



NBP

Narodowy Bank Polski

Economic Analysis Department

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

Warsaw / 8th March 2021



Outline

Outline:

Pandemic: economic
fallout

Projection 2021 – 2023

- Economic conditions
abroad
- Polish economy

Uncertainty

1 Pandemic: economic fallout

2 Projection 2021 - 2023

3 Uncertainty

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Pandemic: economic
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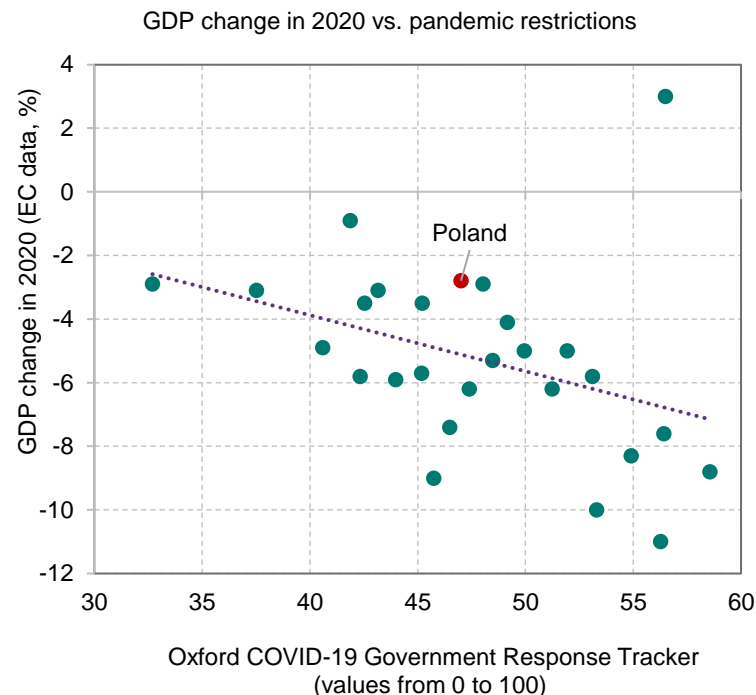
Uncertainty

Pandemic: economic fallout

The economic slowdown in Poland in 2020 was milder than in the other countries, despite the pandemic restrictions close to the EU average.

	20q4			2020		
	Nov'20 projection	Mar'21 projection*	GUS 26.02.2021	Nov'20 projection	Mar'21 projection*	GUS 26.02.2021
GDP (y/y) (%)	-6.5	-2.8	-2.8	-3.5	-2.8	-2.7
Domestic demand (y/y) (%)	-7.6	-2.7	-3.4	-4.7	-3.7	-3.9
Household consumption (y/y) (%)	-7.5	-3.2	-3.2	-4.2	-3.0	-3.0
Public consumption (y/y) (%)	5.8	4.2	3.4	3.6	3.4	3.2
Gross fixed capital form. (y/y) (%)	-14.8	-10.6	-10.9	-8.2	-8.4	-8.4
Exports (y/y) (%)	-10.4	2.6	8.0	-6.4	-2.0	-0.5
Imports (y/y) (%)	-12.6	3.6	7.9	-8.7	-3.7	-2.6
Contribution of net exports (pp)	0.8	-0.3	0.4	1.1	0.8	1.0

* Cut-off date for the March'21 projection: 16th February 2021



A favourable cyclical position and no significant imbalances at the onset of the pandemic.

Selected macroeconomic data for 2019

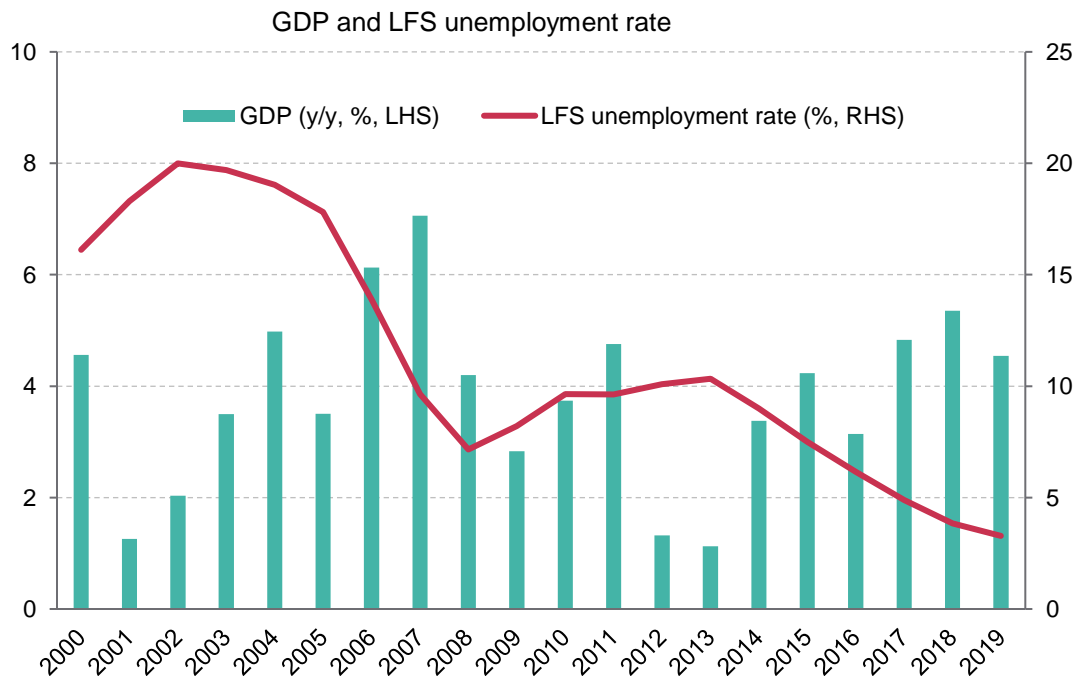
GDP growth rate (y/y) 4.5%

LFS unemployment rate 3.3%

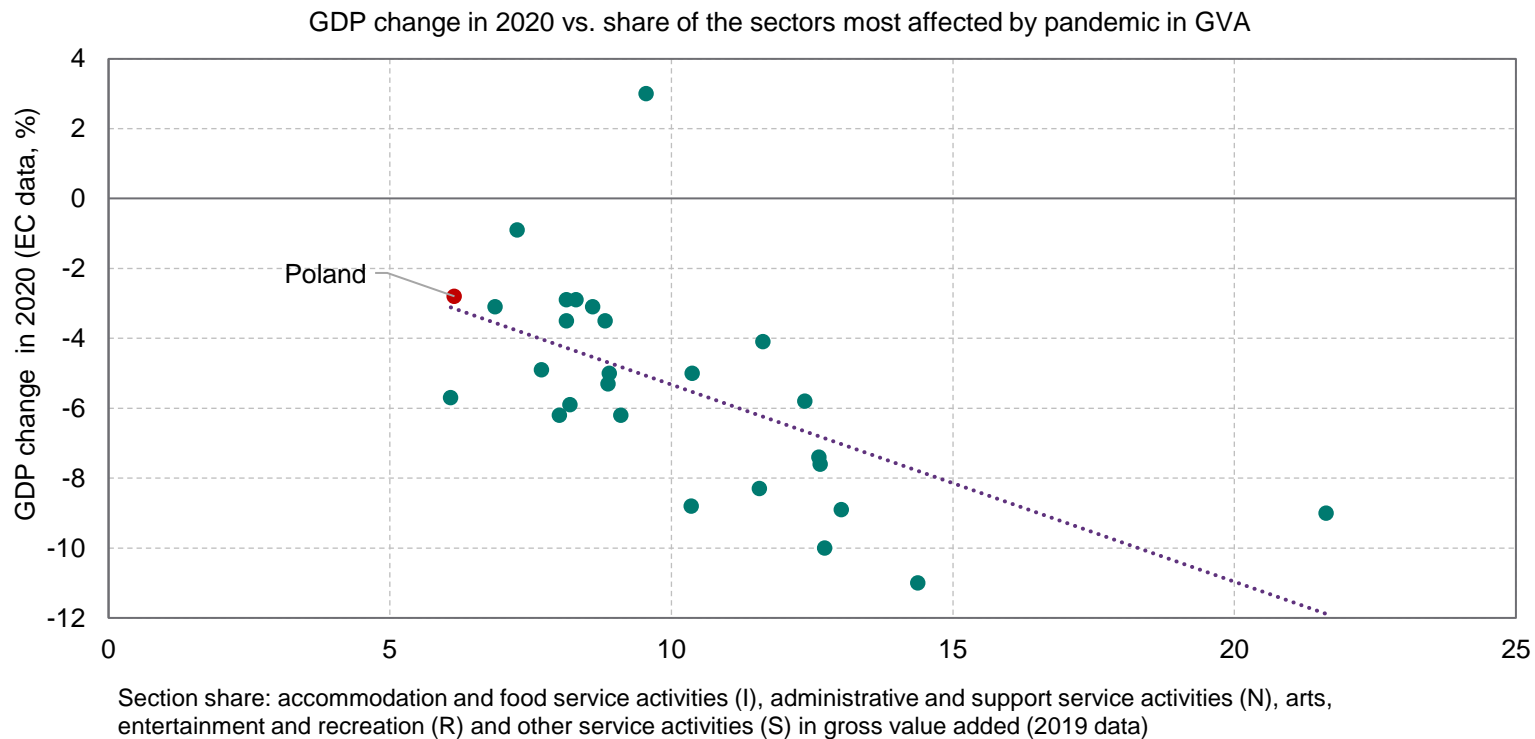
General government balance -0.7% PKB

General government debt (ESA2010) 45.7 % PKB

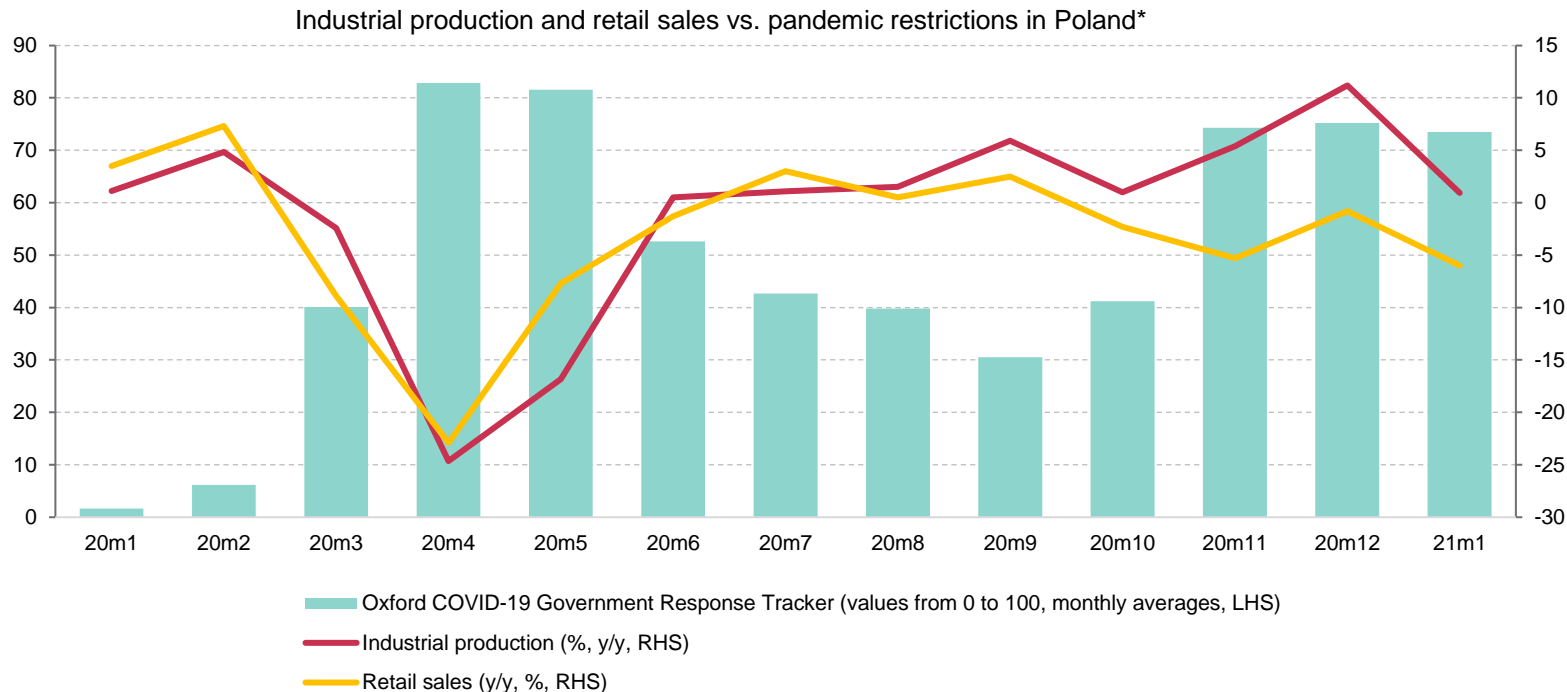
Current and capital account balance 2.5% PKB



Favourable sectoral structure of the economy.



