



NARODOWY
BANK POLSKI

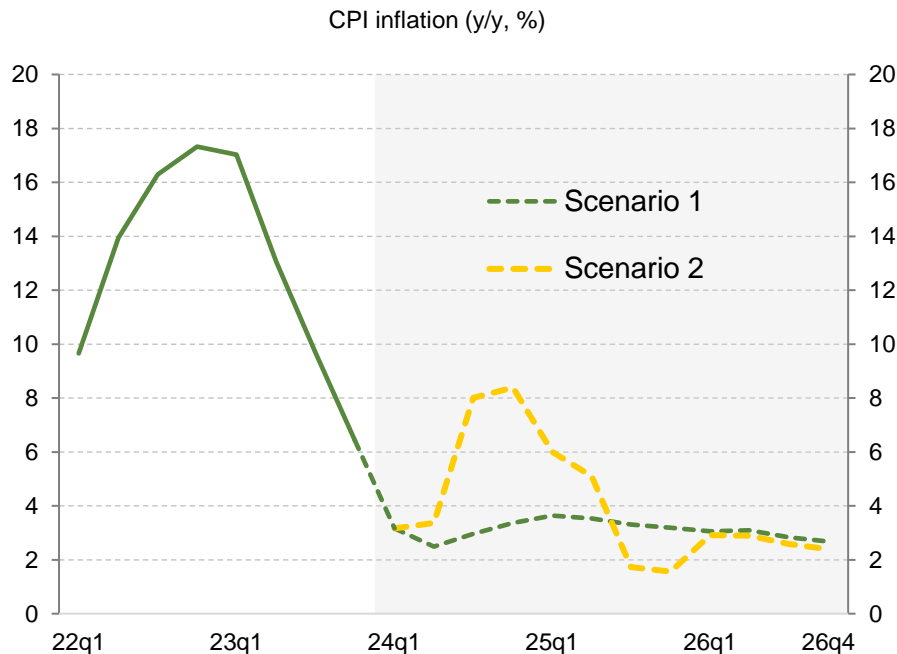
Economic Analysis and Research Department

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

Warsaw / 11th March 2024 r.



The inflation trajectory in the March projection is heavily influenced by forthcoming legal amendments that will impact energy and food prices.



Scenario 1 – extension of the shielding measures reducing energy and food prices until the end of the projection horizon.

Scenario 2 – reinstatement of the 5% VAT rate on staple food products from April this year and a complete unfreezing of electricity and gas prices for households from 2024 Q3.

CPI, y/y, %	2022	2023	2024	2025	2026
Scenario 1	14.4	11.4	3.0	3.4	2.9
Scenario 2	14.4	11.4	5.7	3.5	2.7



Outline:

Projection 2024 – 2026

- Economic conditions abroad
- Economic perspectives for Poland
- Inflation

Uncertainty

Projection 2024-2026

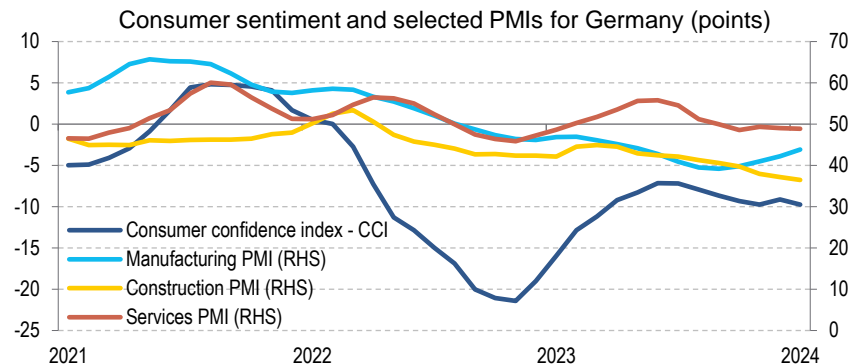
Economic conditions abroad

Slightly weaker-than-expected rebound in Eurozone growth in 2024-2025. Soft-landing scenario in the US

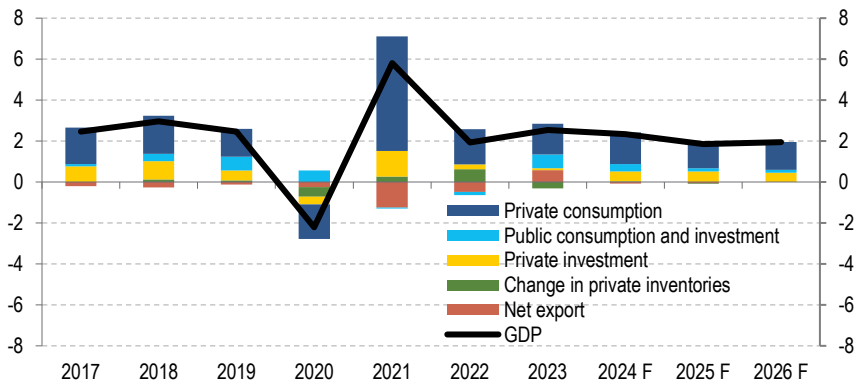
GDP growth in the main economies – NBP forecast (%)

	2023	2024	2025	2026
Euro area	0.5	0.7 (1.1)	1.3 (1.4)	1.2
Germany	-0.1	0.2 (0.9)	1.2 (1.3)	1.0
United Kingdom	0.1	0.3 (0.5)	1.1 (1.1)	1.4
USA	2.5	2.3 (1.3)	1.9 (1.8)	1.9
China	5.2	4.8 (4.5)	4.5 (4.4)	4.0

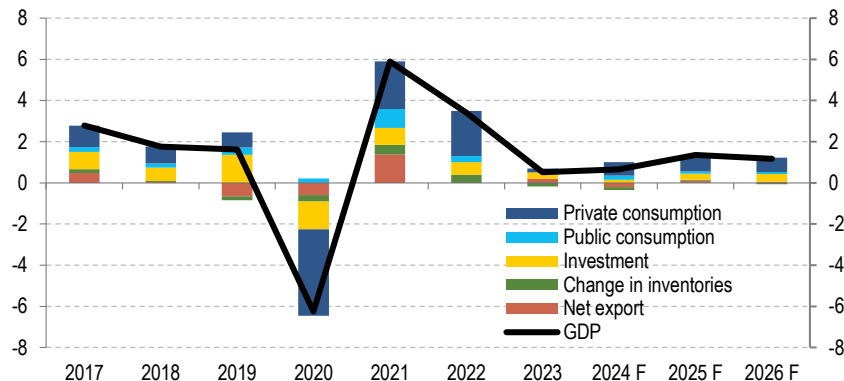
Values from the November projection are given in brackets (seasonally adjusted). Indicators with values higher than in the November projection are marked green, and indicators with lower values are marked red.



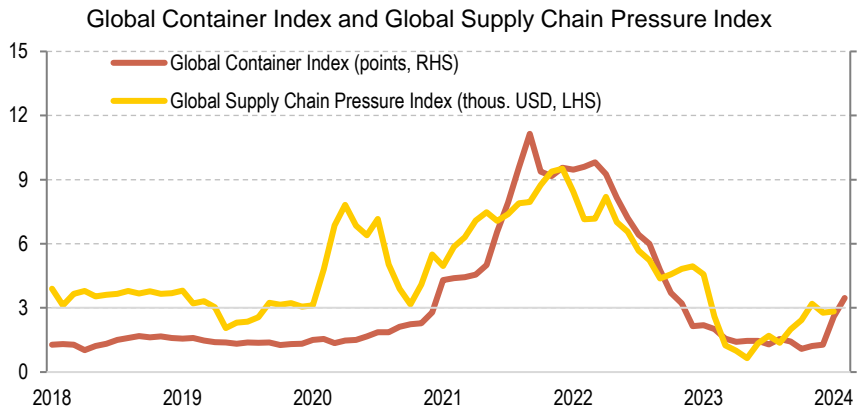
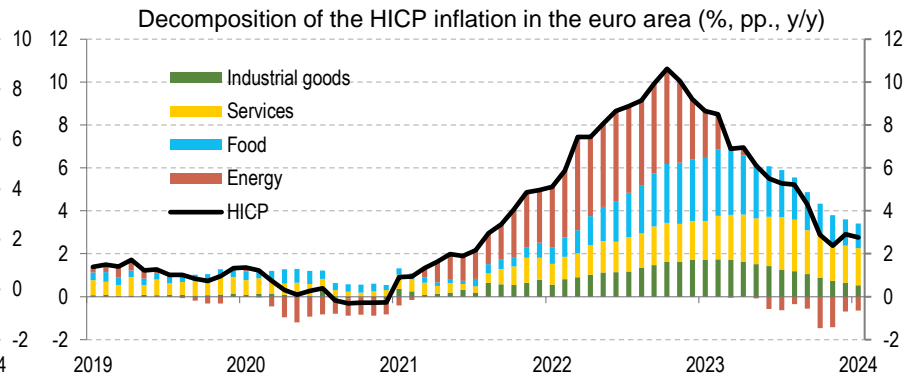
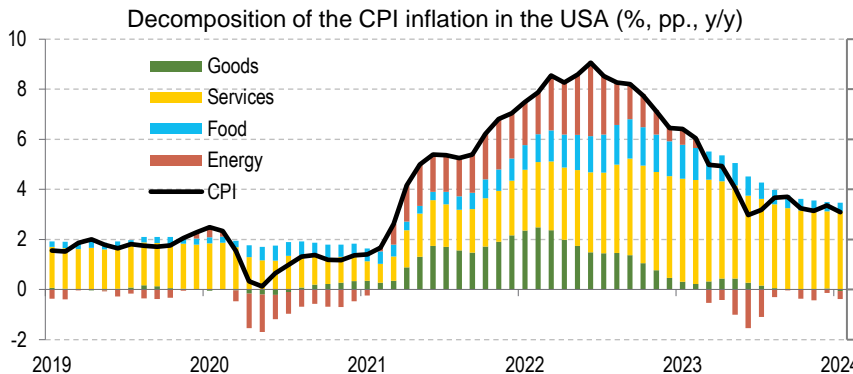
US real GDP growth decomposition (% and percentage points)



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



Between 2024 and 2026, inflation will decline, while being constrained by the persistence of service price inflation.



Note: Core inflation in the euro area means HICP inflation net of food, alcohol and tobacco and energy prices; in the United States – CPI inflation after excluding food and energy prices.

Source: BLS, Eurostat, Refinitiv, FRBNY, Datastream.



