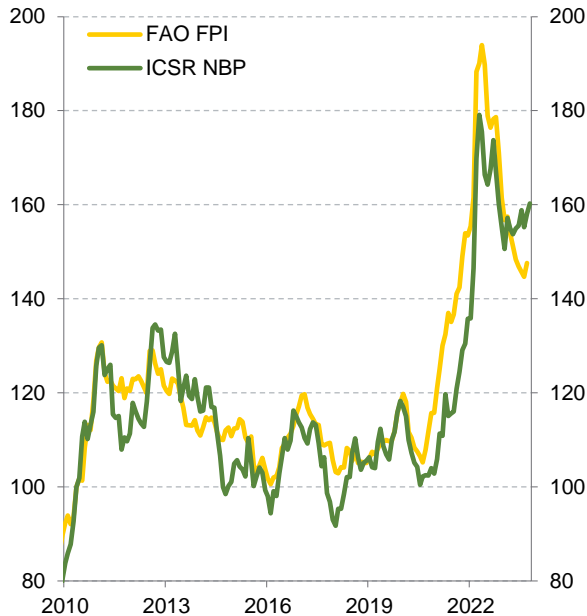
Commodity prices have declined compared to their record values in 2022.

Prices of oil, natural gas and coal (USD/boe, monthly data)



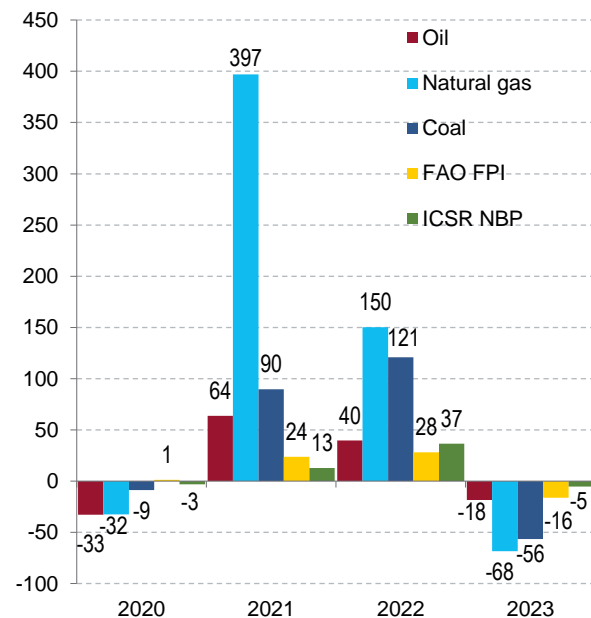
*boe - barrel of oil equivalent

FAO FPI and ICSR NBP (May 2010=100, EUR, monthly data)



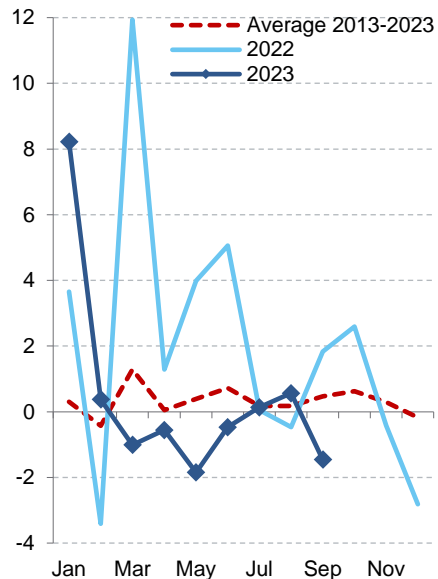
*FAO FPI index since September 2023

Average annual commodity price dynamics in 2020-2022 and Jan-Oct 2023 (%)