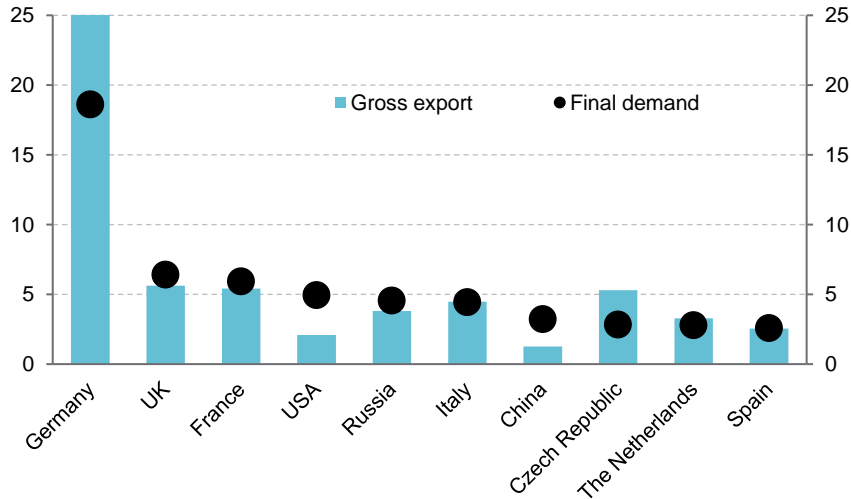
Relatively fast adaptation of economic agents to functioning during a pandemic.



*Oxford COVID-19 Government Response Tracker – monthly averages

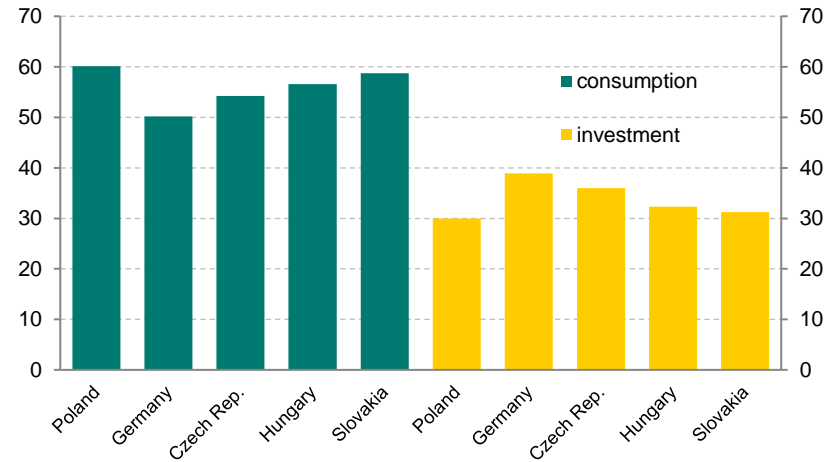
Favourable geographic and product structure of Polish exports.

Share of geographic markets in export (% , 2014)



- Strong **trade ties with the German economy**, which coped with the crisis better than a large part of the EU economies.

Share of consumption and investment final demand in exported value added in 2014 (%)

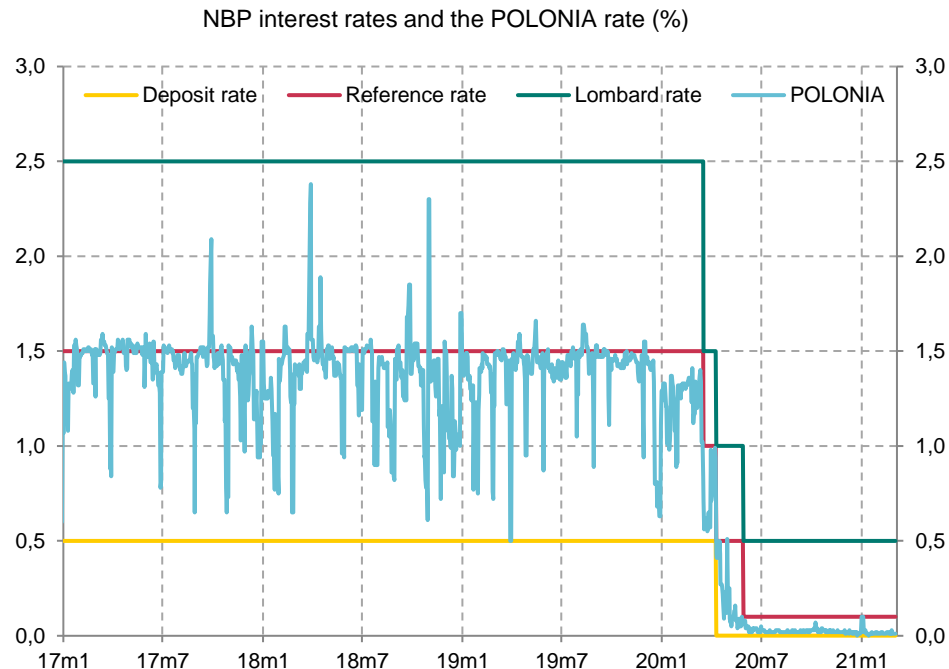
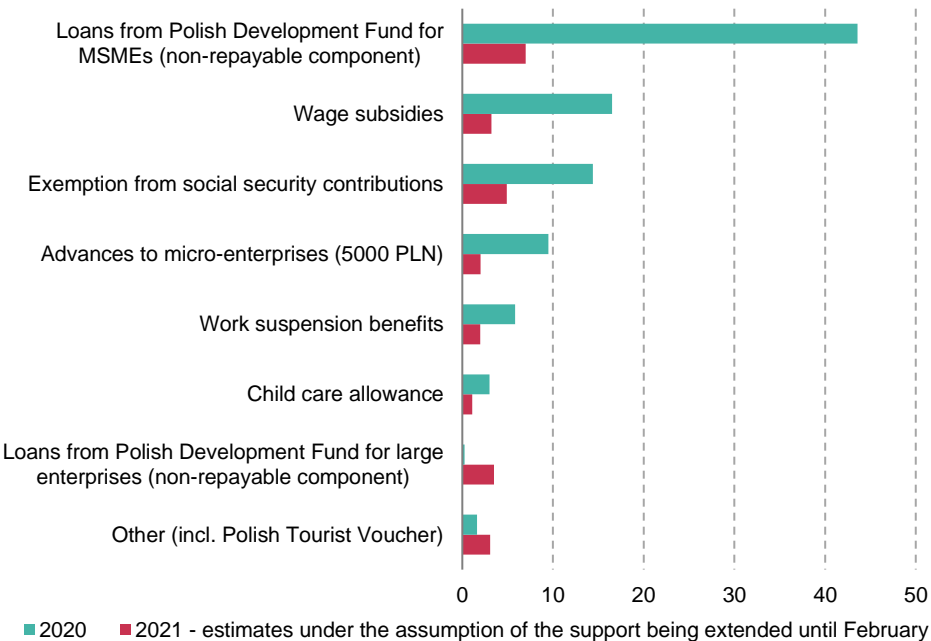


- Consumption-oriented exports.

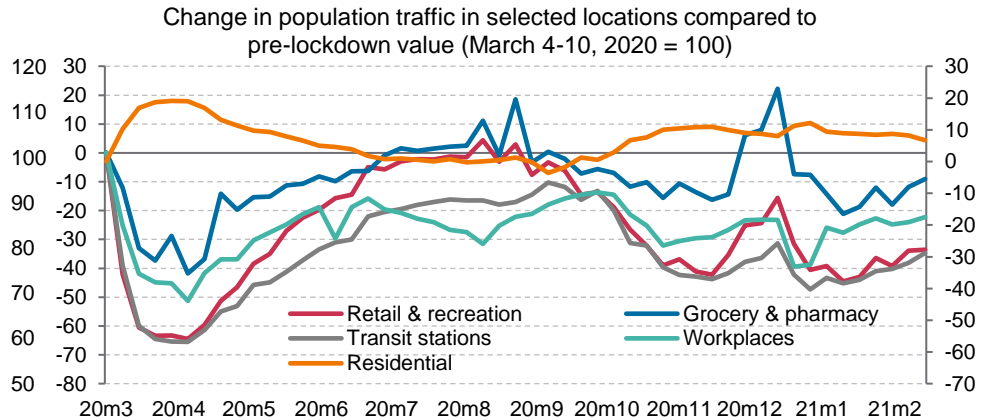
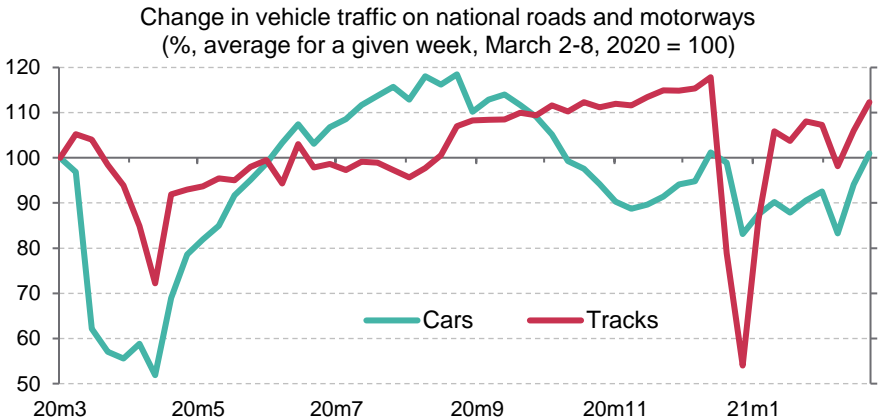
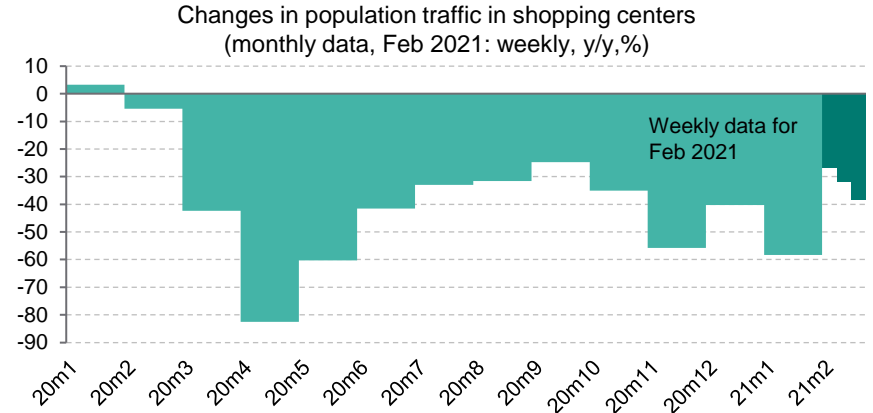
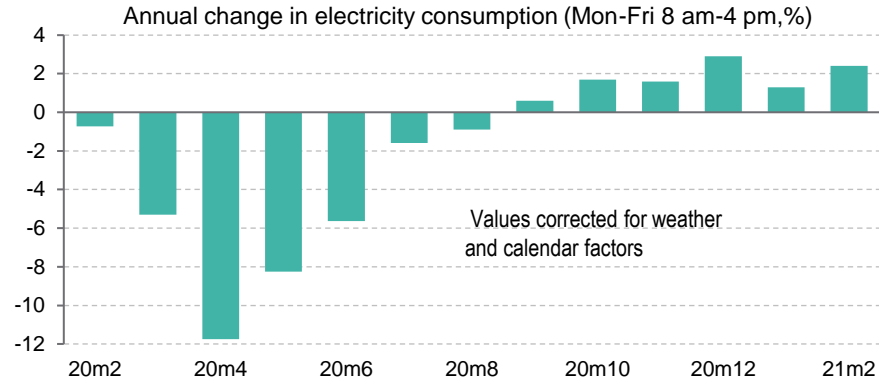
Effective policy mix .