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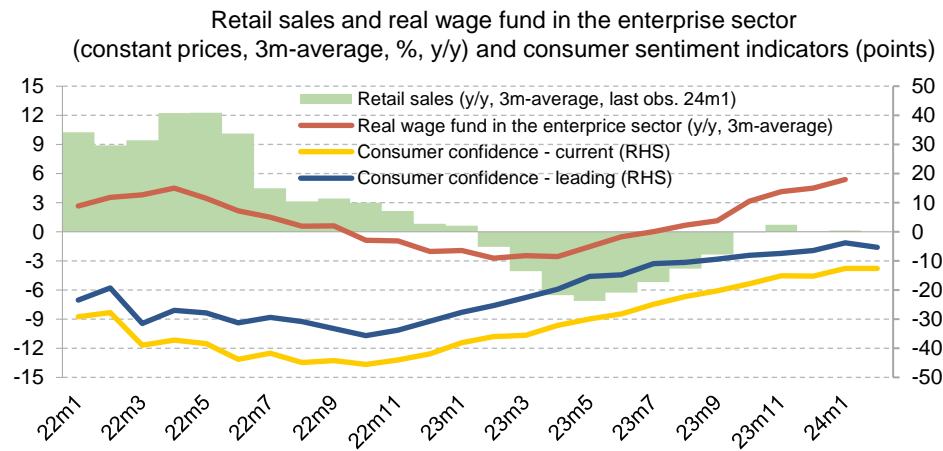
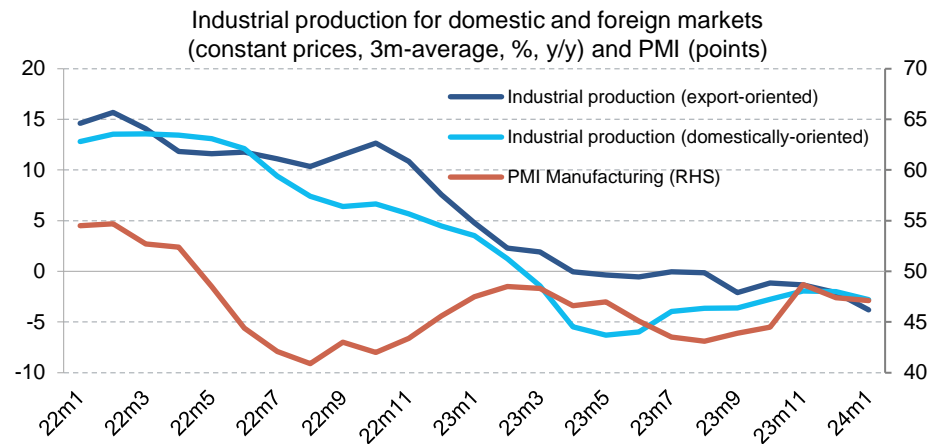
Projection 2024-2026

Economic perspectives for Poland

Gradual recovery of economic activity in H2 2023

	23q3		23q4		23q4 Statistics Poland (29.02.2024)
GDP (y/y, %)	0.5	(0.4)	1.0	(1.3)	1.0
Domestic demand (y/y, %)	-5.2	(-2.0)	-3.3	(-0.4)	-2.3
Household consumption (y/y, %)	0.8	(-1.4)	0.3	(-0.7)	-0.1
Public consumption (y/y, %)	3.3	(5.9)	5.0	(13.1)	5.7
Gross fixed capital form. (y/y, %)	7.2	(7.6)	7.7	(5.8)	8.7
Change in inventories contrib. (y/y, pp)	-7.7	(-3.5)	-6.1	(-3.3)	-5.4
Net exports contribution (y/y, pp)	5.9	(2.4)	4.2	(1.7)	3.3
Exports (y/y, %)	-11.0	(-4.3)	-3.0	(-3.1)	2.7
Imports (y/y, %)	-20.3	(-8.2)	-10.5	(-6.8)	-2.8

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

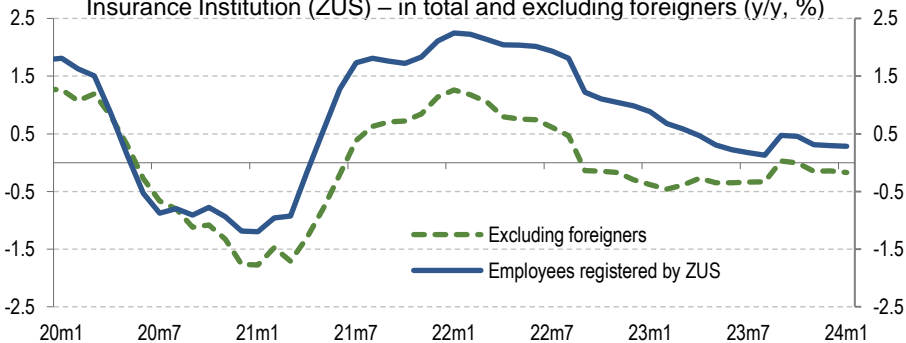


Reduction in labour demand

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

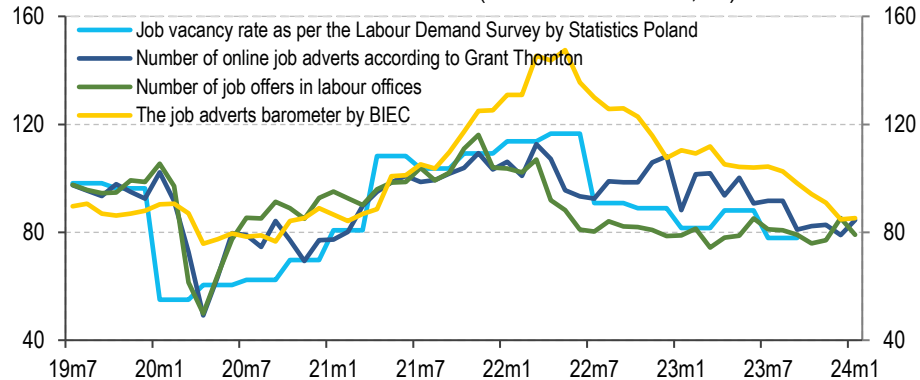


No. of employees registered for pension and disability insurance by The Social Insurance Institution (ZUS) – in total and excluding foreigners (y/y, %)

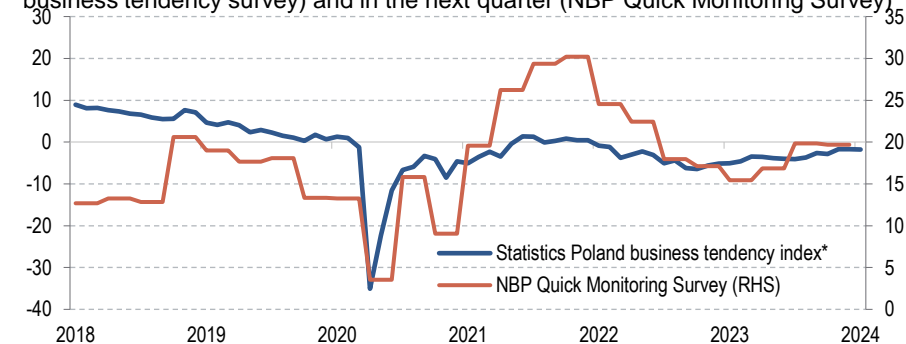


Source: Statistics Poland, The Social Insurance Institution (ZUS), NBP Quick Monitoring Survey, BIEC, Grant Thornton, NBP calculations.

Labour demand measures (index 04.2019=100, sa)



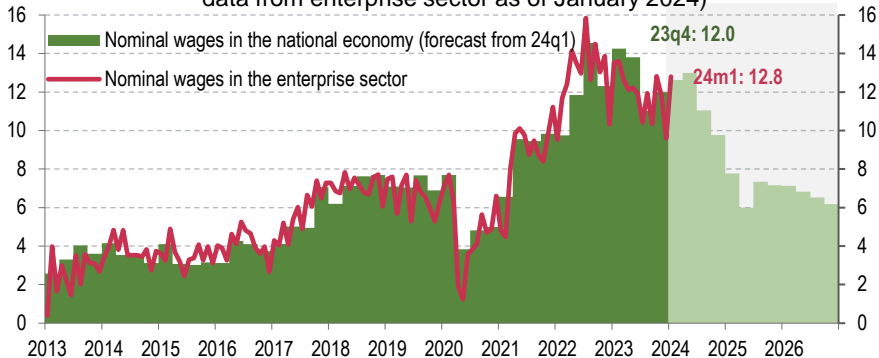
Index of expected changes in employment over the next 3 months (Statistics Poland business tendency survey) and in the next quarter (NBP Quick Monitoring Survey)



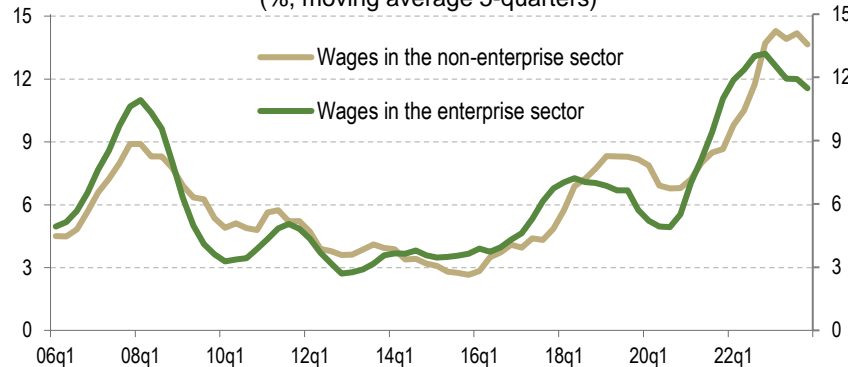
* Seasonally adjusted data. The index represents the difference between respective shares (in %) of answers indicating an increase and a decrease in expected employment. Statistics Poland data aggregated by the NBP.

Nominal wage dynamics this year will be sustained by a high increase in the minimum wage and wage hikes in the general government sector; in real terms, wage growth will accelerate significantly.

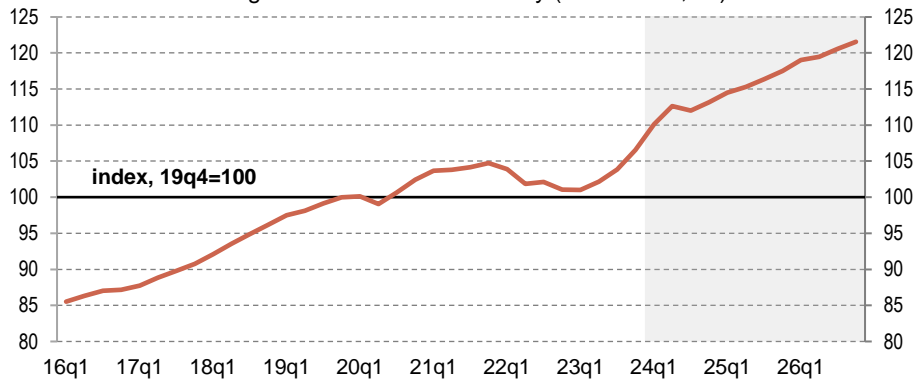
Nominal wage dynamics (% , y/y, national economy data as of 23q4, data from enterprise sector as of January 2024)



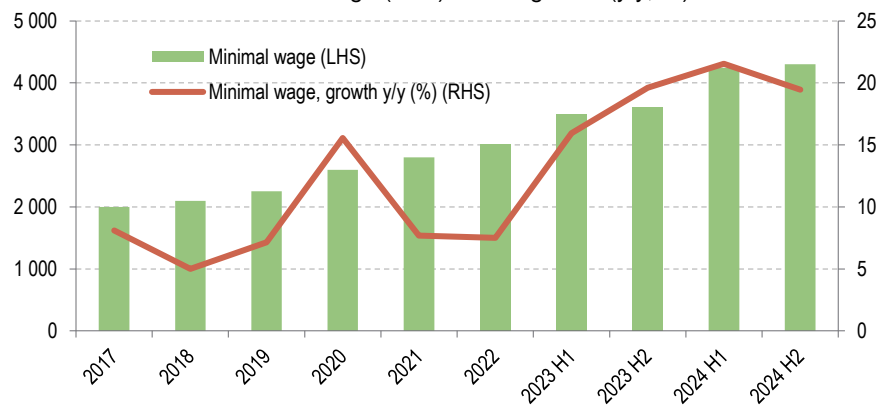
Annual growth rate of wages in the enterprise and non-enterprise sector (% , moving average 5-quarters)



Real wages in the national economy (19Q4 =100, sa)