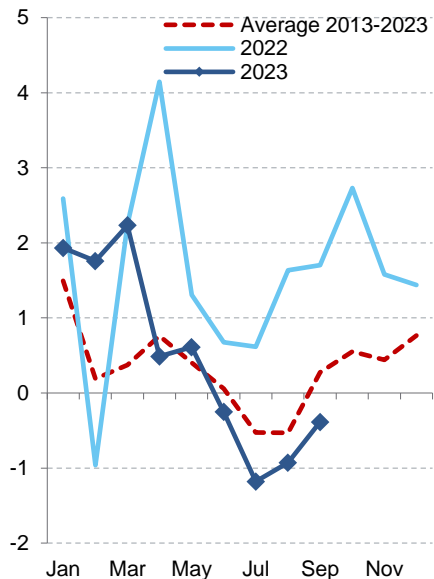


In September a decline in prices of all main components of the basket of consumer goods and services.

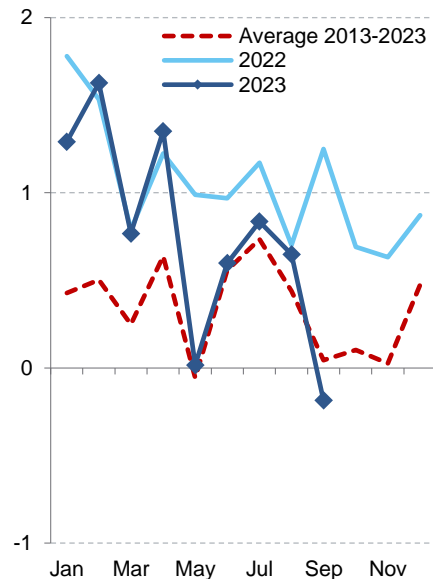
Energy prices (m/m, %)



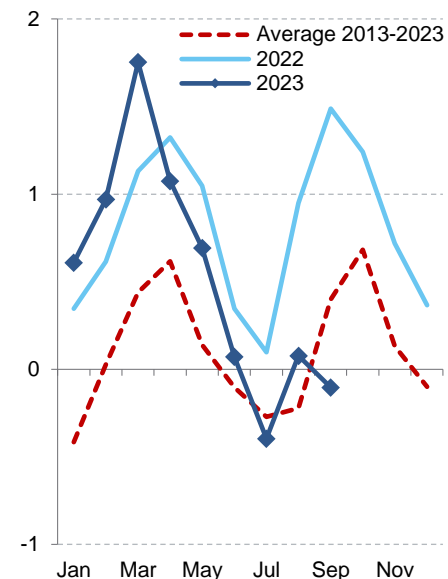
Food prices (m/m, %)



Services prices (m/m, %)

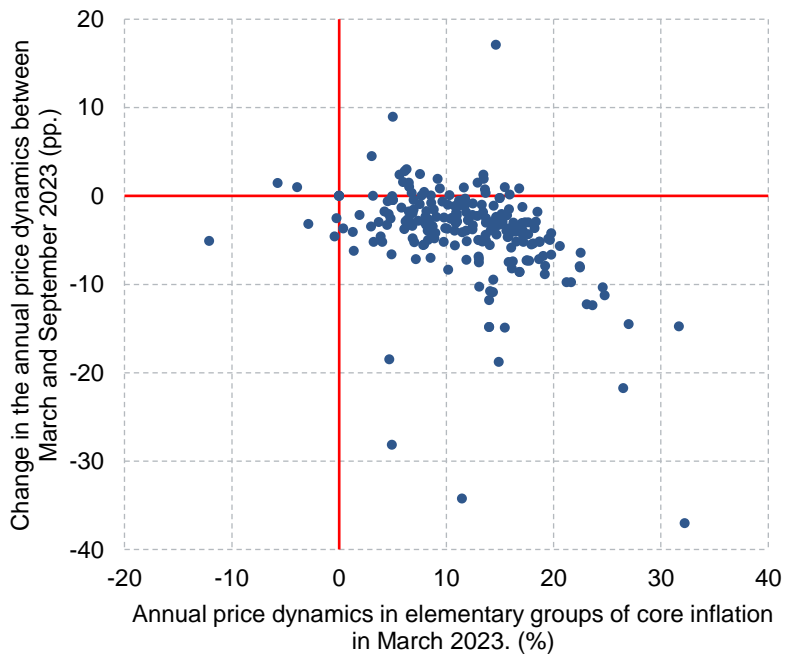


Goods prices (m/m, %)