- Prompt and considerable fiscal response to the crisis, supported by interest rate cuts and unconventional monetary policy measures.

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



Acceleration of economic activity due to the loosening of some epidemic restrictions in February this year.



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Projection 2021-2023

Economic conditions abroad

Regionally diversified economic recovery in 2021 after the pandemic.

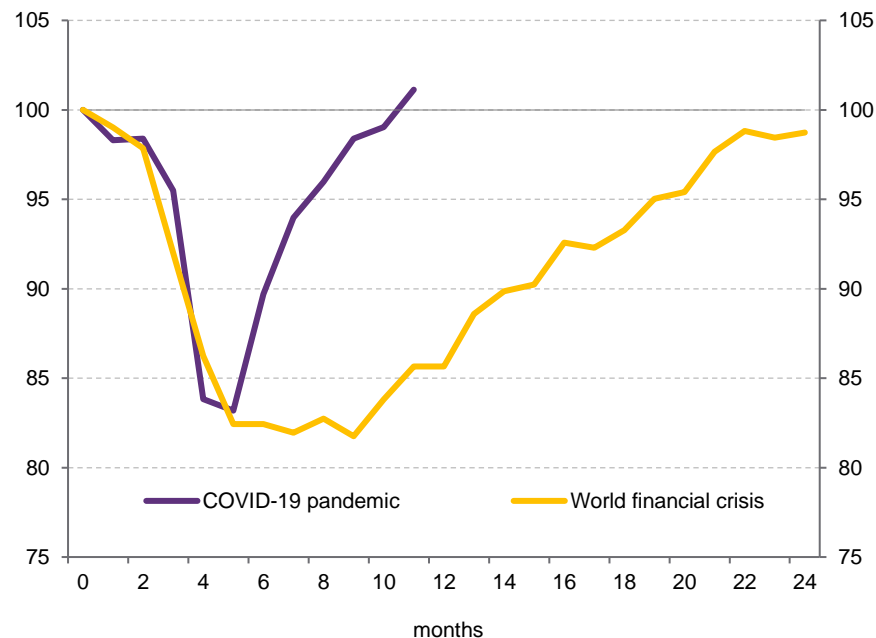
Factors determining the forecast of economic growth:

- ⤴ Companies and households adapting to functioning in the pandemic.
- ⤴ Launching the vaccination process - limiting the spread of the pandemic and bringing closer the prospects of lifting the restrictions.
- ⤴ Large fiscal packages in the major world economies.
- ⤵ Poor growth prospects for emerging economies.
- ⤵ *Brexit*.

GDP forecast in the selected economies

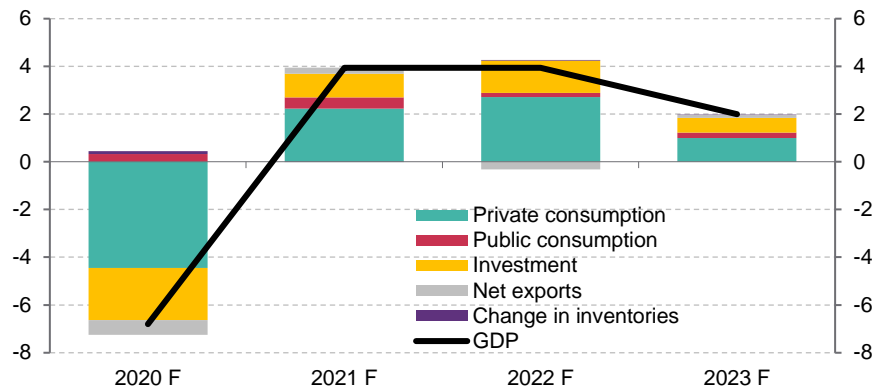
GDP y/y, %	2020	2021	2022	2023
Euro area	-6.8 (-7.5)	3.9 (3.2)	3.9 (4.0)	2.0
Germany	-5.3 (-5.9)	3.1 (3.4)	4.3 (3.7)	1.5
United Kingdom	-9.9 (-10.4)	3.6 (4.2)	5.5 (4.5)	2.0
USA	-3.5 (-3.8)	4.6 (3.3)	3.2 (2.3)	1.9
China	2.3 (1.7)	8.0 (7.7)	5.5 (5.5)	5.4

World commodity trade (100 and t=0 respectively Aug 2008 and Dec 2019)

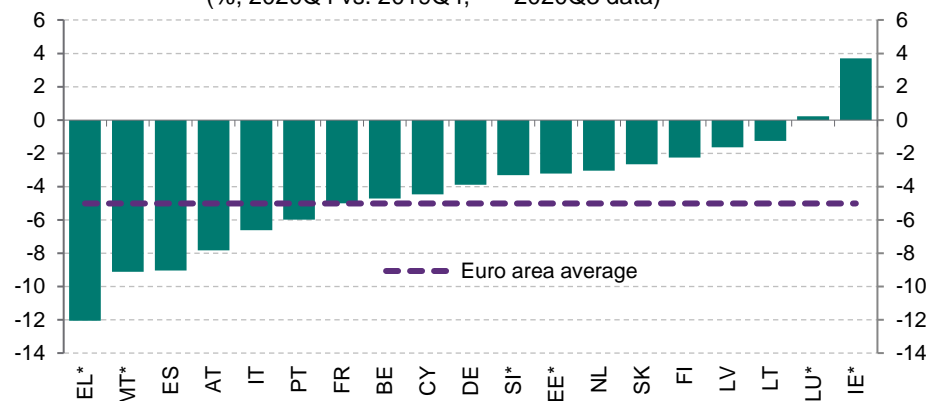


Euro area: return to growth path from 2021 Q2 supported by fiscal stimulus.

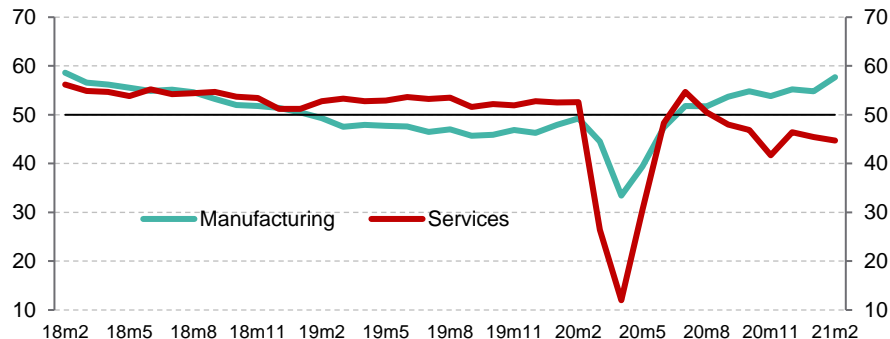
GDP in the euro area (% i pp., y/y)



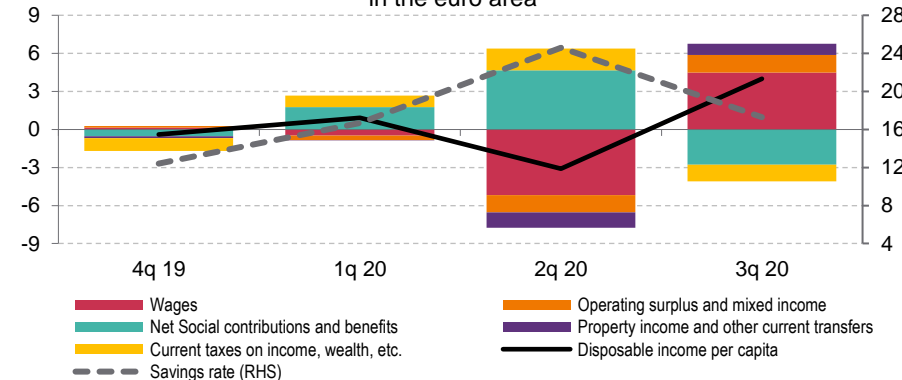
GDP in the euro area and individual countries (% , 2020Q4 vs. 2019Q4, * - 2020Q3 data)



PMI for the euro area – manufacturing and services



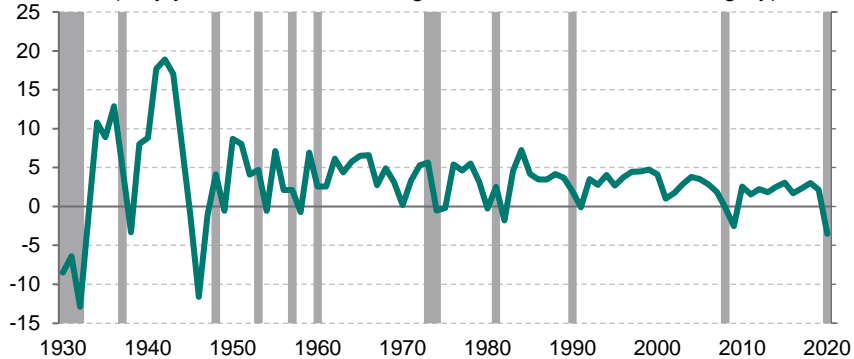
Disposable income per capita (% , q/q, 4-day average), saving rate (%) in the euro area



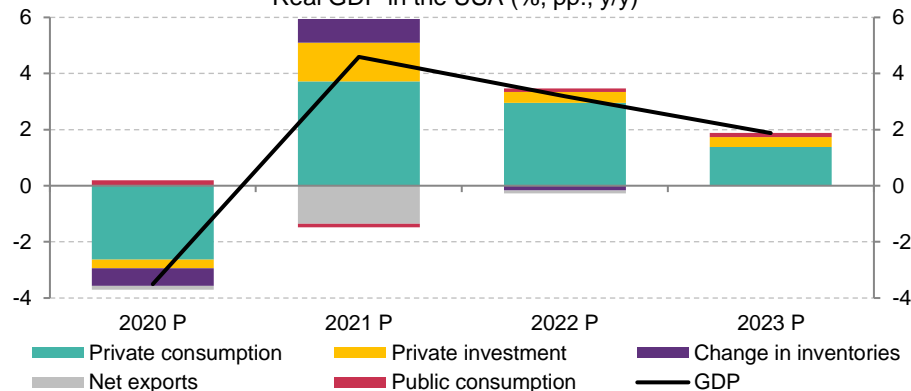
The United States: economic recovery constrained by protracted pandemic, but supported by fiscal policy.