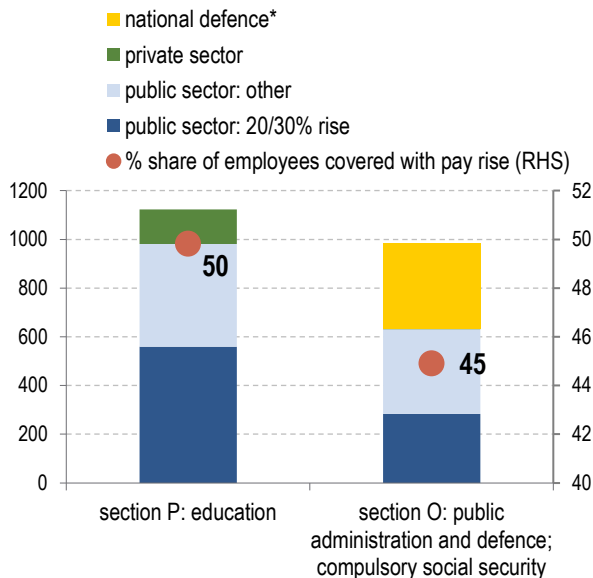


Minimal wage (PLN) and its growth (y/y, %)



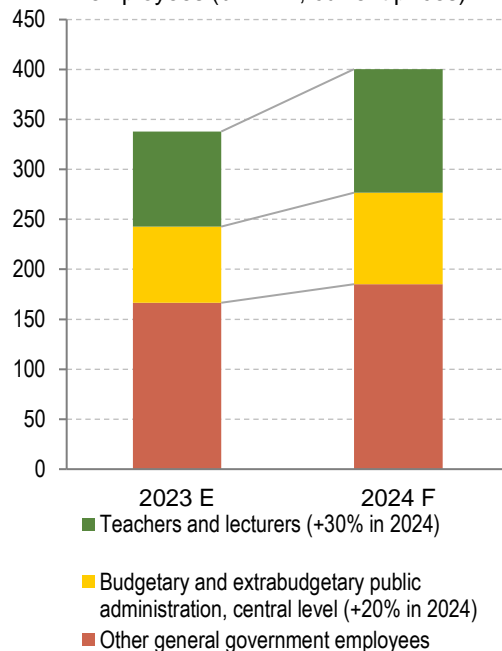
A significant impact of the wage hikes in the general government sector

Number of employees in the education and public administration section (thous.) and share of employees covered with the highest pay rise in these sections (%) (estimates)



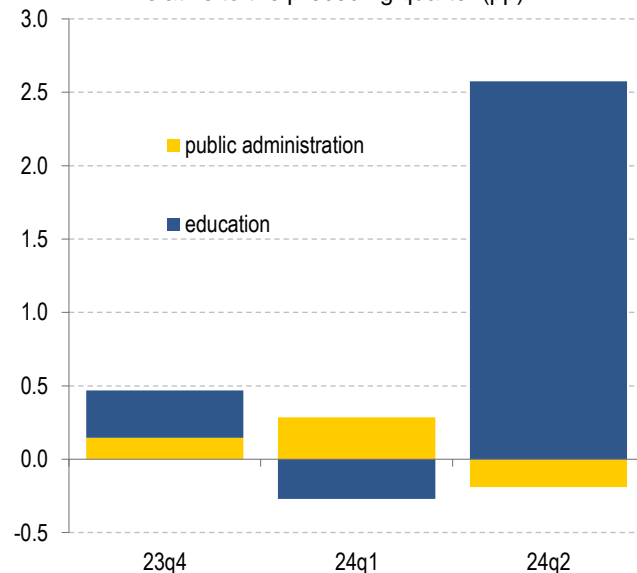
* The share of employees in section O does not include national defence. National defence is subject to the announced pay rise, but it is not within the subjective scope of the forecast average salary in the national economy.

Estimated general government expenditure on compensation of employees (bn PLN, current prices)



E – estimates
F – forecast

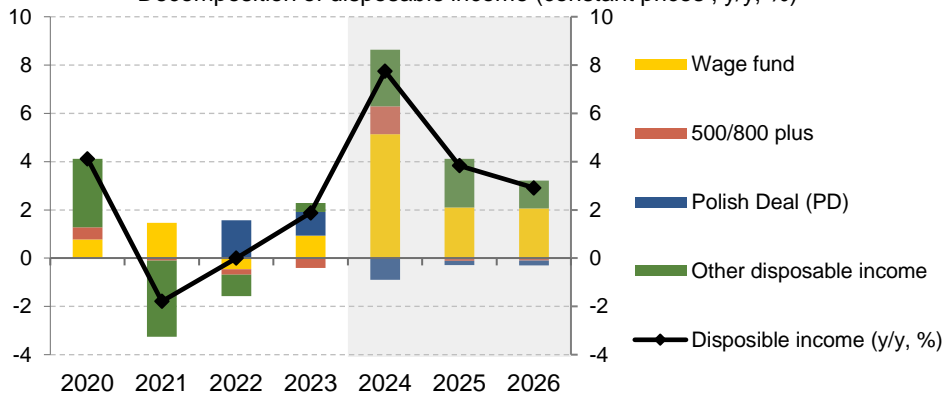
Contribution of selected sections to the change in nominal annual wage growth in the national economy, relative to the preceding quarter (pp)



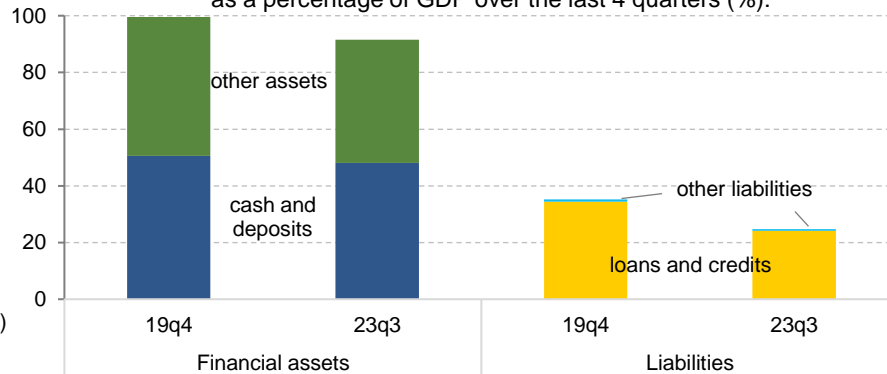
Note: Estimates assuming the payment of rises in education in Q2 this year with compensation from January and the payment of rises in the public administration in Q1 this year.

In 2024, household consumption is expected to accelerate, driven by the favourable growth of real disposable income.

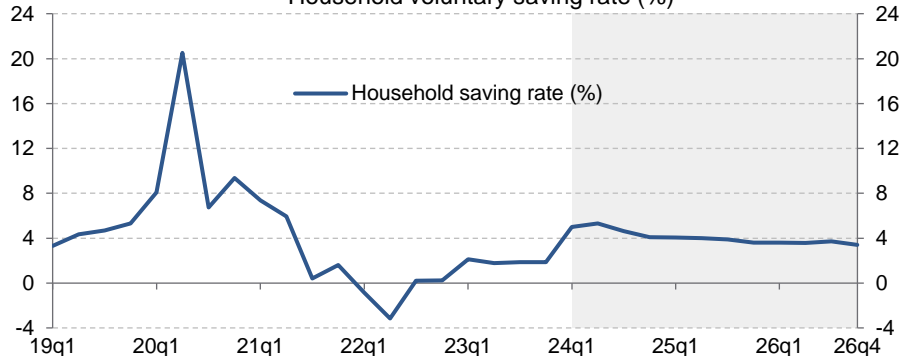
Decomposition of disposable income (constant prices , y/y, %)



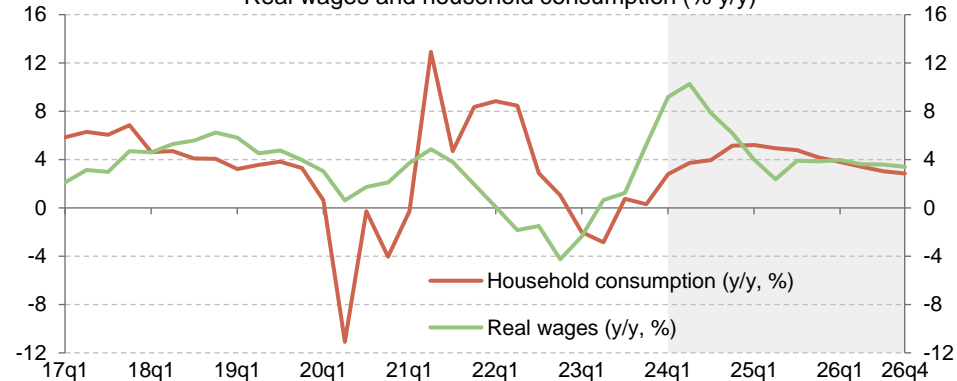
Financial assets and liabilities of households at the end of 19q4 and 23q3 as a percentage of GDP over the last 4 quarters (%):



Household voluntary saving rate (%)

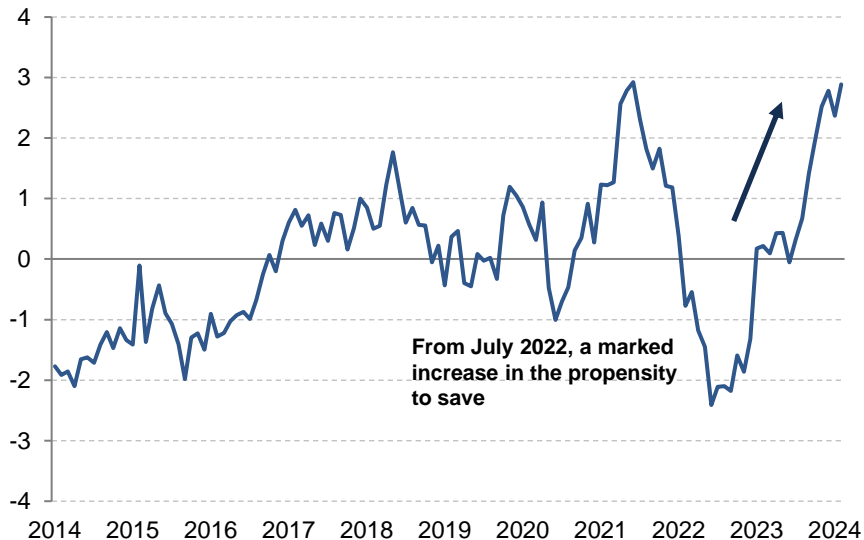


Real wages and household consumption (% y/y)



A growing propensity to save and an increased interest in bonds among households

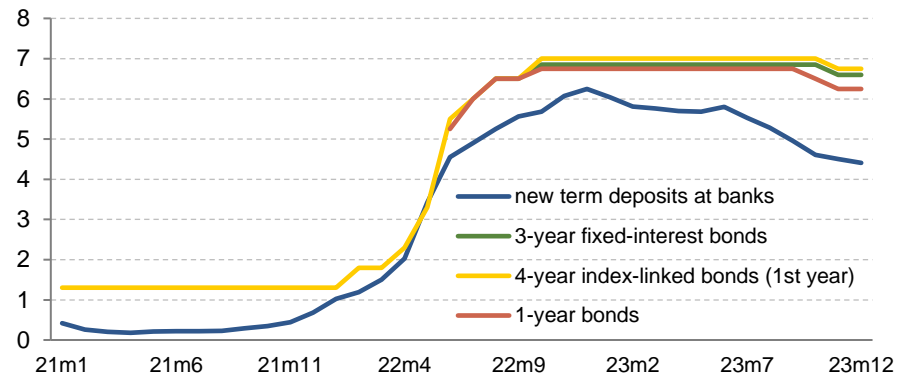
Propensity to save index adjusted for the impact of the household's current financial situation



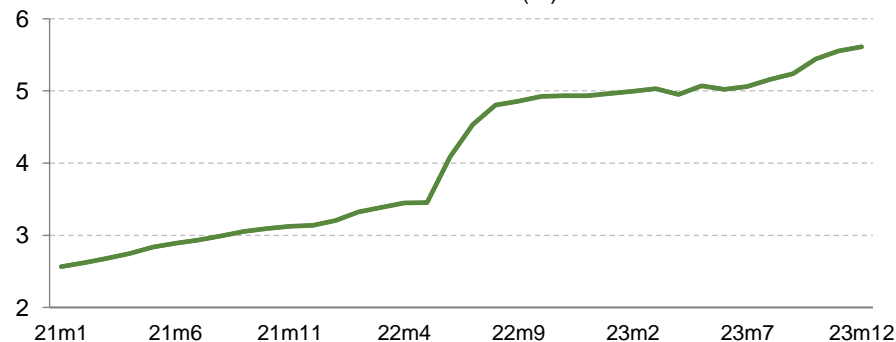
Notes: indicator determined from linear regression estimates in which the dependent variable was the "Future Money Saving" index (KGD, Statistics Poland) and the set of explanatory variables included the aggregate percentages of individual responses to the question, "Which of the following statements best describes your household's current financial situation?" (1) we can save a lot, (2) we are saving a little, (3) with our current income we are making ends meet, (4) we have to use our savings, (5) we are going into debt, (6) I don't know."