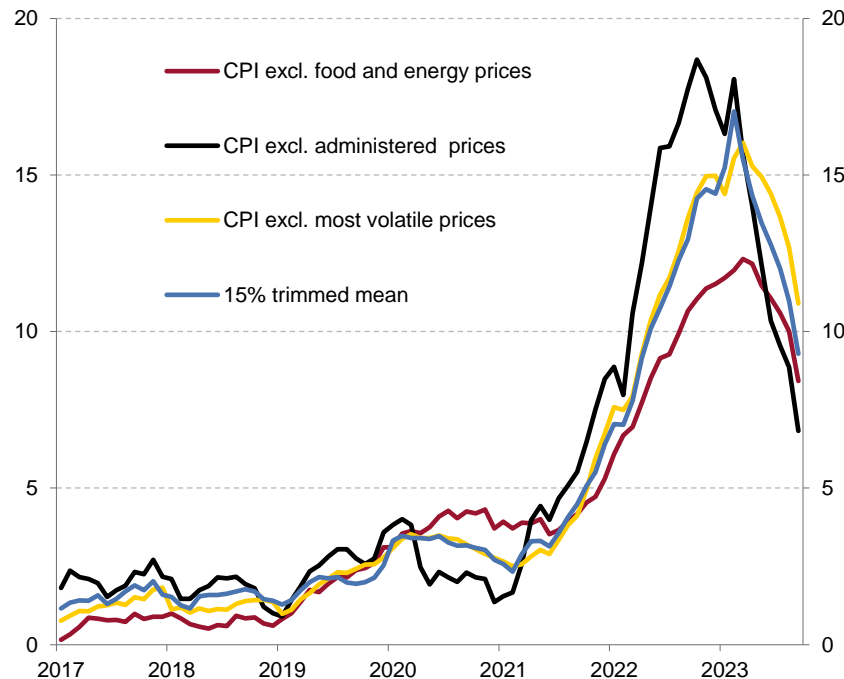


The decline in inflation of a wide group of goods and services from the core inflation basket

Change in the annual price dynamics between March and September 2023 vs. the inflation level in March 2023



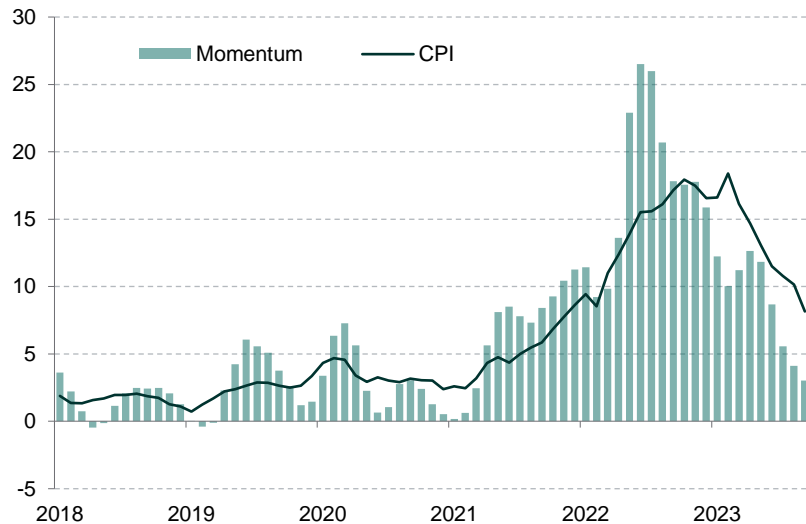
Core inflation indices (y/y, %, monthly data)