Real GDP in the USA

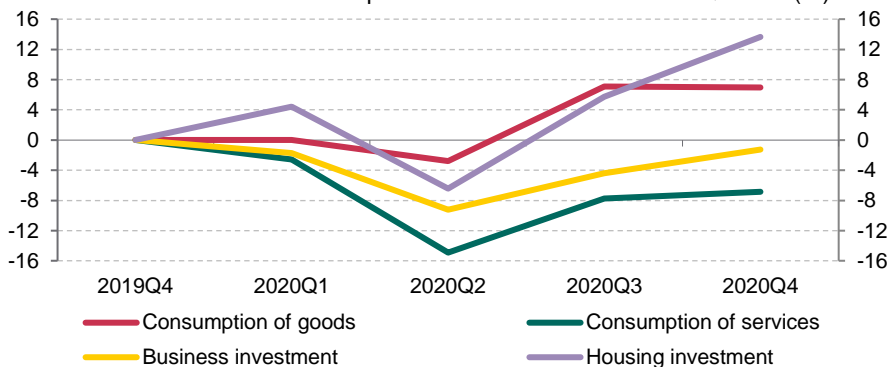
(%, y/y, recessions according to the NBER are marked in gray)



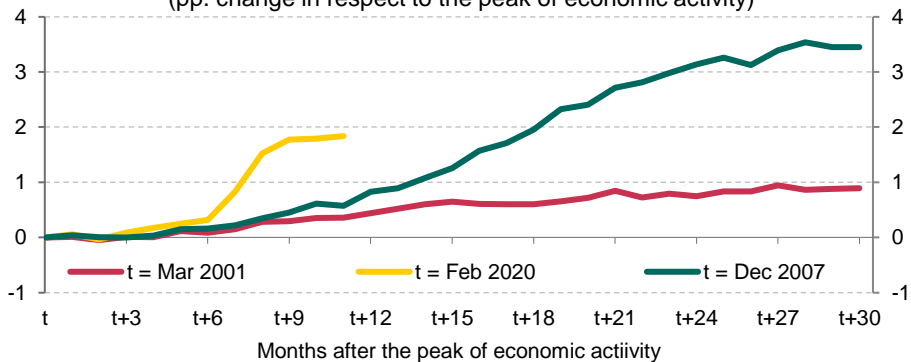
Real GDP in the USA (% pp., y/y)



Deviation of selected components of GDP from the 2019 Q4 level (%)



Unemployed for at least 27 weeks as % of the labor force (pp. change in respect to the peak of economic activity)



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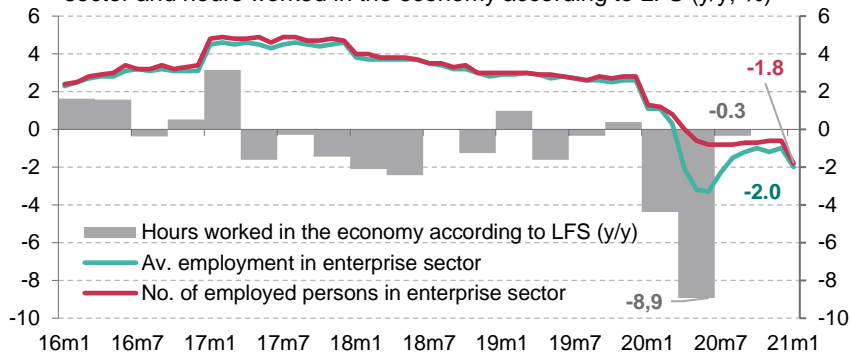
Uncertainty

Projection 2021-2023

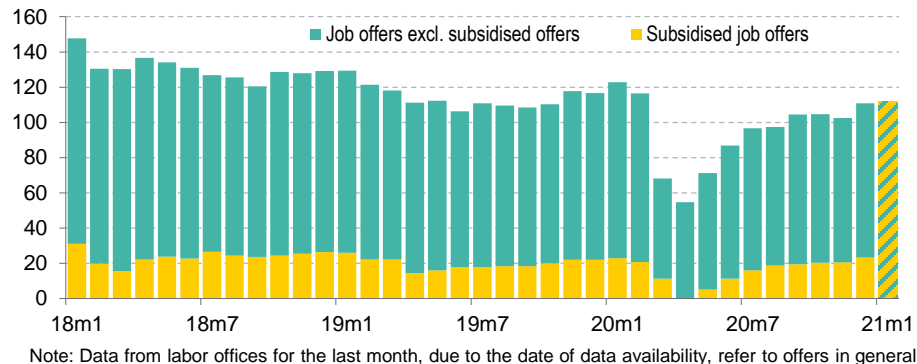
Polish economy

Partial recovery of labour demand in the second half of 2020. Limited growth of the unemployment rate, owing to the anti-crisis measures.

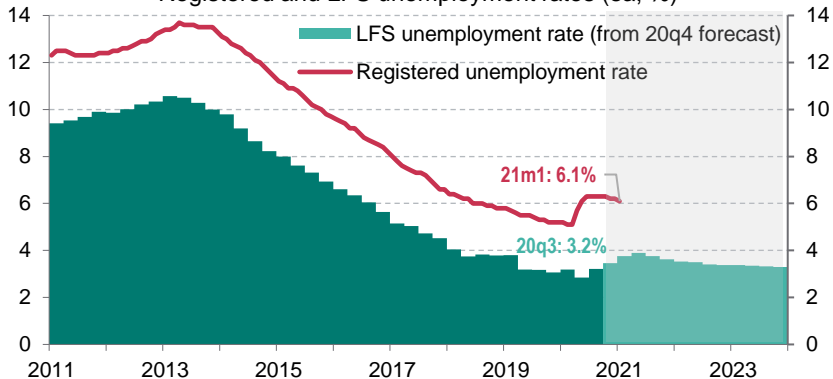
Number of employed persons and average employment in enterprise sector and hours worked in the economy according to LFS (y/y, %)



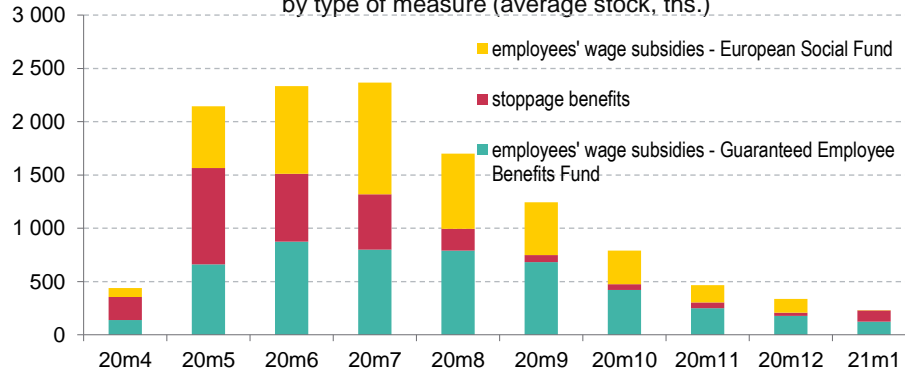
Number of job offers declared during a month (in thous., sa)



Registered and LFS unemployment rates (sa, %)

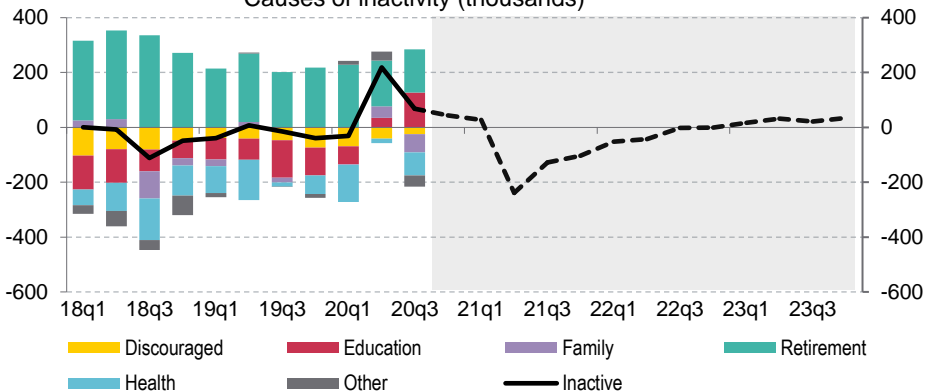


Number of employees benefiting from the Anti-crisis Shield by type of measure (average stock, ths.)

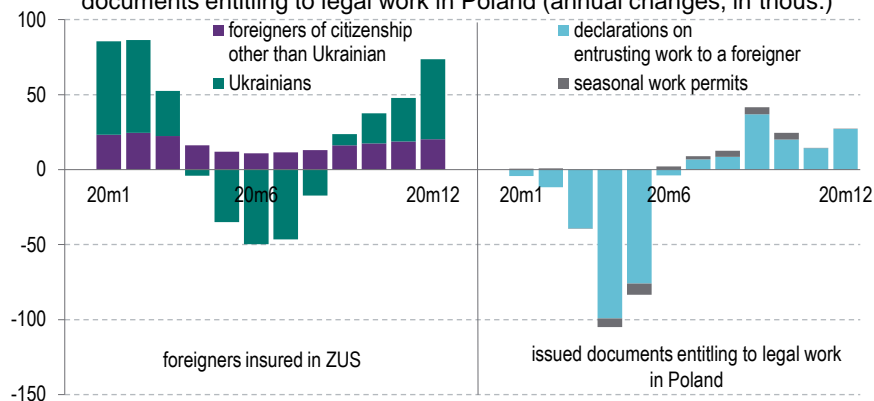


Incomplete recovery of labour supply.

Causes of inactivity (thousands)



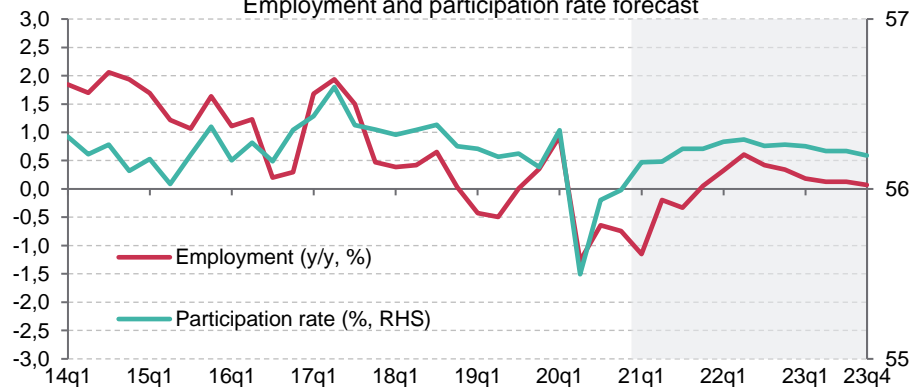
Changes in the number of foreigners insured in ZUS and the number of issued documents entitling to legal work in Poland (annual changes, in thous.)



Effective number of foreign workers in Poland (thous.)

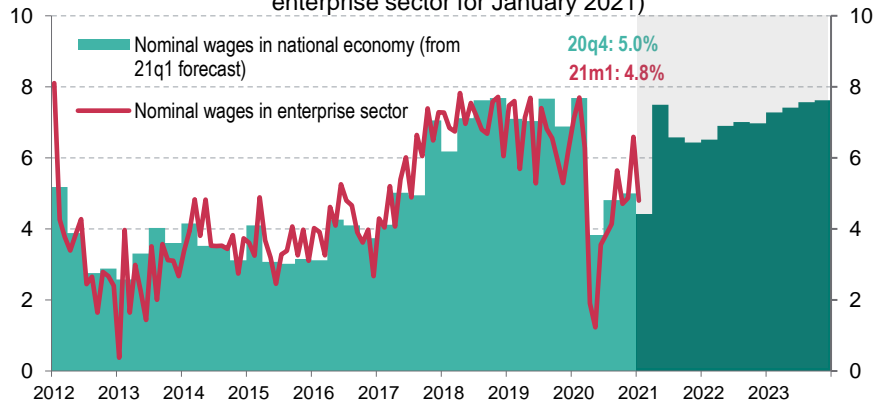


Employment and participation rate forecast

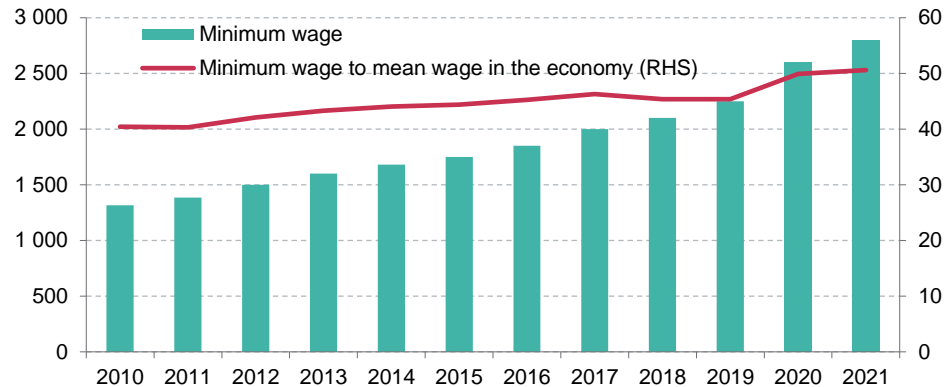


A gradual recovery in labour demand amid a low unemployment rate will lead to wage growth.