Source: Household Condition Survey (KGD Statistics Poland), MF, NBP calculations.

Average interest rates on new bank deposits and retail bonds (%)

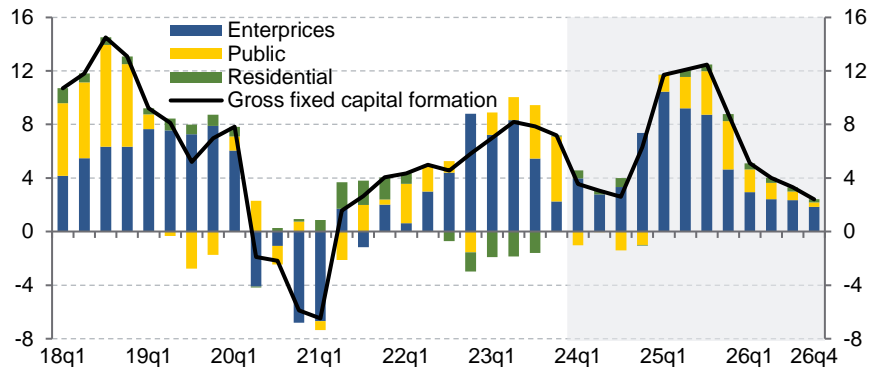


Share of government bonds in domestic financial assets of households (%)

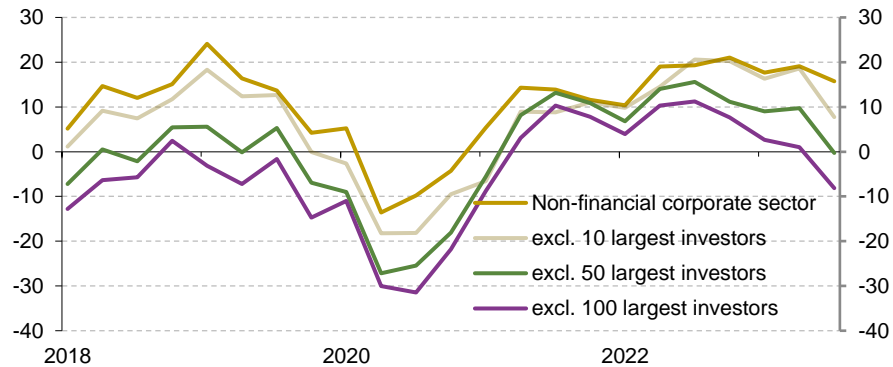


The robust expansion of gross fixed capital formation in 2023 was driven by substantial investments from large companies, particularly in the transport and energy sectors.

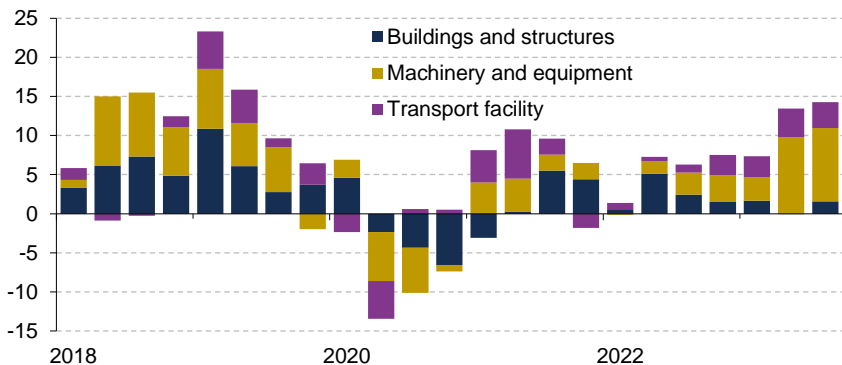
Decomposition of gross fixed capital formation (y/y, %)



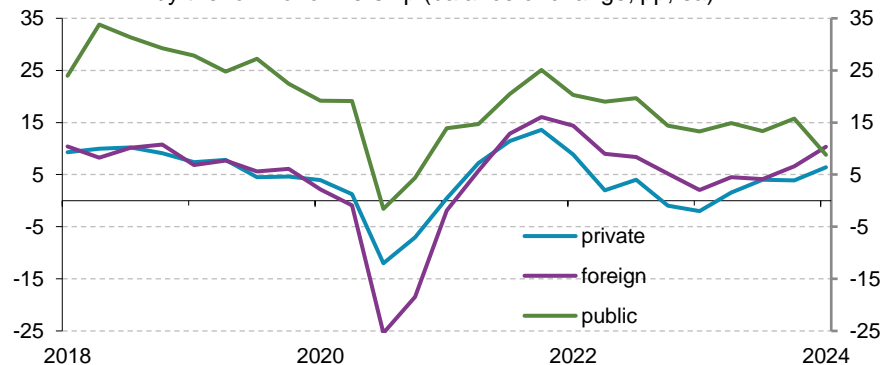
Investment dynamics excluding major investor groups (y/y, current prices)



Contribution to real investment growth by type (y/y, pp)

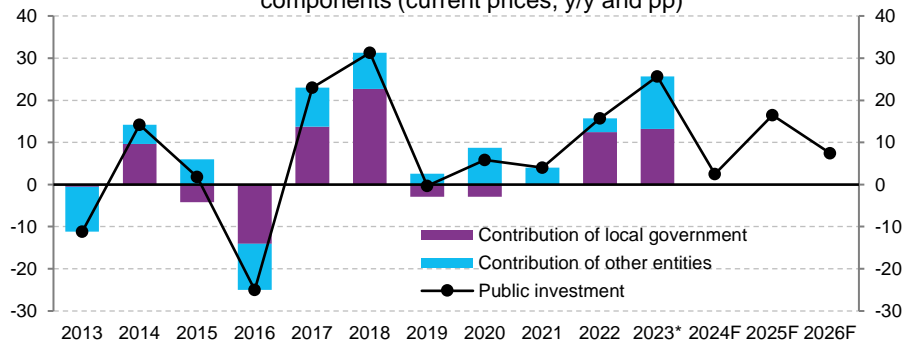


Planned change in the scale of investment in the outlook for the year by the form of ownership (balance of change, pp, sa)

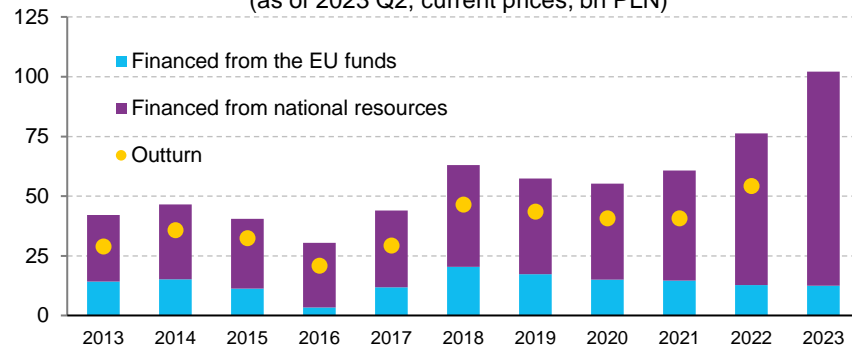


Following a substantial rise in local government investment in 2023, public investment expected to slow down in 2024 due to the initial phase of the new EU perspective

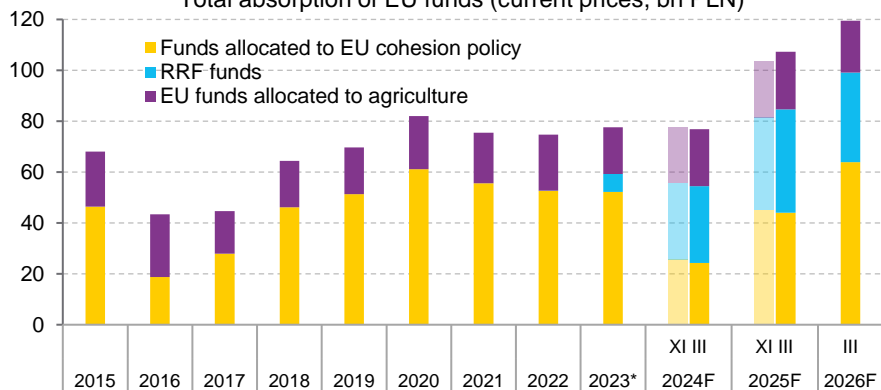
Nominal growth rate of public investment and contribution of its main components (current prices, y/y and pp)



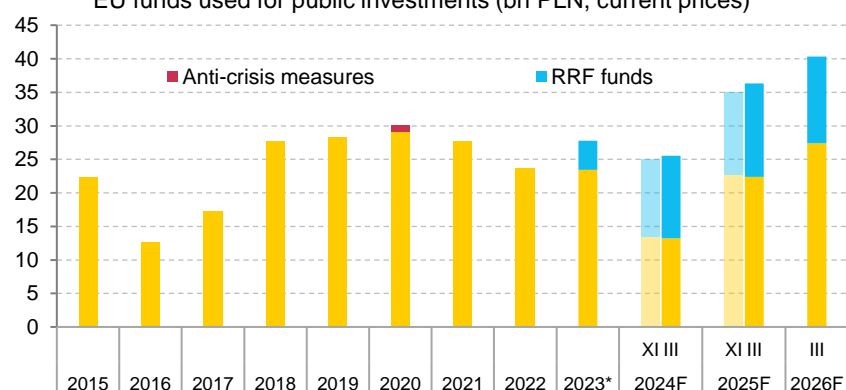
Planned local governments investment spending (as of 2023 Q2, current prices, bn PLN)



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



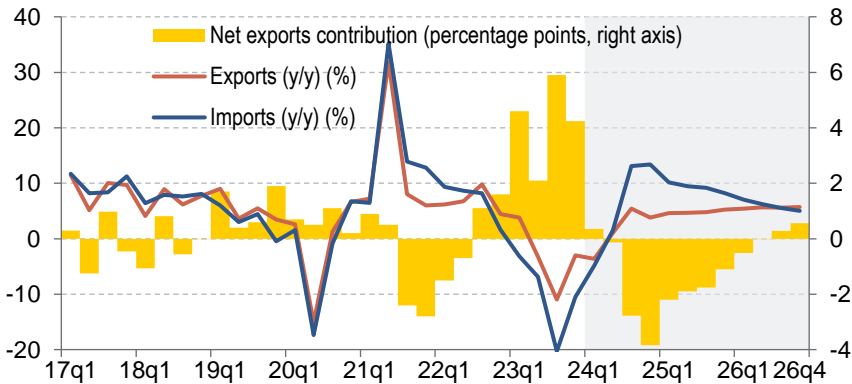
EU funds used for public investments (bn PLN, current prices)



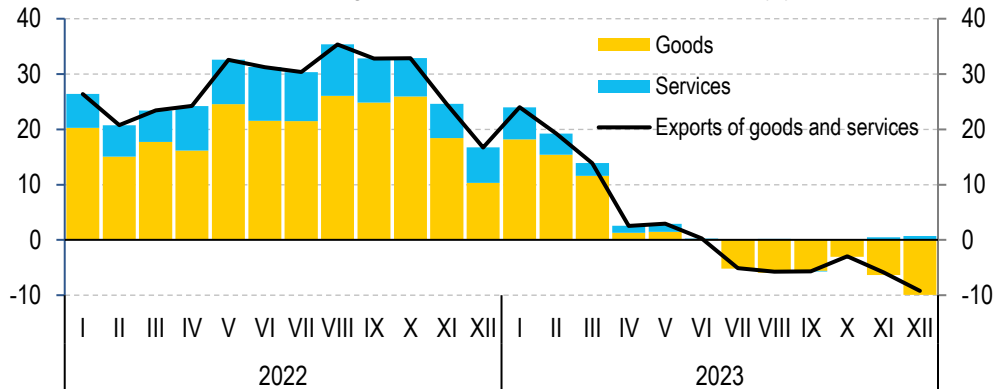
* - estimates
F - forecast

After a historically high outturn in 2023, the contribution of net exports to GDP growth turns negative again in 2024-2025.