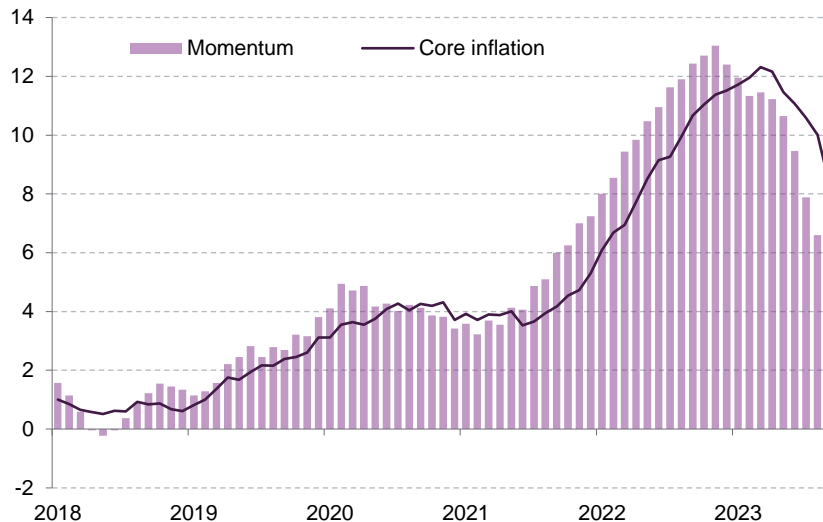
Note: due to the range of the axes, international flights have been omitted in the chart (annual price dynamics in September: 62.5%, change since March: -59.7 pp., impact on the decline in core inflation in this period by less than 0.1 pp.).

In the last months significant decrease in the momentum of CPI and core inflation

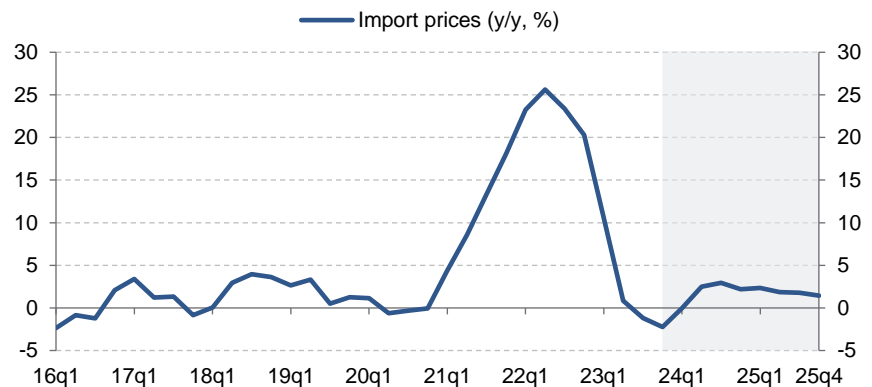
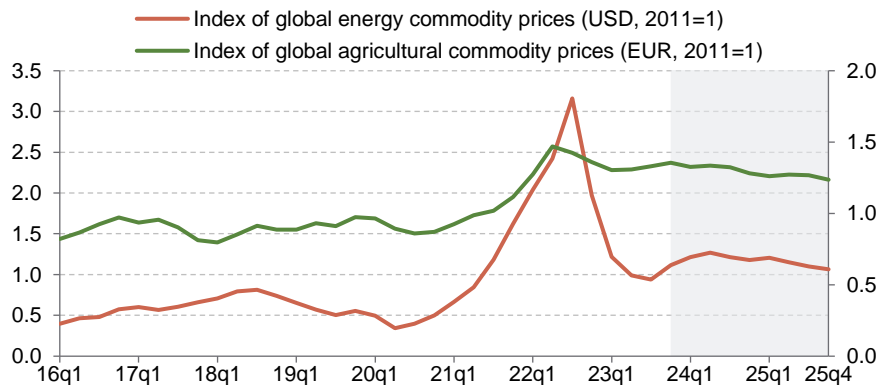
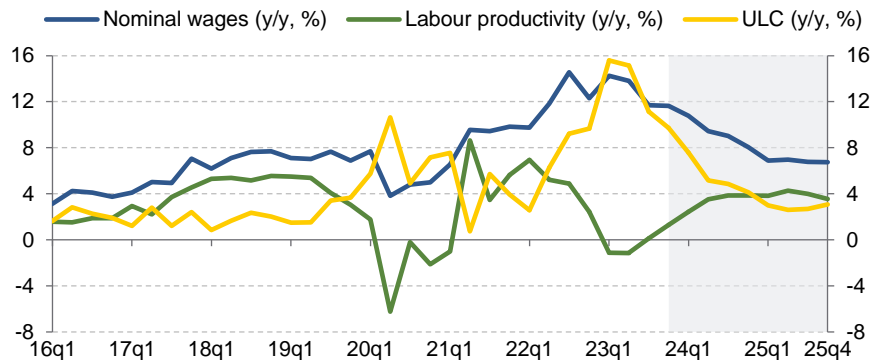
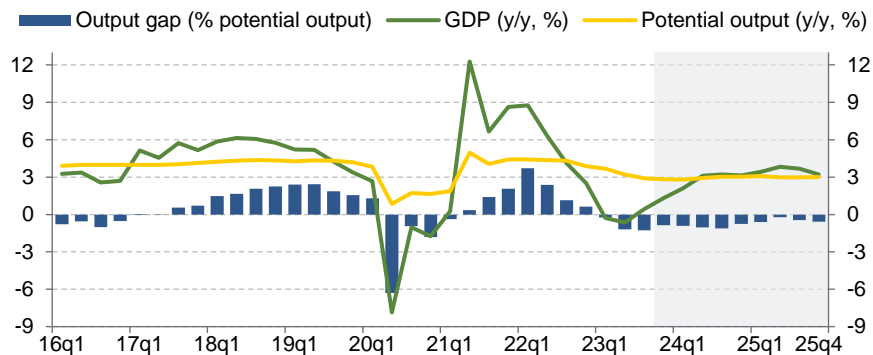
CPI inflation
and annualized momentum (y/y, %)