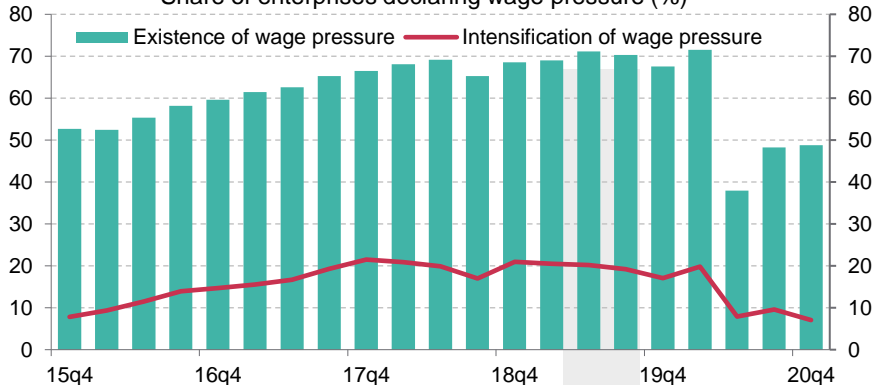
Annual wage growth (in%, y/y, latest data from the GN for 2020Q4, from the enterprise sector for January 2021)



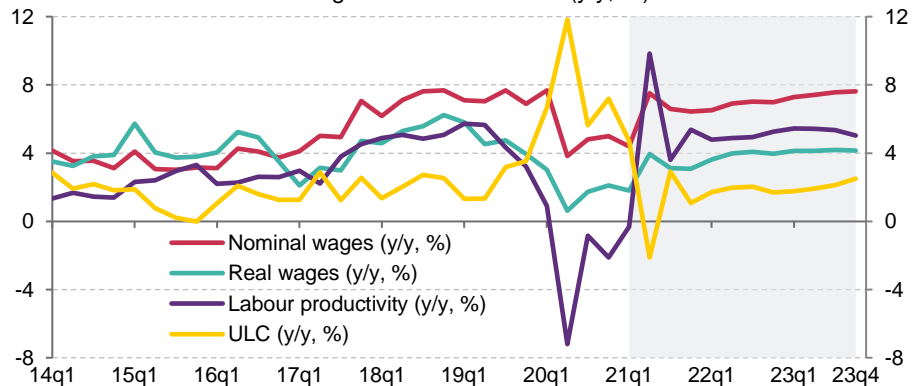
Minimum wage in Poland (PLN) and its ratio to mean wage in the economy (%)



Share of enterprises declaring wage pressure (%)

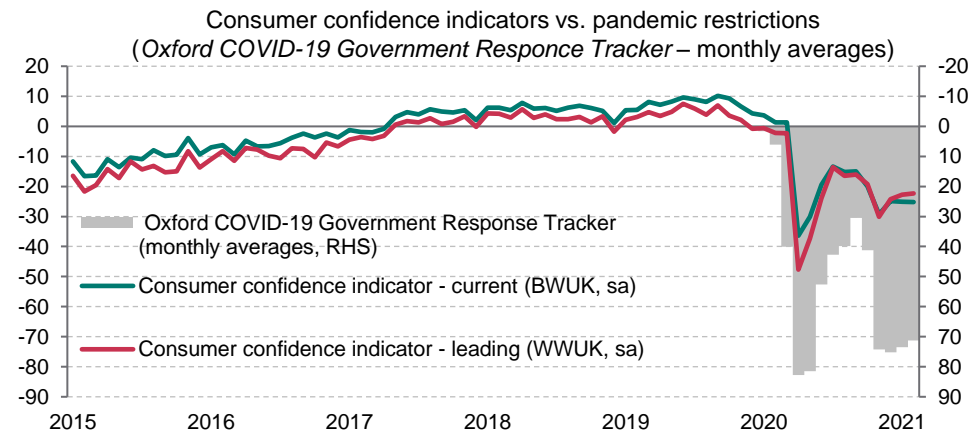
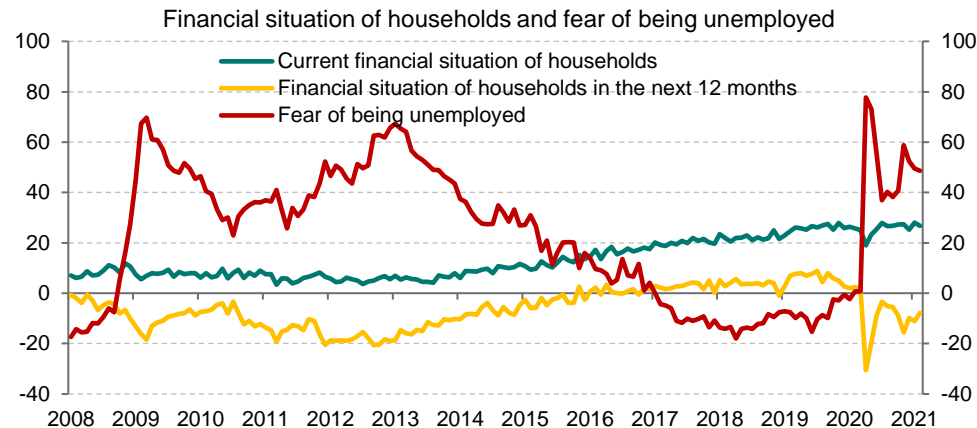
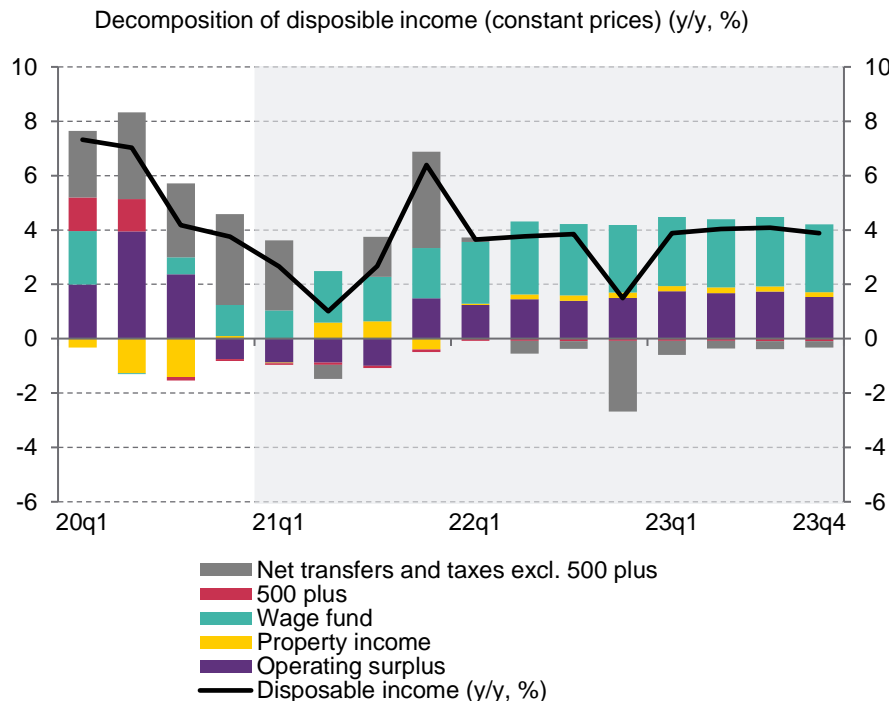


Wages and ULC forecast (y/y, %)



Source: GUS, Szybki Monitoring NBP, NBP calculations.

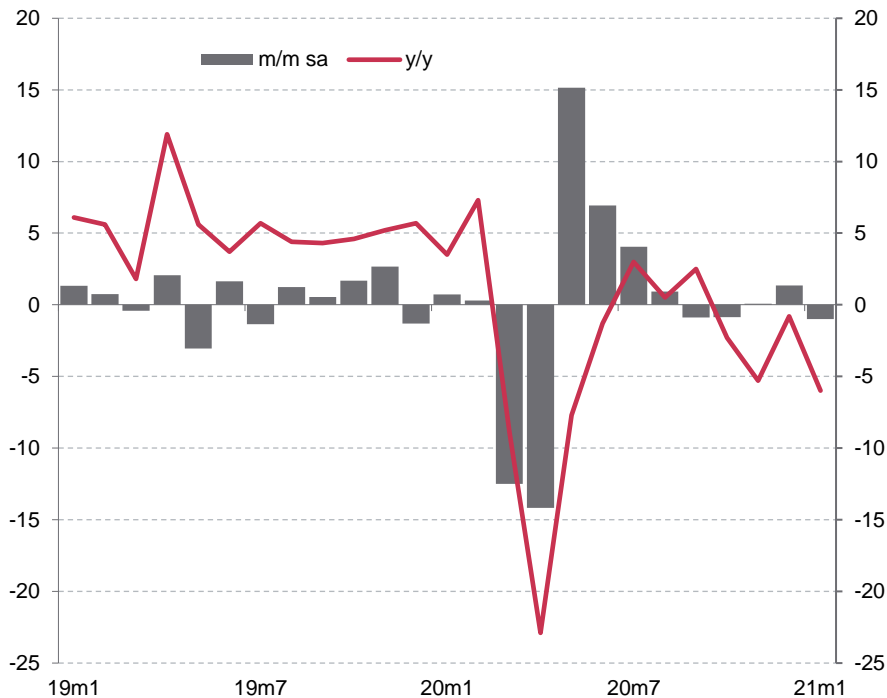
Consumer sentiment driven by the development of the pandemic and the scale of the related restrictions.



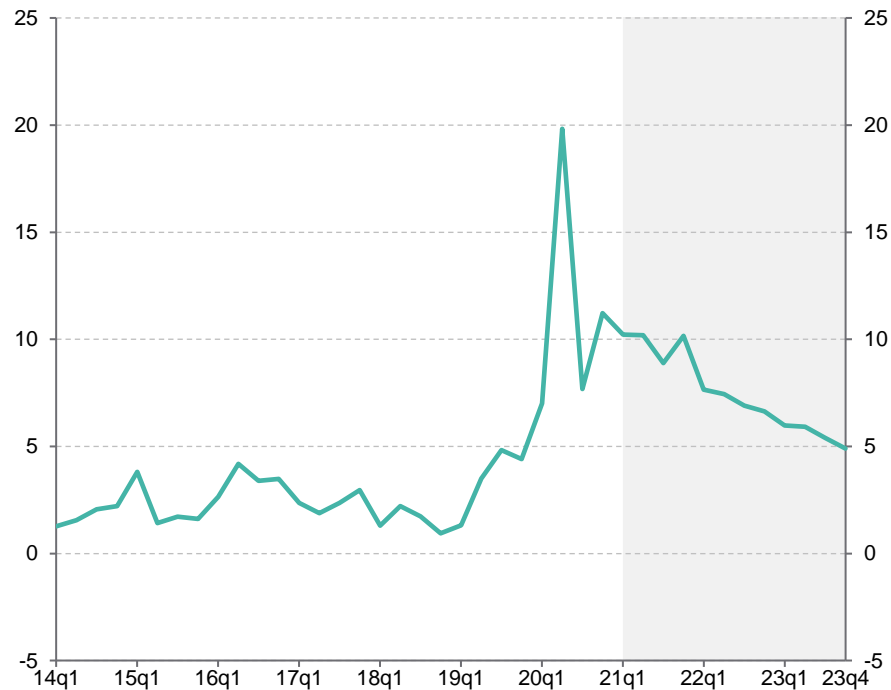
Source: GUS, Hale, T., S. Webster, A. Petherick, T. Phillips, B. Kira (2020). Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, NBP calculations.

Expected increase in consumption demand along with the improvement of the epidemic situation and lifting the restrictions.