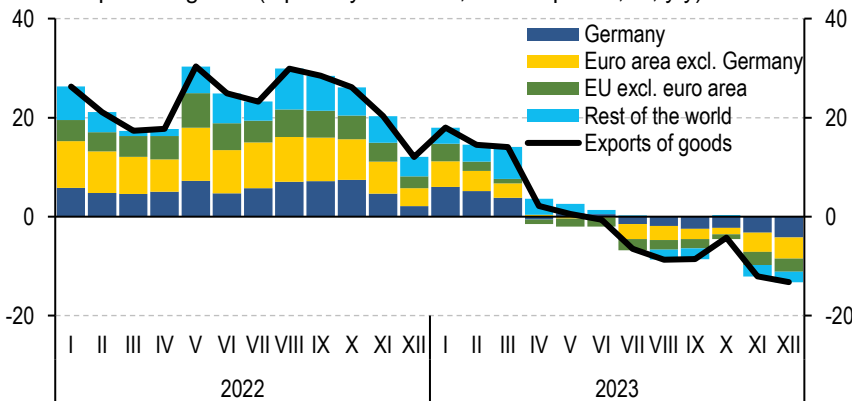
Net exports contribution to GDP growth rate



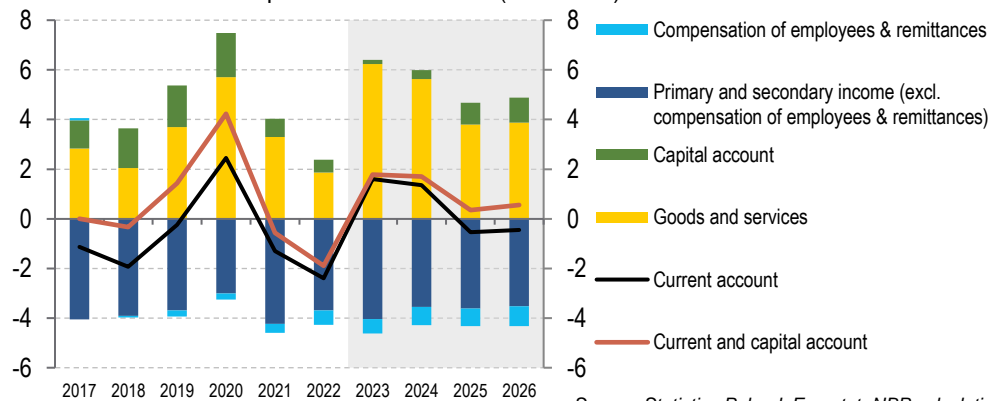
Exports of goods and services (current prices, %, y/y)



Exports of goods (inputs by direction, current prices, %, y/y)

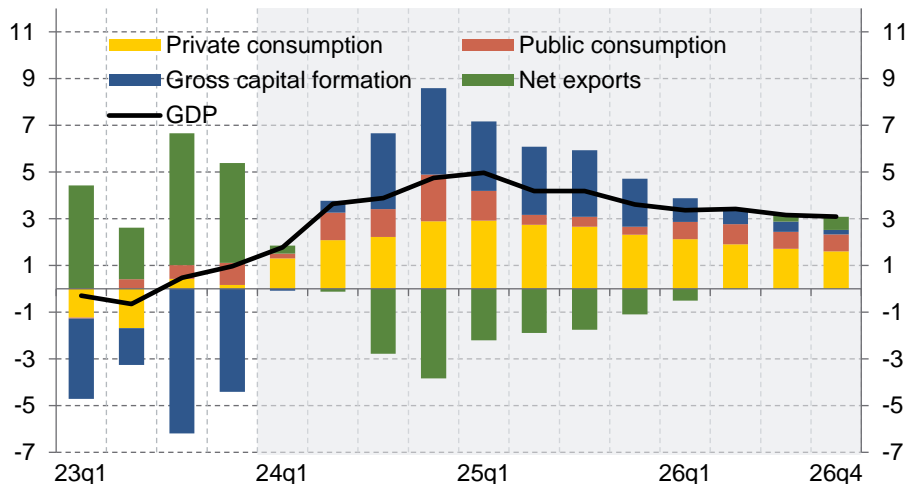


Current and capital account balance (% of GDP)

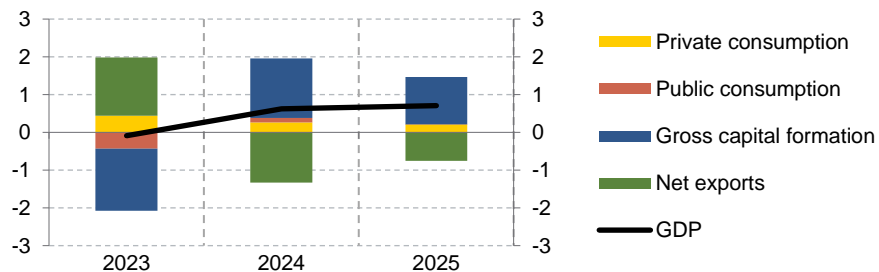


After a marked slowdown in 2023, growth rebounds in subsequent years, slightly stronger than in the November round.

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



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



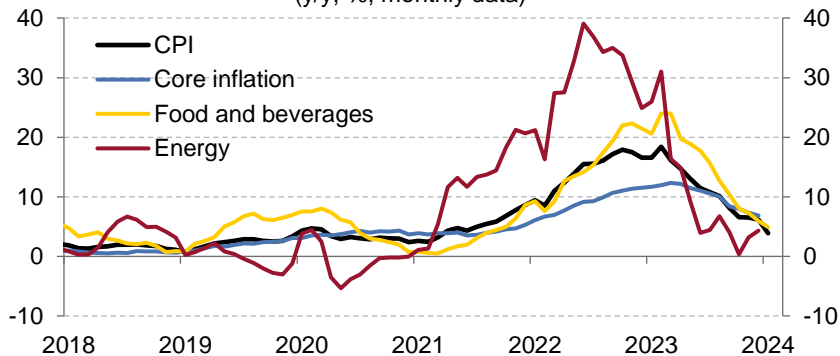
Factors determining domestic activity over the projection horizon:

- ↑ **receding impact of supply shocks** on global energy commodity markets
- ↑ **fiscal measures** to increase household disposable income
- ↓ ↑ **a slight decline in the use of European funds in 2024** and **a sharp increase in 2025** under the new financial perspective 2021-2027
- ↑ **limited recovery in Poland's external environment**
- ↓ **restrictive monetary policy**, assuming rates remain unchanged

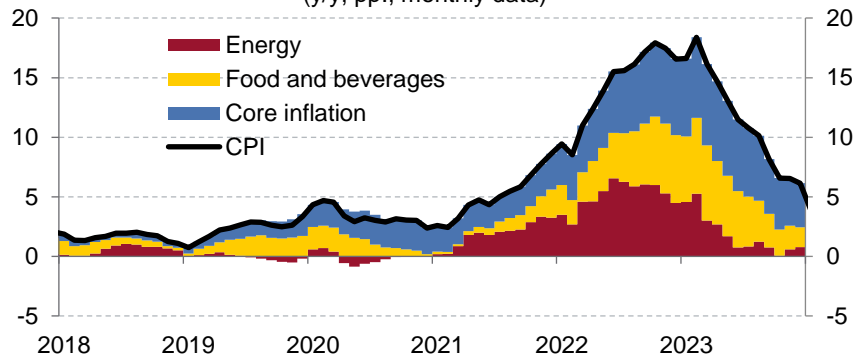
GDP, y/y, %	2022	2023	2024	2025	2026
March 2024	5.3	0.2	3.5	4.2	3.3
November 2023	5.3	0.3	2.9	3.5	-

A marked decline in CPI inflation at the turn of 2023-2024

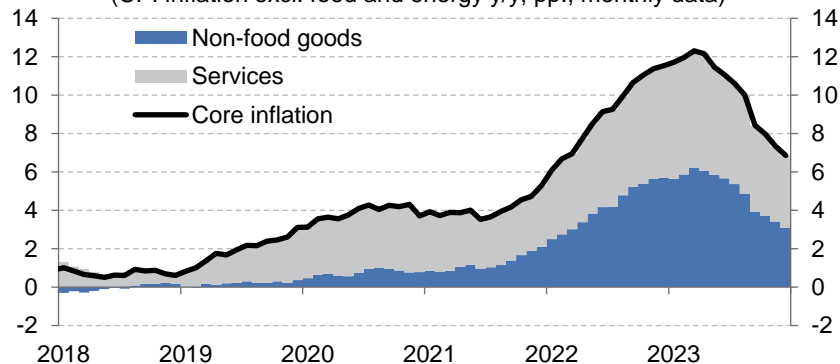
Consumer price dynamics
(y/y, %, monthly data)



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



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



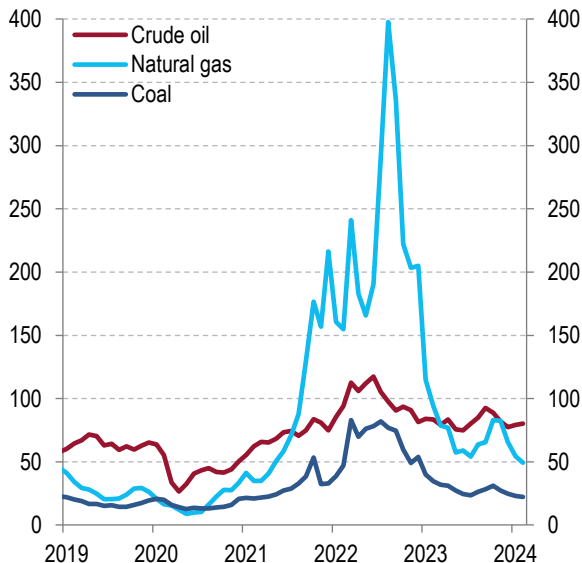
Inflation in 2023 compared to the November projection
(y/y, %)

y/y, %	23q3	23q4	2023
CPI inflation	9.7	6.4	(6.7) 11.4 (11.4)
Core inflation	9.7	7.4	(7.6) 10.1 (10.1)
Food prices inflation	12.9	7.1	(7.0) 15.1 (15.0)
Energy prices inflation	5.1	2.6	(3.6) 9.8 (10.0)

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

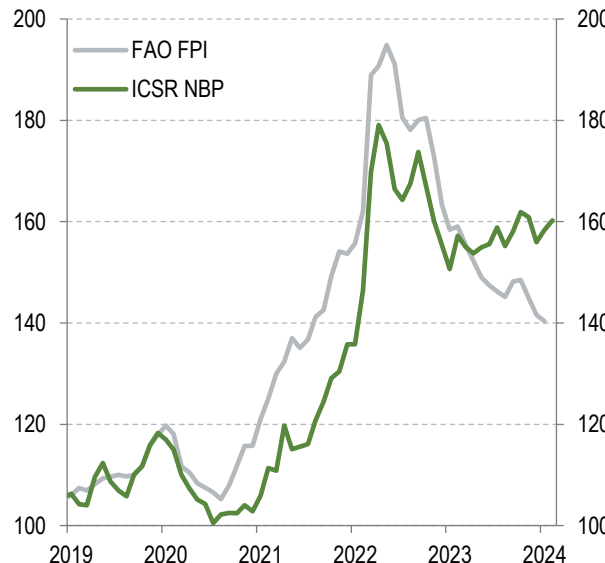
Global commodity prices have fallen from their record levels in 2022.