Core inflation (CPI excl. food and energy)
and annualized momentum (y/y, %)

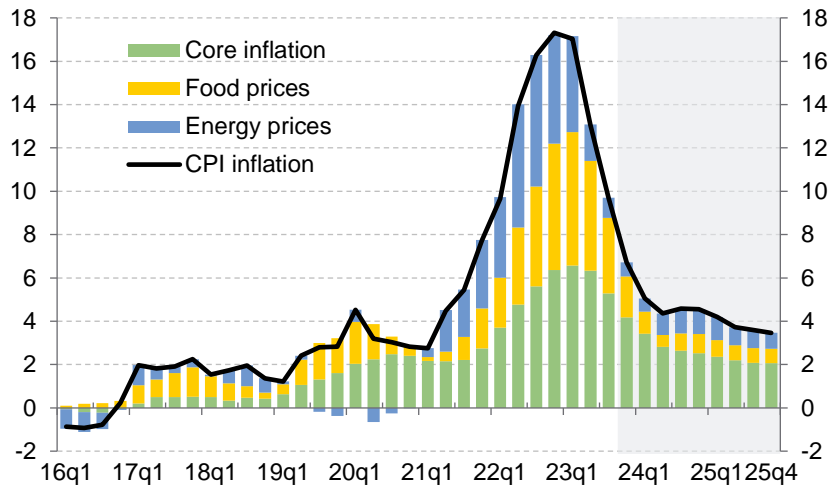


Demand pressure at a reduced level over projection horizon, contributing to a decline in CPI inflation



Gradual return of inflation to the band of deviations from the NBP inflation target over 2023-2025.