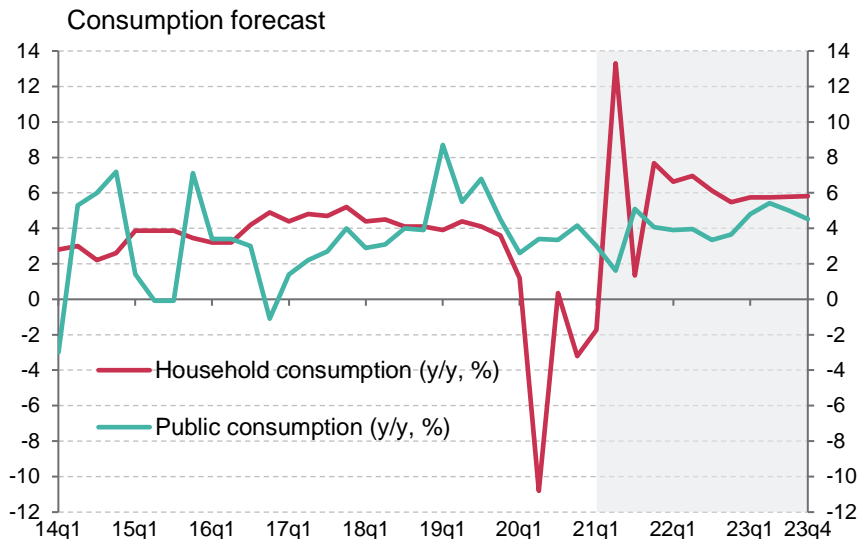
Retail sales (%)



Households saving rate forecast (%, sa)



Private consumption growth accelerates over the longer projection horizon.



y/y, %	2020	2021	2022	2023
Household consumption	-3.0	4.9	6.3	5.8
Public consumption	3.4	4.4	3.7	4.9

Private consumption:

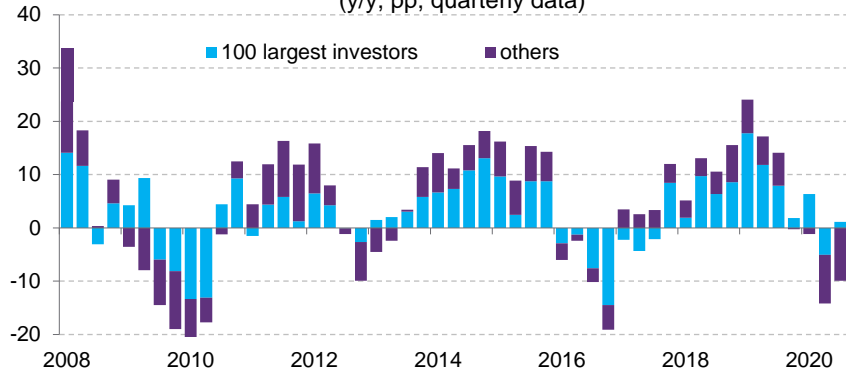
- ⇩ Worsening of the epidemic situation in the autumn and winter period:
 - imposed restrictions
 - changes in the behaviour of the population for fear of contracting the coronavirus
 - a precautionary motive resulting from high uncertainty.
- ⇩ Gradual lifting of epidemic restrictions.
- ⇩ High level of savings accumulated during the pandemic (due to low propensity to consume and anti-crisis fiscal support).

Public consumption:

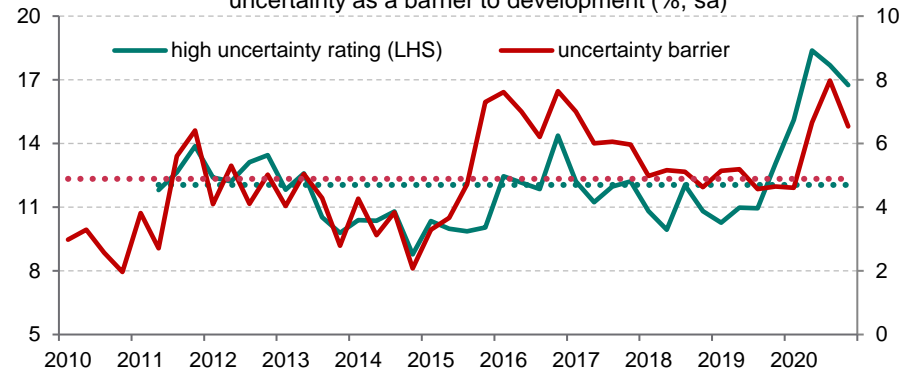
- ⇩ Increase in health care expenditure related to the pandemic (2020: costs of treatment and purchase of protective measures, 2021: purchase of vaccines)
- ⇩⇩ The decrease in expenditure on public services in 2020, due to the pandemic restrictions in force, followed by the increase in 2021.
- ⇩ Travel vouchers (strongest impact in 2021).
- ⇩ Freeze of salaries in the public administration in 2021.
- ⇩ Return to neutral fiscal policy towards the end of the projection horizon.

Improving sentiments, especially among large and public enterprises. However, persistent high uncertainty. Still low investment activity in 2021.

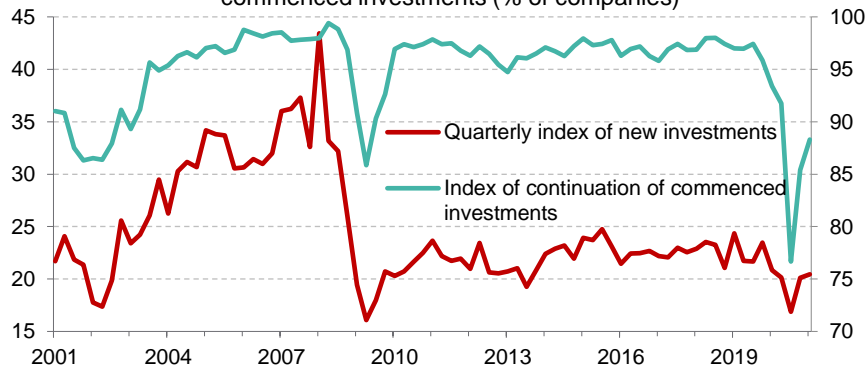
Contribution to investment growth of the 100 largest investors (y/y, pp, quarterly data)



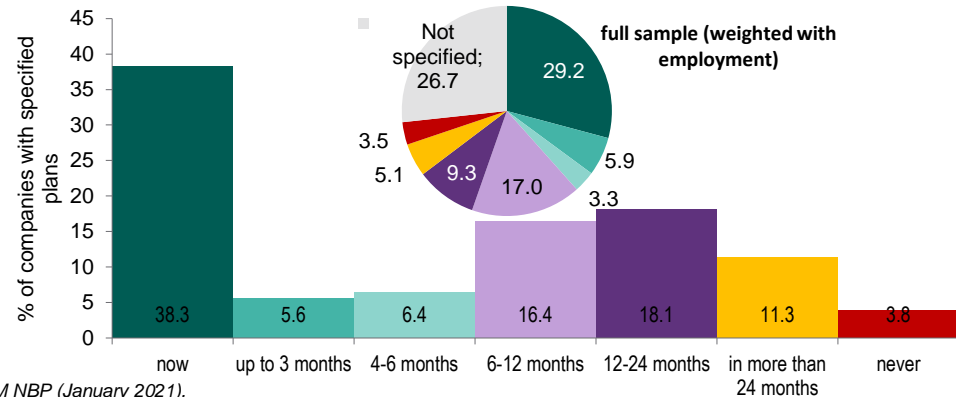
Share of enterprises assessing uncertainty as high and indicating uncertainty as a barrier to development (% sa)



Quarterly index of new investments and index of continuation of commenced investments (% of companies)



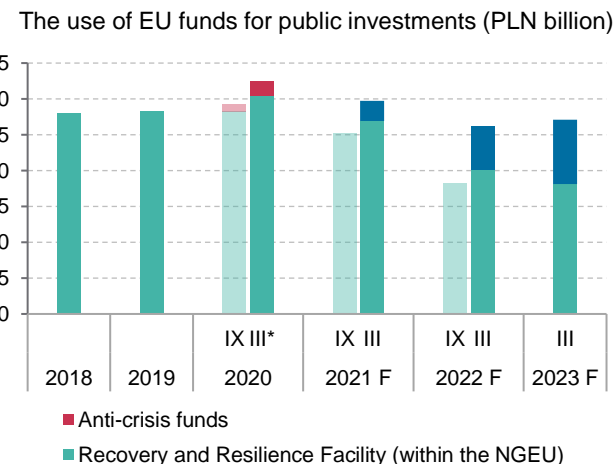
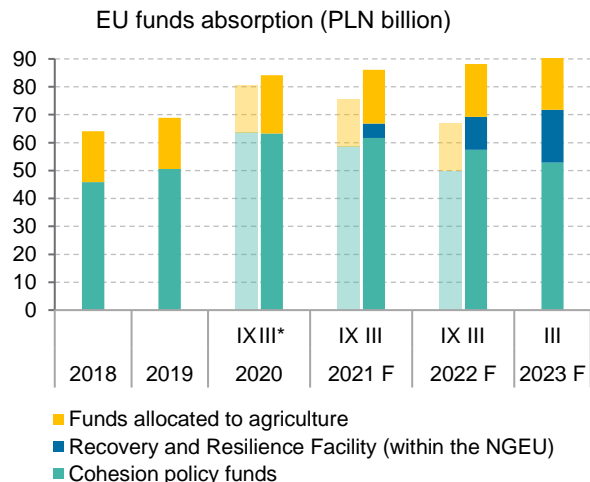
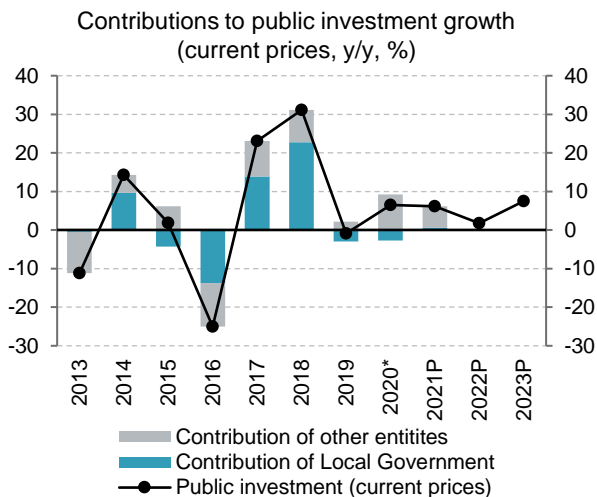
The prospect of investment returning to pre-pandemic levels (% of companies)



Source: GUS, SM NBP (January 2021).

Grants under the *Next Generation EU* instrument will significantly change the dynamics of EU funds absorption in the coming years.

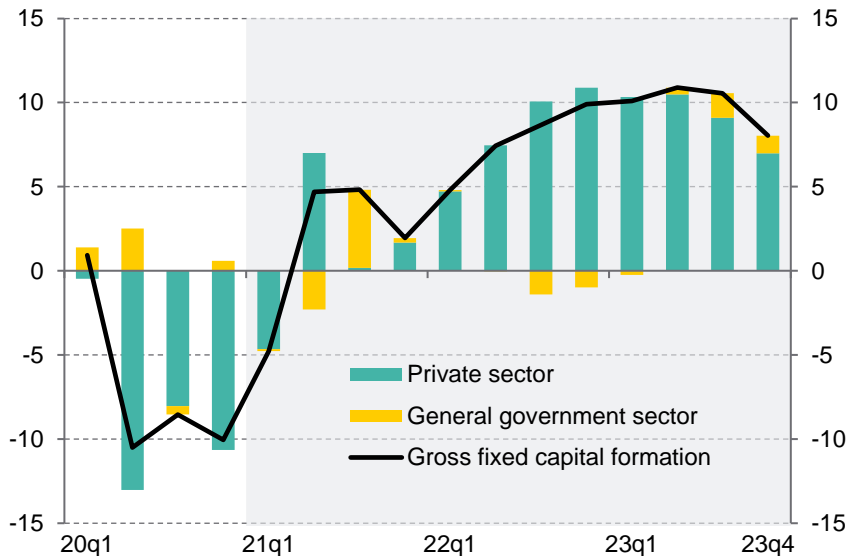
- As a part of the new instrument, grants of approx. EUR 30 billion are provided to Poland, of which EUR 23.9 billion are payments under the Recovery and Resilience Facility that will be distributed and settled based on the National Recovery and Resilience Plan (which is to be submitted to the European Commission by the end of April this year). The remaining part of the grants will be included in the traditional cohesion policy funds.
- The projection is based on a cautious assumption that the loan component of *NGEU* (the allocation for Poland amounts to approx. EUR 34 billion) will not increase total investment outlays – these repayable funds will only be used to finance those expenditures which would have been incurred anyway (substituting for other forms of financing of the government borrowing requirement).



* - NBP estimates
F – NBP forecast

Gradual return of gross fixed capital formation to pre-crisis values.

Investment dynamics and its decomposition (y/y %)



y/y, %	2020	2021	2022	2023
Gross fixed capital formation	-8.4	1.5	7.7	9.9

Source: GUS, NBP calculations.