Oil, gas and coal prices
(USD/boe, monthly data)



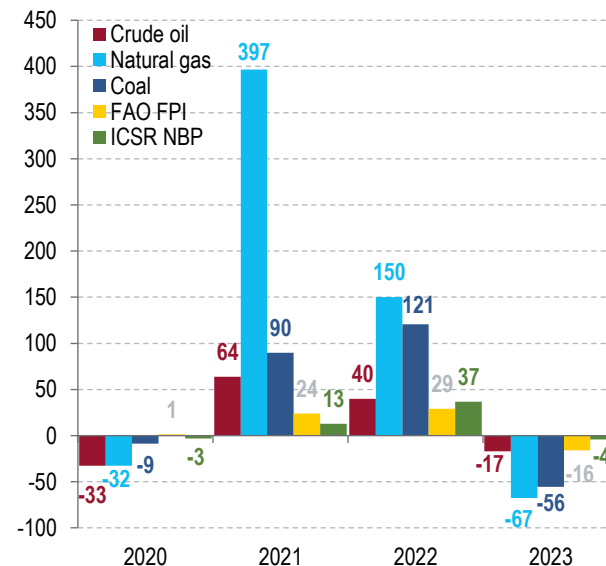
Note: boe - barrel of oil equivalent

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



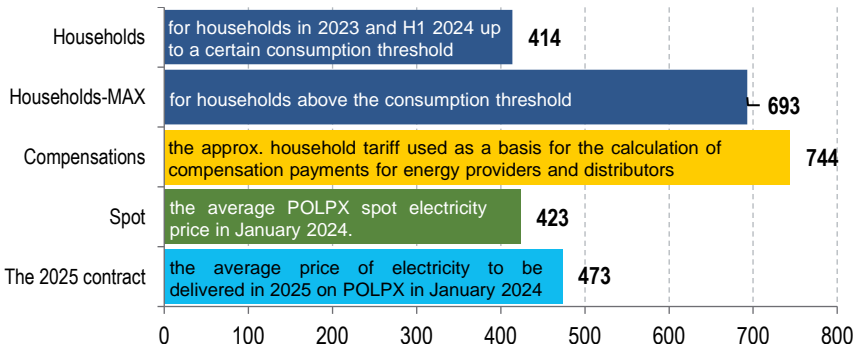
Note: FAO FPI Index data up to January 2024.

Average annual price dynamics
of energy and agricultural commodities between
2020 and 2023 (per cent)

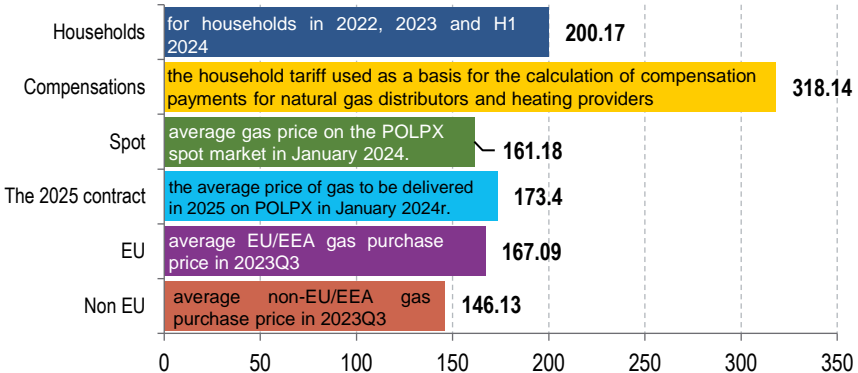


Uncertainty over the energy price path after June 2024

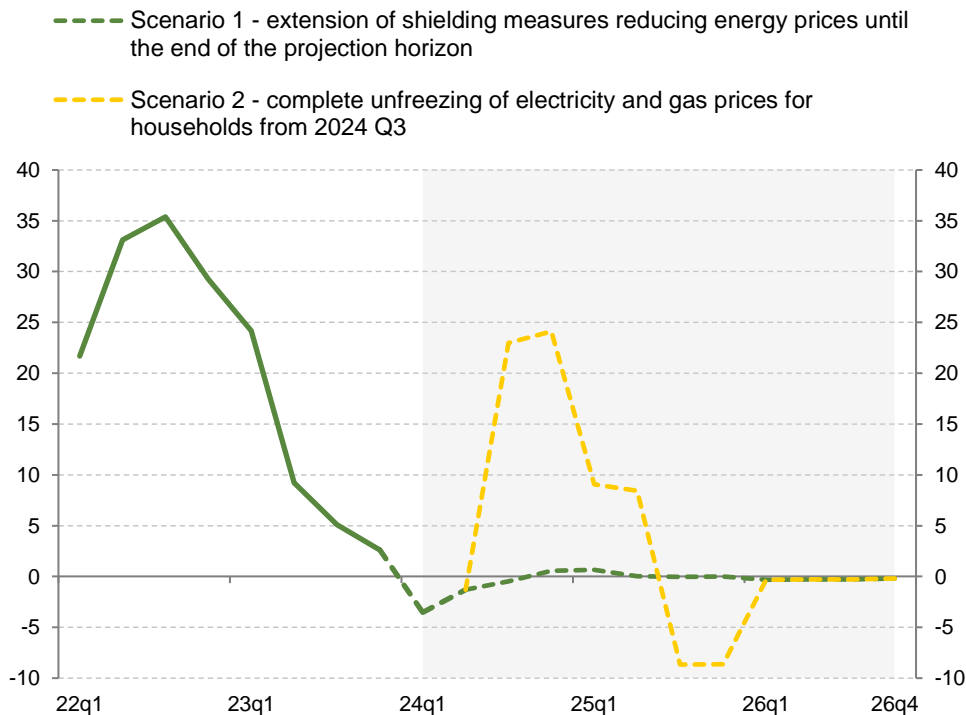
Electricity prices (PLN/MWh)



Natural gas prices (PLN/MWh)

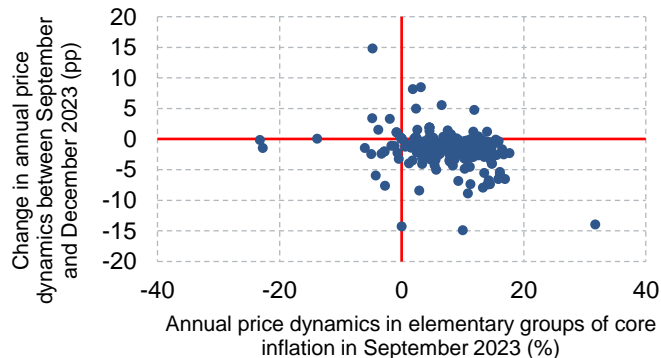


Energy price inflation – 2 scenarios (y/y) (%)



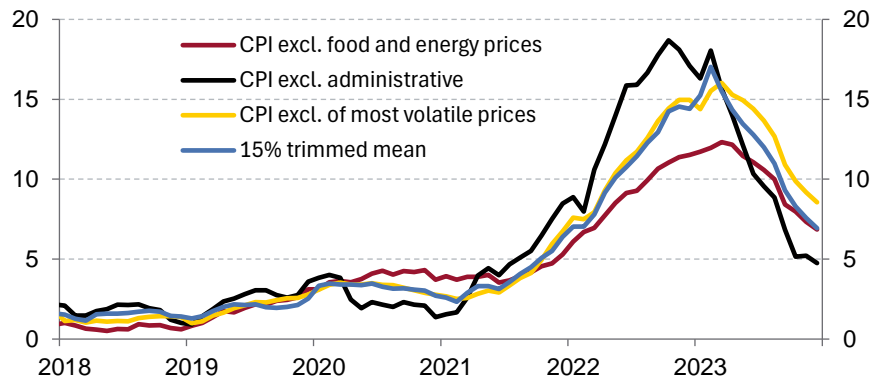
The decline in price dynamics applies to a broad range of goods and services in the basket of core inflation. The increasing contribution of rigid components to the evolution of CPI inflation.

Change in annual price dynamics between September and December 2023, depending on the level of inflation in September 2023.

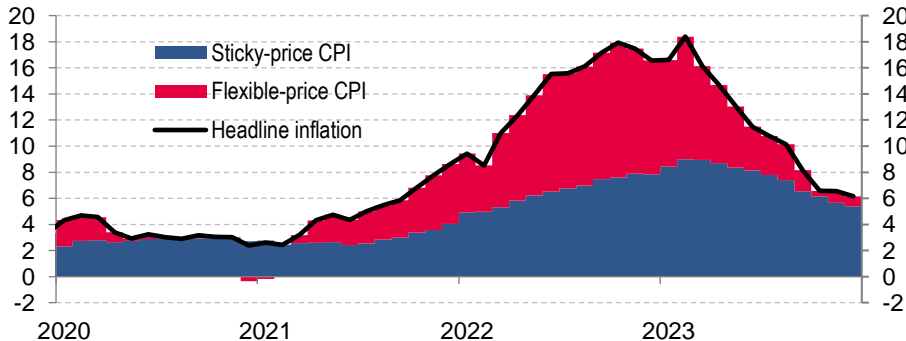


Note: Due to the size of the axis, 1 elementary group has been omitted from the graph: sea passenger transport (annual price dynamics in December: 32.6%, change from September: 49.8 percentage points). Due to its small weight, the impact of these dynamics on core inflation was negligible.