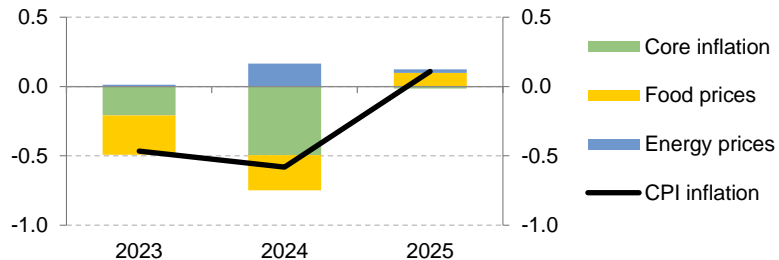
CPI inflation and its decomposition (y/y, %, pp.)



The inflation path over the projection horizon will be affected by:

- ⇩ fading away of recent years' inflation drivers:
 - ⇩ spread-over-time effects of earlier **declines in energy and agricultural prices**
 - ⇩ **normalization of the supply situation abroad**
 - ⇩ **slowdown of inflation abroad**
 - ⇩ **reduced level of aggregate demand** in the economy 2024-2025
 - ⇩ **declining labour cost dynamics**
- ⇧ **increased inflation persistence** (stronger wage pressures, increased acceptance of higher price growth)
- ⇧ scaling back of **government shielding measures** in 2024-2025
- ⇧ **minimum wage** increases in 2024

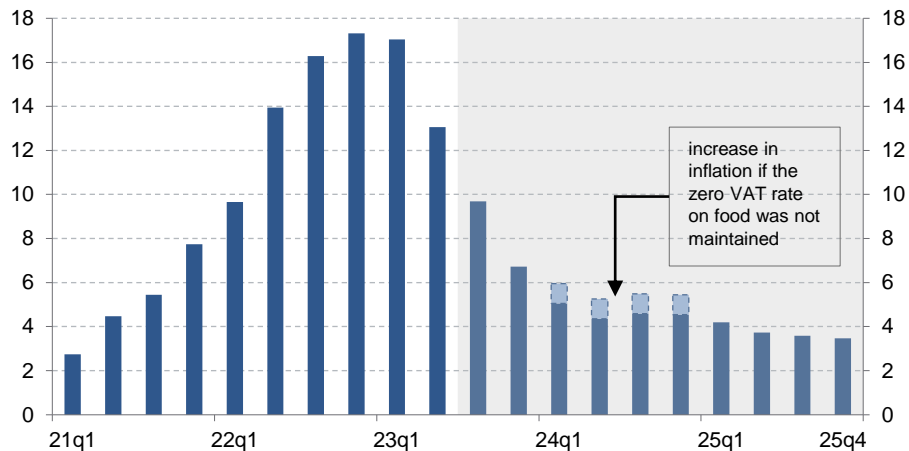
Decomposition of CPI forecast changes between the projection rounds (y/y, pp.)



CPI, y/y, %	2021	2022	2023	2024	2025
November 2023	5.1	14.4	11.4	4.6	3.7
July 2023	5.1	14.4	11.9	5.2	3.6

Withdrawing a zero VAT rate on food would increase inflation by 0.9 pp. in 2024

Direct impact of withdrawing a zero VAT rate on food on the CPI inflation forecast (y/y, pp.)



CPI, y/y, %	2023	2024	2025
November 2023 (excl. a zero VAT rate on food)	11.4	5.5	3.7
November 2023	11.4	4.6	3.7



Outline:

Projection 2023 – 2025

- Economic conditions abroad
- Economic perspectives for Poland
- Inflation

Uncertainty

Uncertainty

- Risks
- Fancharts

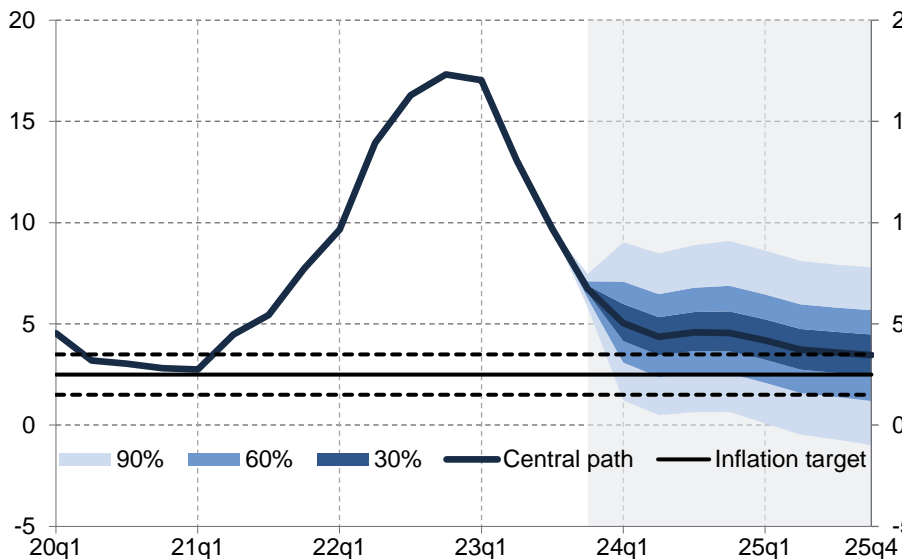
Risks

- **Further course of Russia's military aggression against Ukraine**
- **Global supply and demand for energy commodities (incl. escalation of the conflict in the Middle East)**
- **Effects of monetary tightening by ECB and FED**
- **Growth outlook in China**
- **Fiscal policy, incl. decisions on the government shielding measures**

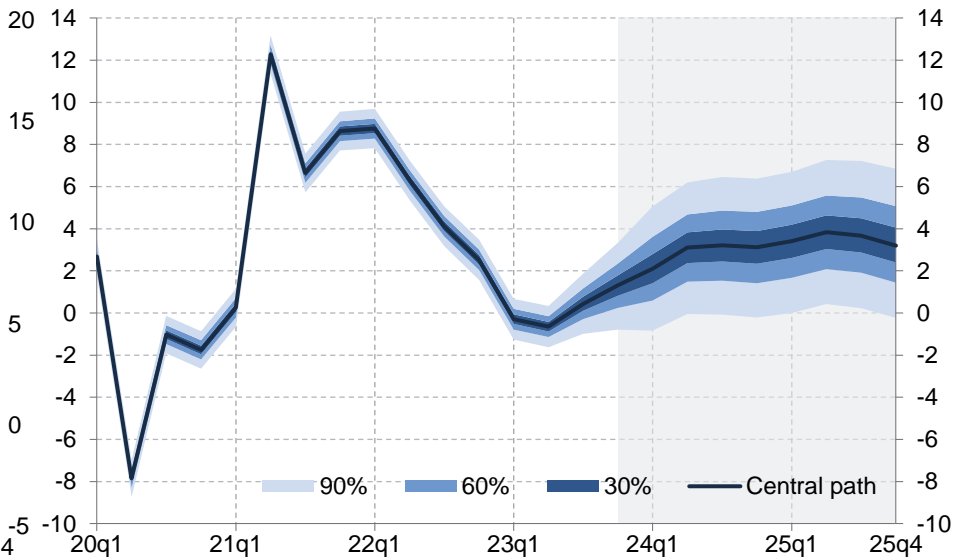
In the November projection horizon there is:

- ↑ **Higher probability of CPI inflation running above the projection's central path**
- ↔ **Close to symmetric distribution of risks to GDP growth**

CPI Inflation (y/y, %)



GDP (y/y, %)



CPI y/y, %	below 1.5%	below 2.5%	below 3.5%	below centr. path	within 1.5-3.5% range
2024	7%	15%	28%	48%	22%
2025	16%	29%	45%	49%	29%

CPI y/y, %	central path	50% probability interval	
2024	4.6	3.2	6.2
2025	3.7	2.2	5.3

GDP y/y, %	central path	50% probability interval	
2024	2.9	1.9	3.8
2025	3.5	2.4	4.7



**NARODOWY
BANK POLSKI**