Private investment:

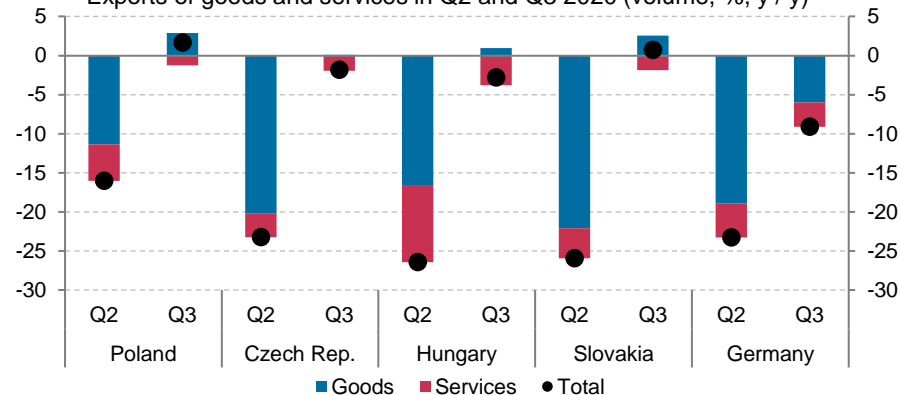
- ⇩ Pandemic restrictions curbing the activities of certain industries, persistent high uncertainty and the related reluctance to incur long-term financial obligations.
- ⇧ Gradual lifting of epidemic restrictions.
- ⇧ Low degree of automation and robotization of the Polish industry and rising labour costs.
- ⇧ Relatively high housing demand, supported by the expected improvement in the labour market situation, the elevated level of some households' savings and a record low level of interest rates.
- ⇧ Absorption of the EU funds from the *Next Generation UE* instrument.

General government investment:

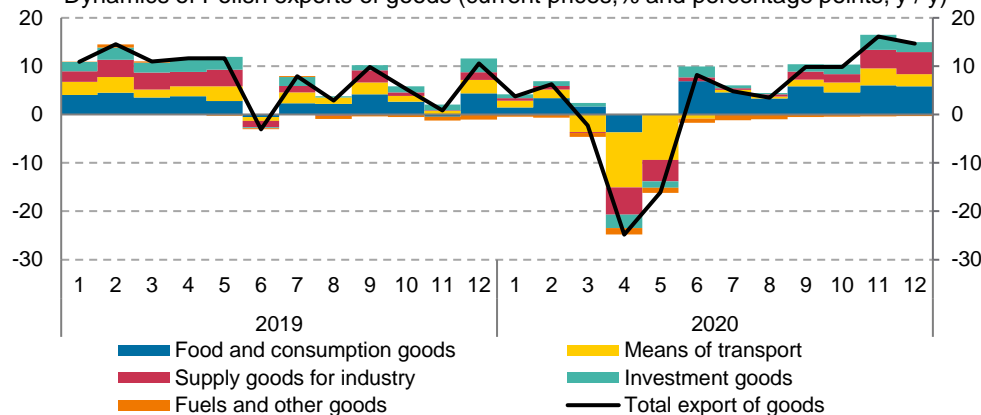
- ⇩ Decline in funds from the 2014-2020 EU perspective, which, according to the $n + 3$ rule, ends in 2023.
- ⇧ Absorption of the funds under the *Next Generation EU* instrument.
- ⇧ Beginning of the new EU perspective – it is assumed that the absorption of the funds from 2021-2027 perspective will start in 2023.

Recovery of exports in the second half of 2020, after a strong slump in foreign trade - possible, inter alia, due to the favourable structure of Polish exports.

Exports of goods and services in Q2 and Q3 2020 (volume, %, y / y)

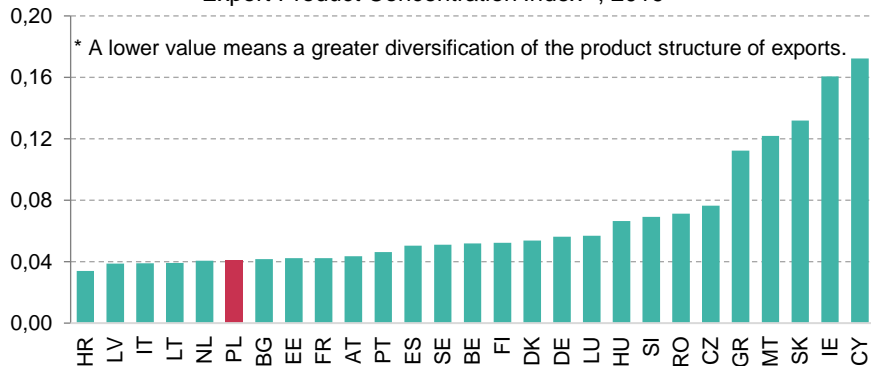


Dynamics of Polish exports of goods (current prices, % and percentage points, y / y)

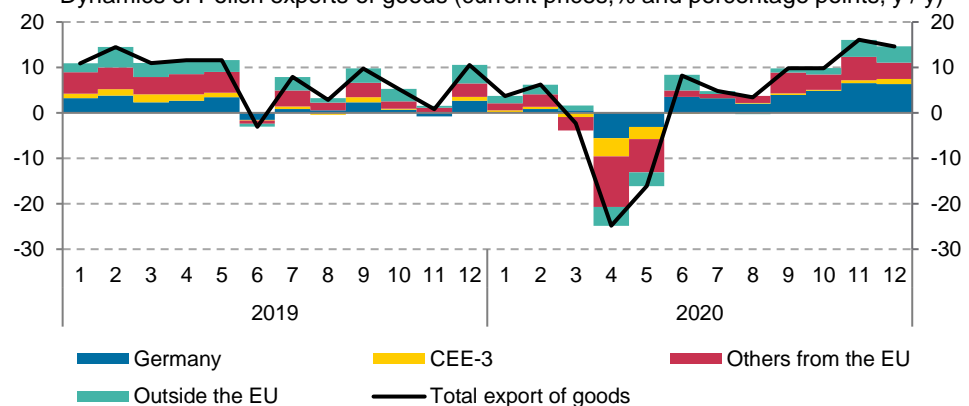


Export Product Concentration Index *, 2019

* A lower value means a greater diversification of the product structure of exports.

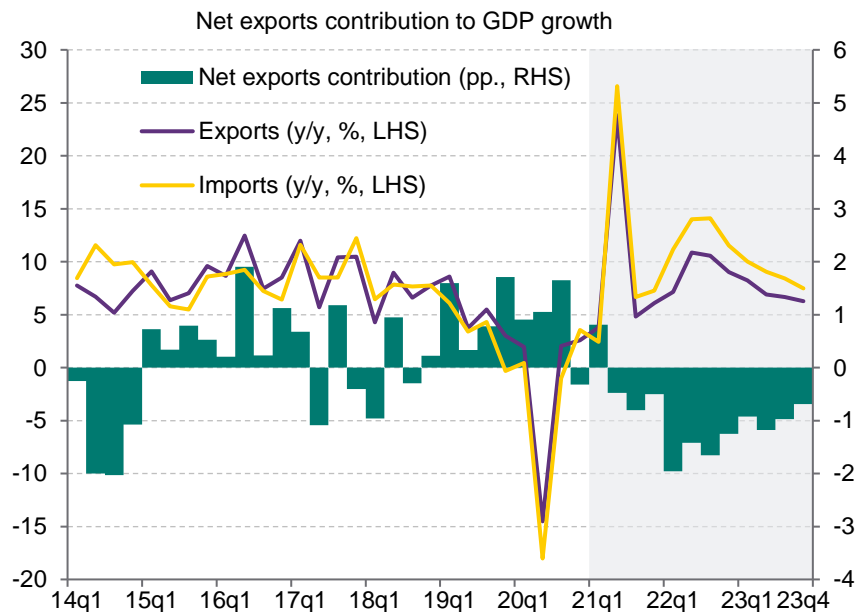


Dynamics of Polish exports of goods (current prices, % and percentage points, y / y)

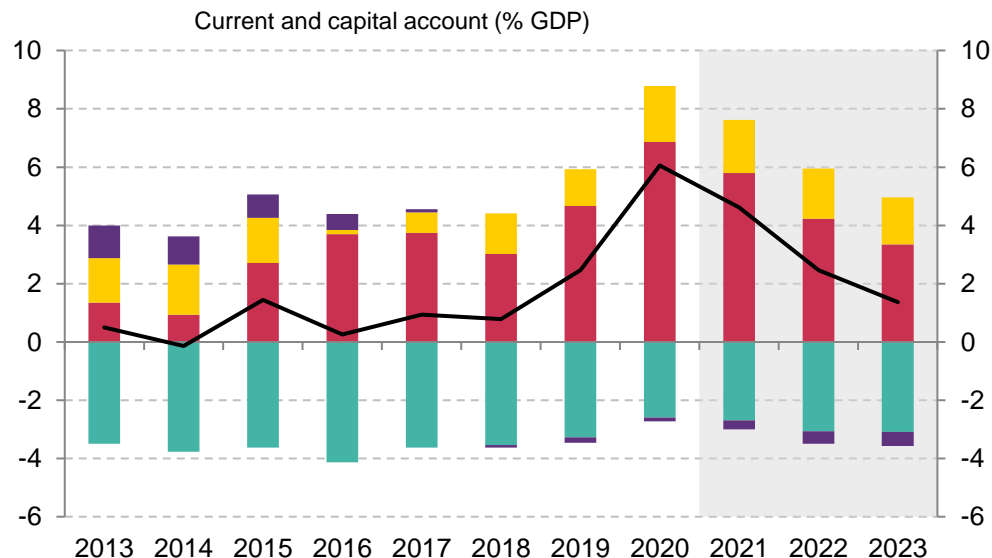


Source: Eurostat, WIOD, NBP calculations.

Due to anti-cyclical nature of net exports, its contribution to GDP growth will decrease and become negative in the projection horizon.



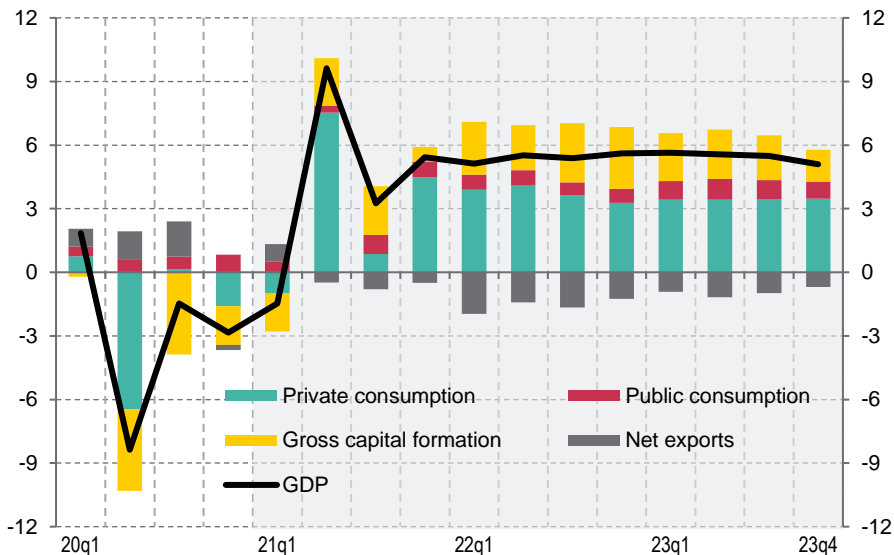
y/y, pp	2020	2021	2022	2023
Net exports contribution to growth	0.8	-0.2	-1.6	-0.9



- Compensation of employees & remittances
- Primary income (excl. compensation of employees)
- Capital account & secondary income (excl. remittances)
- Goods and services
- Current and capital account (% GDP)

The economy will gradually return to its pre-pandemic long-term growth path over the projection horizon.

GDP dynamics and decomposition (y/y, %, pp)



↑ From 2021 Q2, a **sustained economic recovery**, conditional on the normalization of the epidemic situation, recovery of activity abroad and an improvement in the outlook for private demand.

↑ **Private consumption** growth will accelerate over the longer horizon of the projection, due to gradual lifting of epidemic restrictions and a relatively high level of savings accumulated by households during the pandemic.