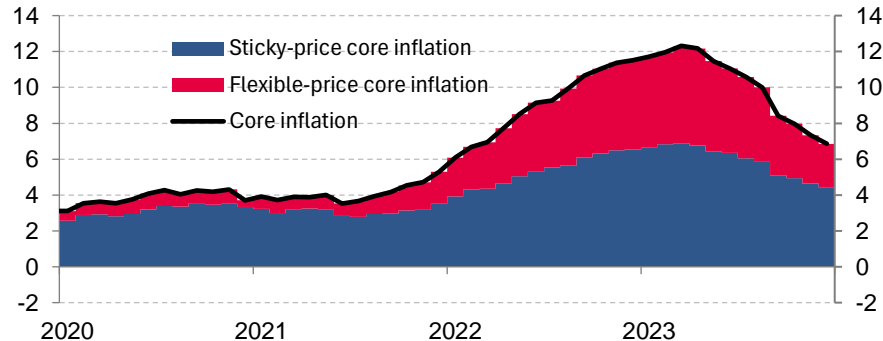
Core inflation indicators (y/y, pp, monthly data)



Headline inflation decomposition to sticky- and flexible-price items (% , pp, y/y)

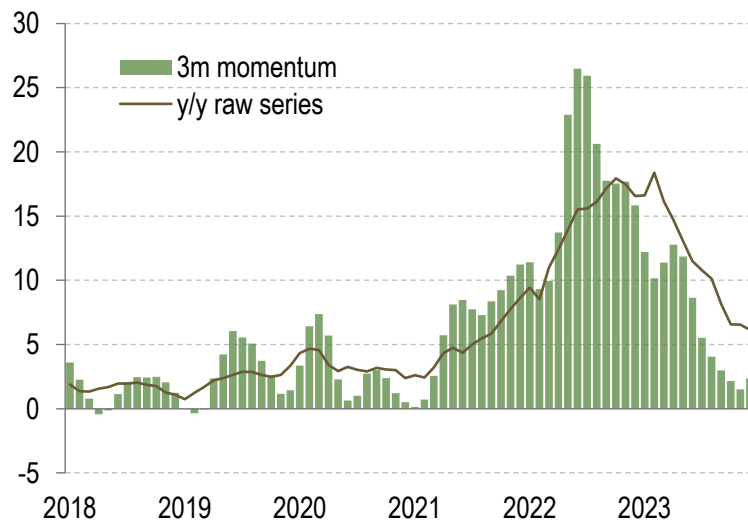


Core inflation decomposition to sticky- and flexible-price items (% , pp, y/y)

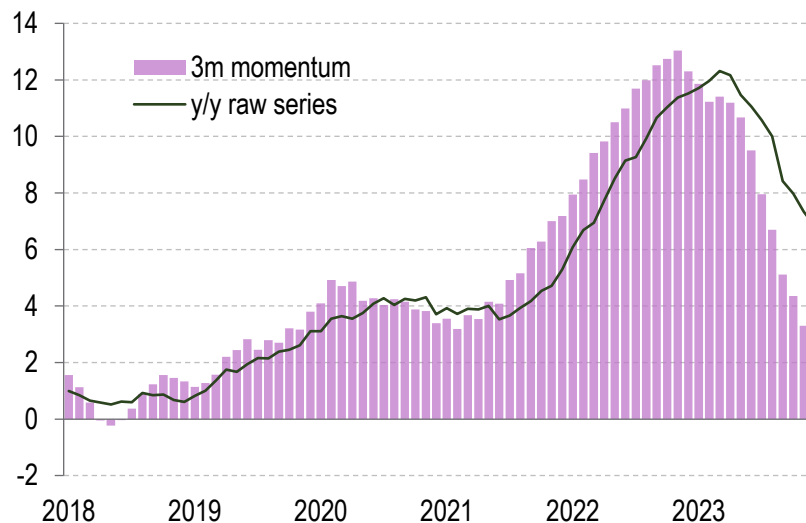


A marked slowdown in the momentum of CPI inflation to 2.4% y/y and core inflation to 3.6%

CPI inflation and annualised momentum
3m (% y/y)

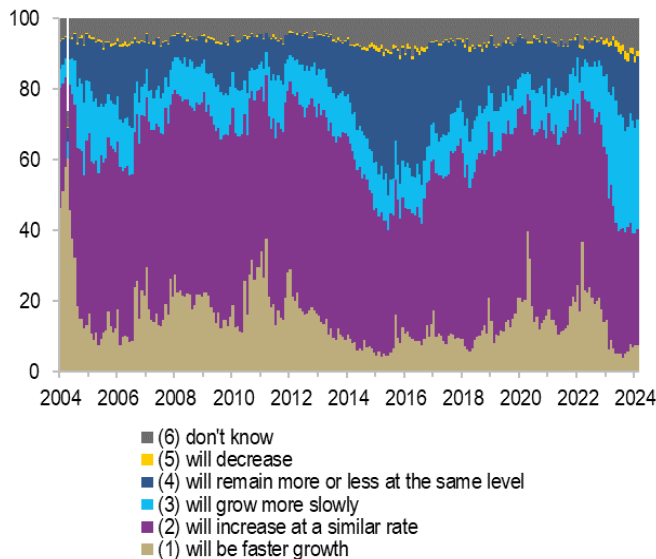


Core inflation (CPI excluding food and energy prices)
and annualised momentum 3m (% y/y)



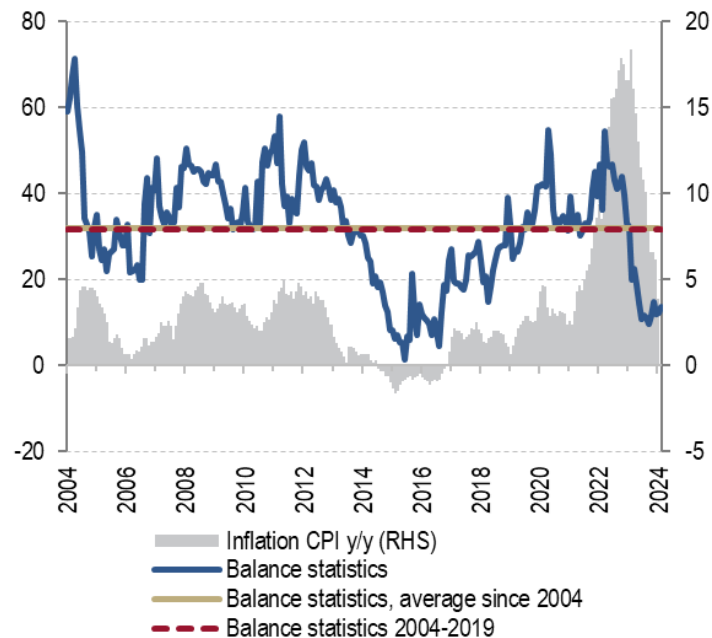
The increase in inflation only temporarily disrupted consumer inflation expectations – the adjustment process in the structure of survey responses to the inflation decline was rapid and occurred preemptively.

Structure of responses to the survey question on changes in consumer prices, +12 months



Content of the survey question: "Comparing to the last 12 months, what are your projections of changes in consumer prices (goods and services) in the next 12 months? (1) will be faster growth, (2) will increase at a similar rate, (3) will grow more slowly, (4) will remain more or less at the same level, (5) will decrease, (6) don't know". The percentages of respondents selecting the above responses are denoted as E1, E2, E3, E4, E5 and E6 respectively.

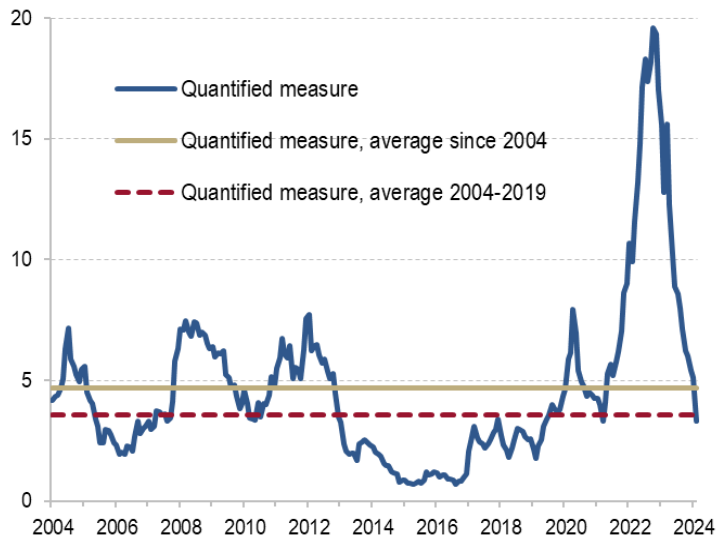
Consumer inflation expectations balance statistics, +12 months



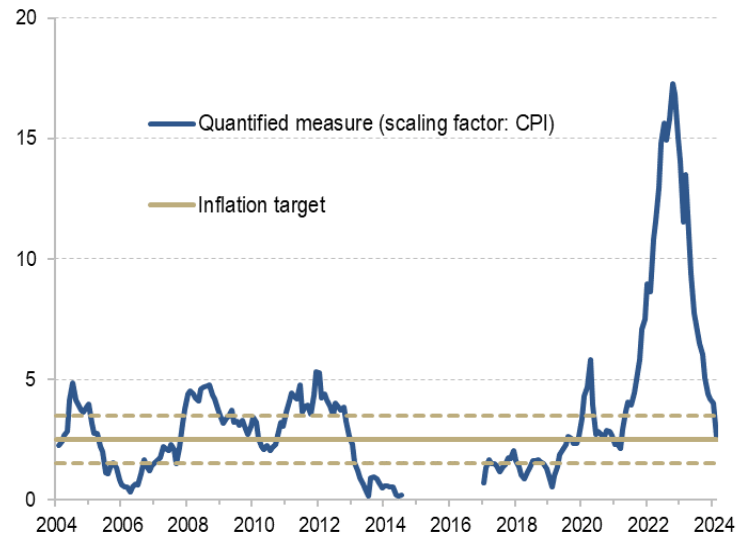
Note: The balance statistic is calculated by the Statistics Poland according to the formula: $E1 + 0.5 * E2 - 0.5 * E4 - E5$, where E1, E2, E3, E4 and E5 are the percentages of respondents selecting the subsequent response options to the survey question.

The decline in consumer inflation expectations is confirmed by experimental measures of expectations.

Measure of inflation expectations quantified with the probability method (scaling factor: CPPI) relative to the long-term average



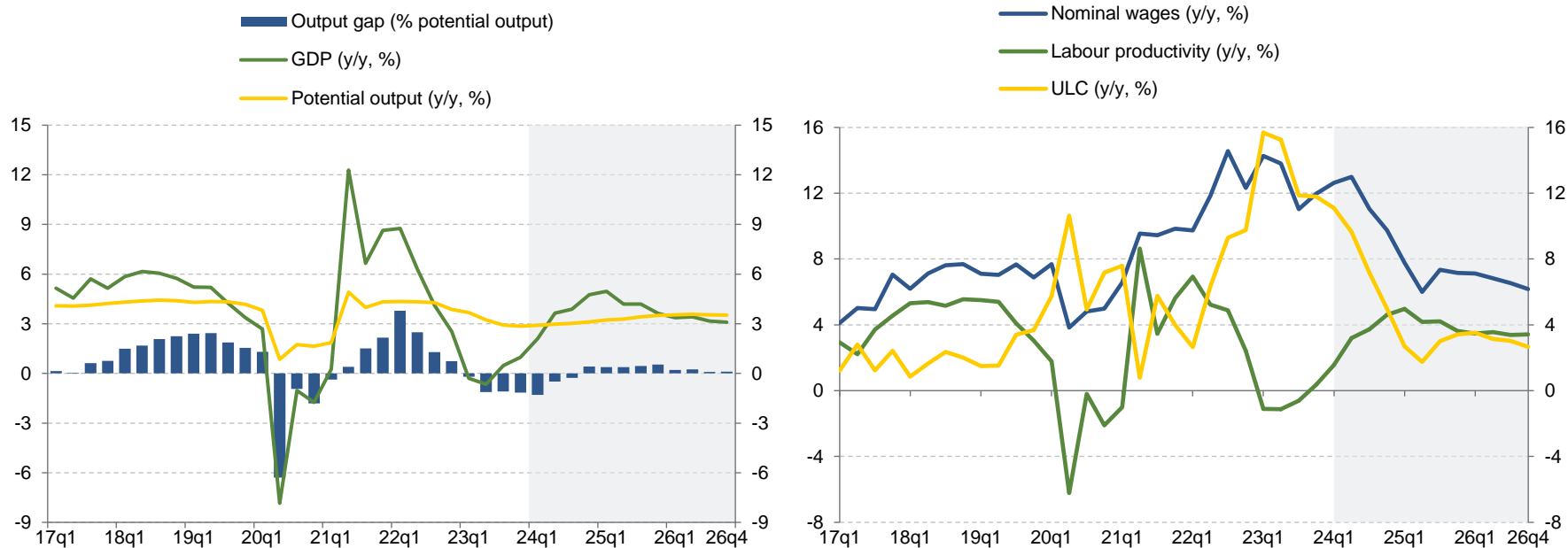
Measure of inflation expectations quantified with the probability method (scaling factor: CPI) against the NBP inflation target



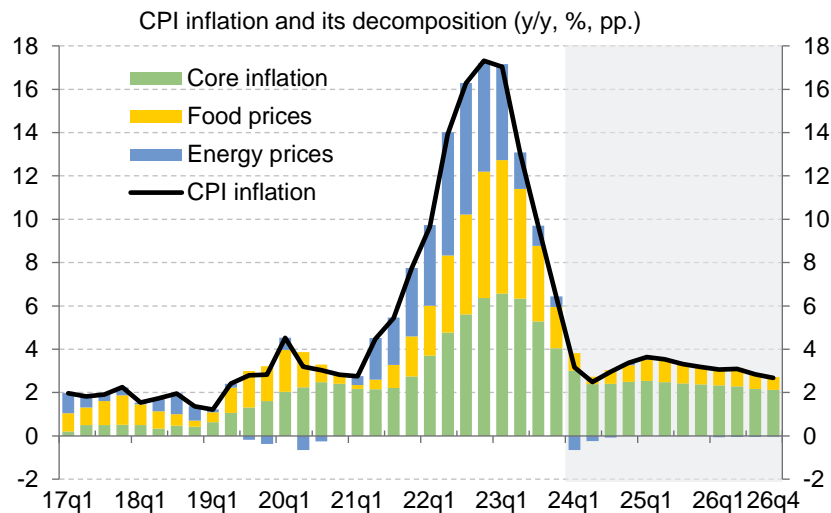
Note: The indicators presented are experimental. For details on the quantification of the measure in the left graph and relevant references, see [NBP Working Paper No. 249](#).

The data presented in the left graph for February 2024 are a preliminary estimate of the quantified measure.

Disinflation curbed by the output gap returning to positive values and, in the shorter projection horizon, also by high wage dynamics



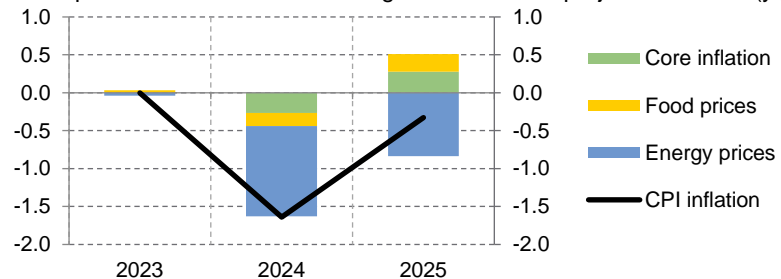
CPI inflation within the range of deviations from the NBP inflation target for most of the forecast period



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

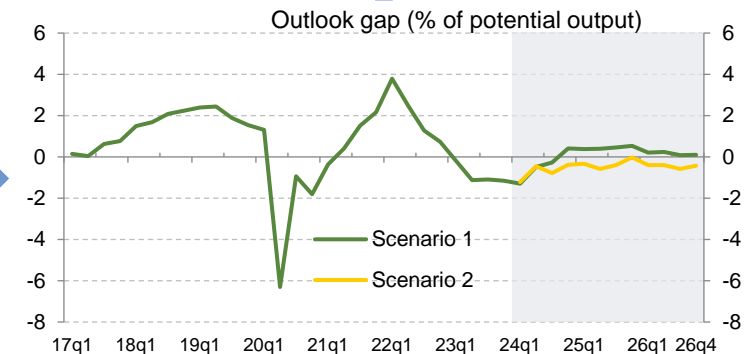
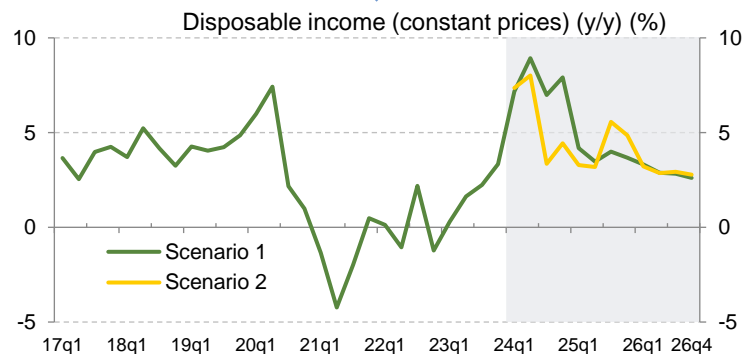
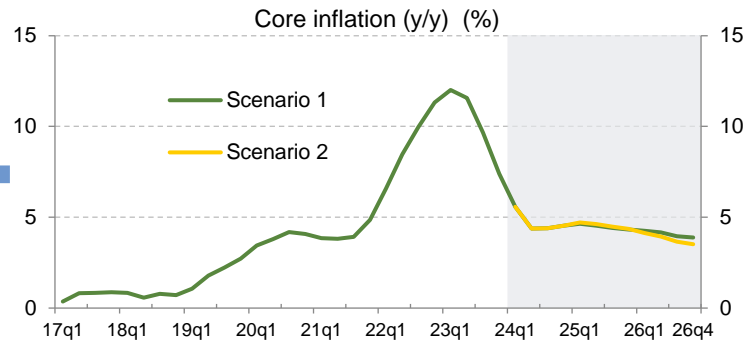
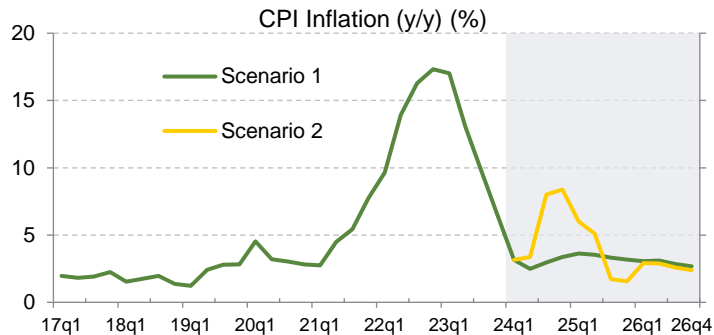
- ⇓ the fall in **energy and agricultural commodity prices**
- ⇓ **low inflation in the Polish economic environment**
- ⇓ **exchange rate appreciation** in 2023Q4
- ⇓ expected decline in **wage dynamics**
- ⇓ **the assumption that the government will maintain the anti-inflation shielding measures** (zero VAT on staple food products and the cap on electricity and gas prices for households)
- ⇑ **a marked recovery in demand**, supported by fiscal measures increasing **social transfers and wages**
- ⇑ **increased inflation persistence**

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



CPI, y/y, %	2022	2023	2024	2025	2026
March 2024	14.4	11.4	3.0	3.4	2.9
November 2023	14.4	11.4	4.6	3.7	-

March forecast - Scenario 1 (central path) vs. Scenario 2



Scenario 1 (central path) – extension of the shielding measures reducing energy and food prices until the end of the projection horizon.

Scenario 2 – the reinstatement of the 5% VAT rate on staple food products from April 2024 and the complete unfreezing of electricity and gas prices for households from 2024 Q3.



Outline:

Projection 2024 – 2026

- Economic conditions abroad
- Economic perspectives for Poland
- Inflation

Uncertainty

Uncertainty

- Risks
- Fancharts

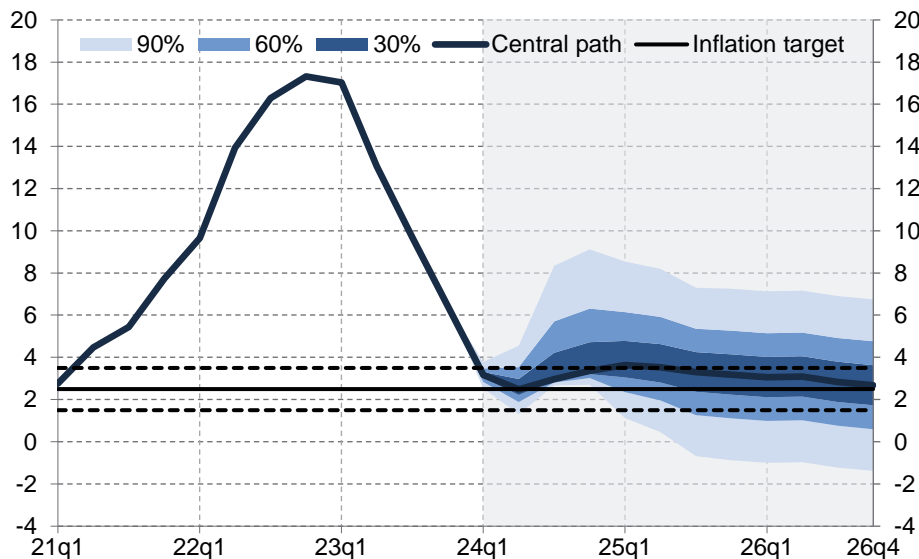
Risks

- **The impact of the government's fiscal measures in Poland, including the scale and scope of the shielding measures**
- **The shape of economic policy in the world's major economies**
- **Geopolitical developments and the scale of armed crises and supply chain disruptions**
- **The future path of energy commodity prices on world markets**

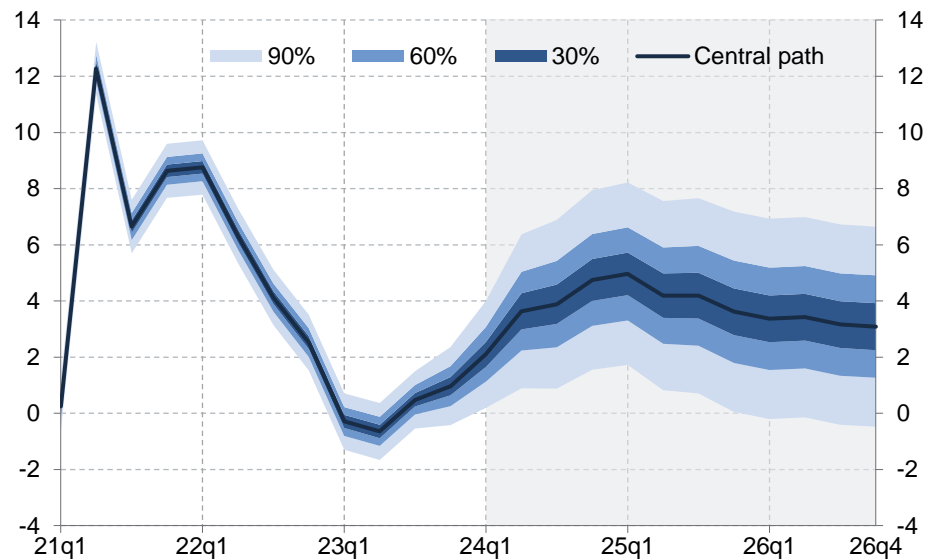
In the March projection horizon there is:

- ↑ **A higher probability of CPI inflation running above the projection's central path**
- ↔ **A 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	0%	2%	32%	15%	32%
2025	12%	26%	45%	43%	33%
2026	25%	42%	61%	50%	36%

CPI y/y, %	central path	50% probability interval	
2024	3.0	2.8	4.3
2025	3.4	2.2	5.0
2026	2.9	1.5	4.3

GDP y/y, %	central path	50% probability interval	
2024	3.5	2.7	4.3
2025	4.2	3.2	5.3
2026	3.3	2.0	4.5



**NARODOWY
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