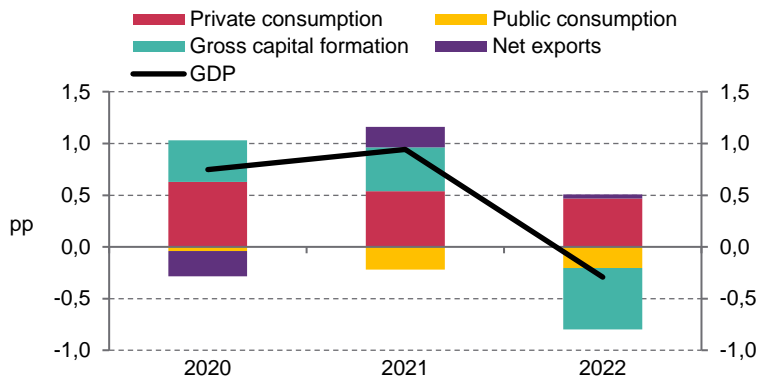
↑ In 2021, the recovery of **investments** will continue to be hampered by restrictions, increased uncertainty and reluctance to incur long-term financial obligations. In the following years, the corporate investment rate will increase.

↓ **The contribution of net exports to GDP growth** will decline below zero in line with its countercyclical nature over the projection horizon.

y/y, %	2020	2021	2022	2023
GDP	-2.8	4.1	5.4	5.4

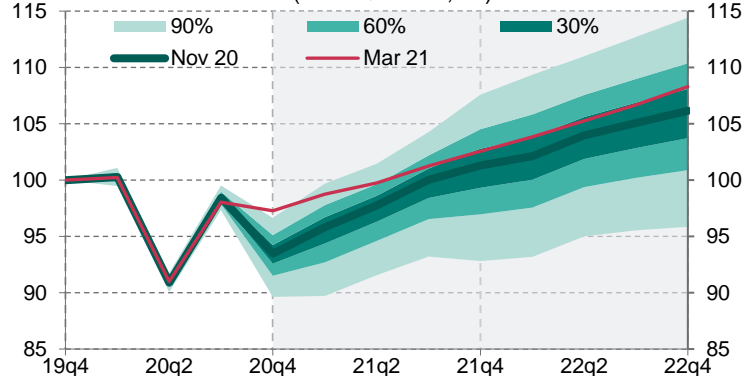
March projection of GDP compared to the November projection

Decomposition of changes in GDP dynamics (y/y, pp)



- ↑ Weaker than expected negative impact of the pandemic on the economy and the labour market at the turn of 2020-2021.
- ↑ Faster than expected economic recovery abroad.
- ↑ Launching new anti-crisis programs in Poland to support the labour market and entrepreneurs in 2021.
- ↑ Absorption of EU funds under the new EU Next Generation instrument included in the projection.

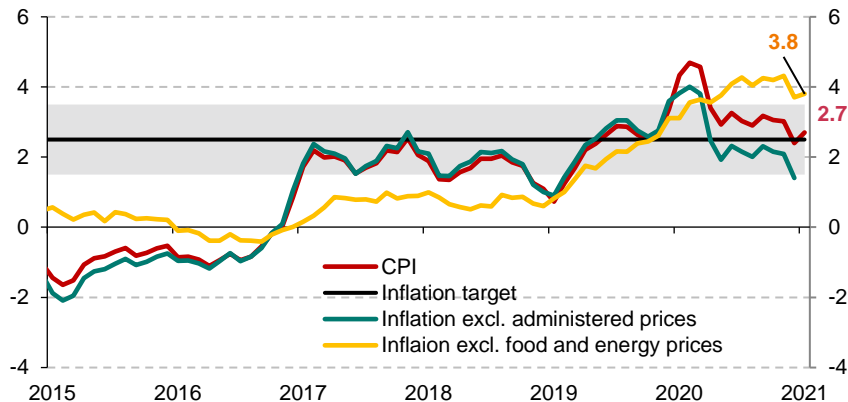
GDP level (2019Q4 = 100, sa)



GDP y/y, %	2020	2021	2022
November 2020	-3.5	3.1	5.7
March 2021	-2.8	4.1	5.4

In 2020 Q4, the decline in inflation resulted from a lower growth in the prices of food and non-alcoholic beverages, due to the favorable supply situation.

CPI and core inflation (y/y, % monthly data)

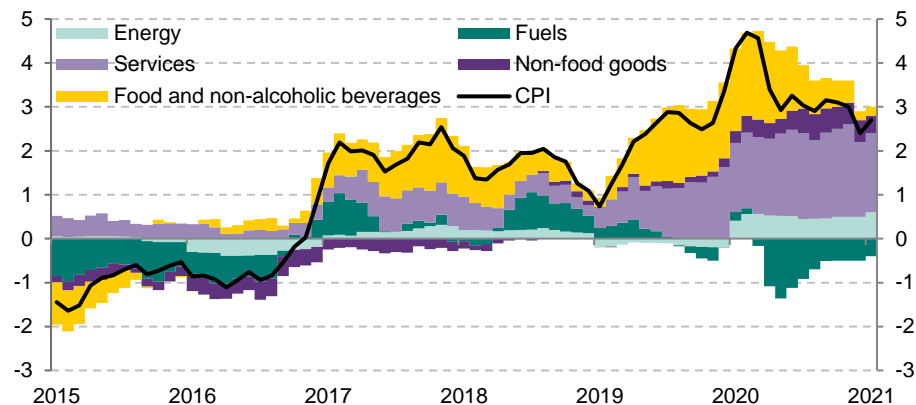


Note: Data for January 2021: CPI, preliminary GUS data, CPI inflation excluding food and energy prices - NBP estimate based on preliminary GUS data.

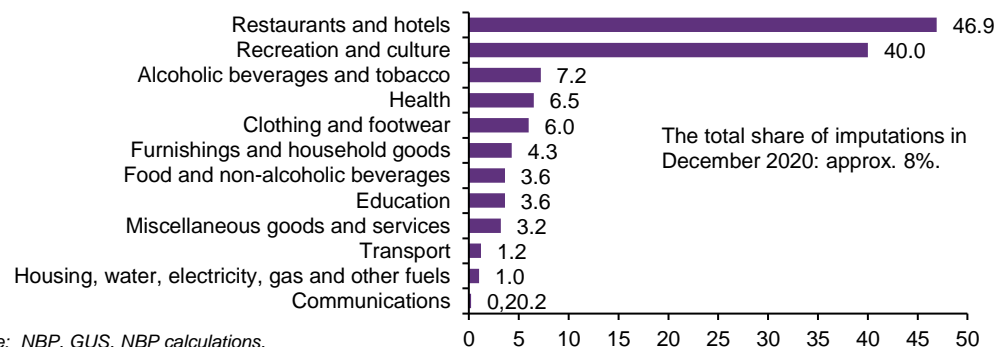
y/y, %	20q3	20q4	(2020)
CPI inflation	3.0	2.8	(2.9)
Core inflation	4.2	4.1	(4.2)
Food prices	3.2	1.7	(2.0)
Energy prices	-1.6	-0.1	(-0.4)

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

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



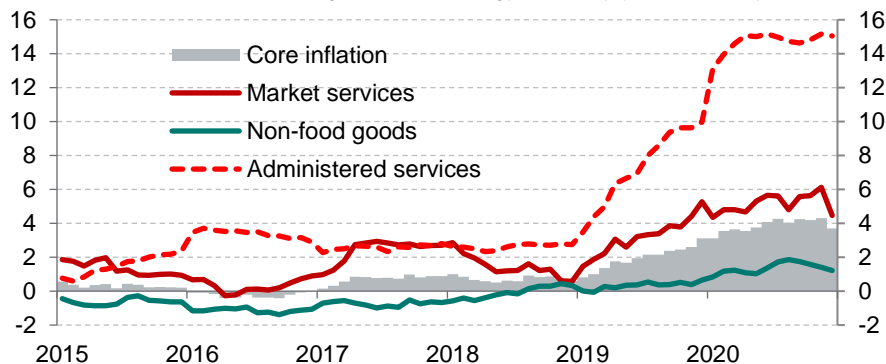
Share of imputations by 12 main COICOP groups (%) in December 2020



Source: NBP, GUS, NBP calculations.

Core inflation in 2020 Q4 driven by lower prices of non-food goods amid high growth in prices of services.

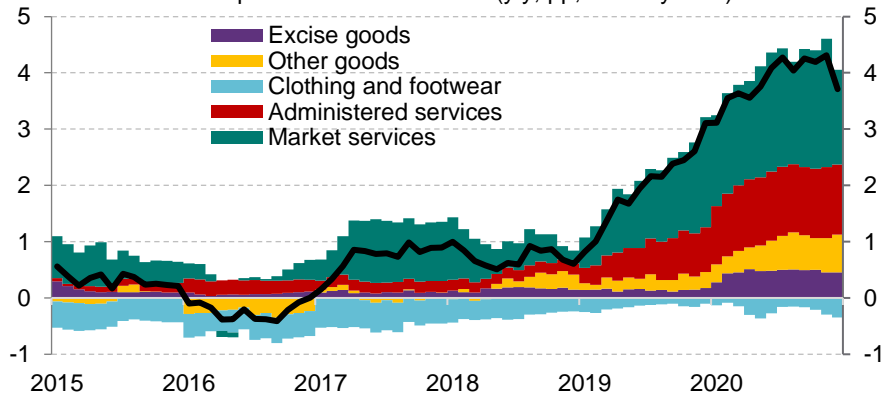
CPI inflation excluding food and energy prices (y/y, %, monthly data)



Dynamics of core inflation and its components (y/y, %)

	y/y, %	20q1	20q2	20q3	20q4
Core inflation	3.4	3.8	4.2	4.1	
Excise goods	3.6	4.6	4.7	4.5	
Other goods	0.5	0.3	1.1	0.8	
Administered services	13.9	15.1	14.8	15.0	
Market services	4.7	5.2	5.3	5.4	

Decomposition of core inflation (y/y, pp, monthly data)

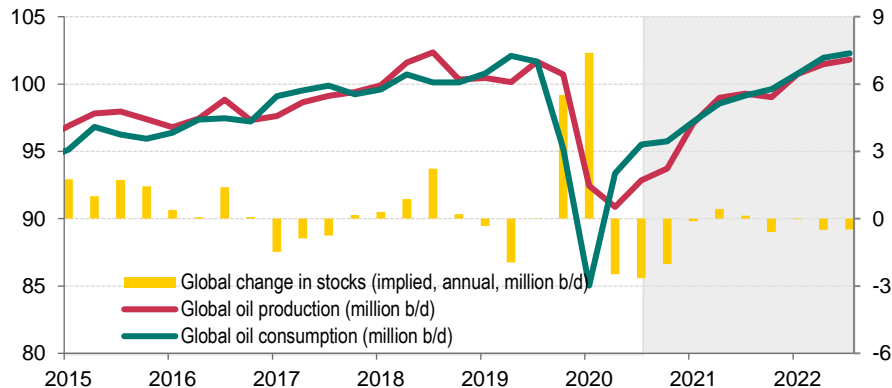


Decomposition of core inflation - contributions (y/y, pp)

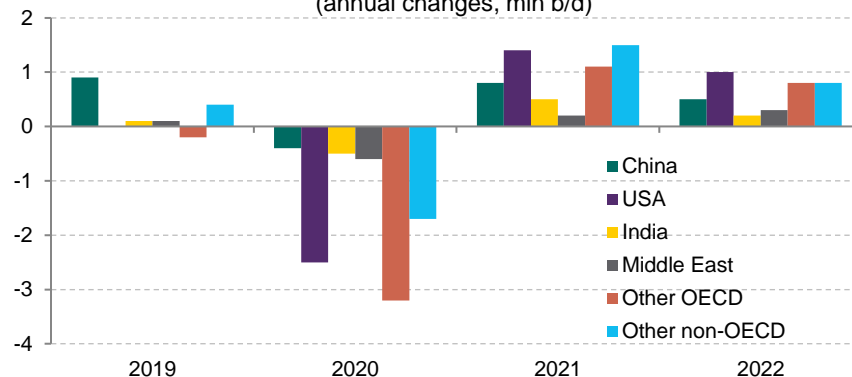
	y/y, %	20q1	20q2	20q3	20q4
Core inflation	3.4	3.8	4.2	4.1	
Excise goods	0.4	0.5	0.5	0.5	
Other goods	0.2	0.1	0.5	0.3	
Administered services	1.1	1.2	1.2	1.3	
Market services	1.7	1.9	2.0	2.0	

Increase in commodity prices at the end of 2020. In the forecast horizon: a gradual increase in demand for crude oil counterbalanced by the expected supply-side adjustments.

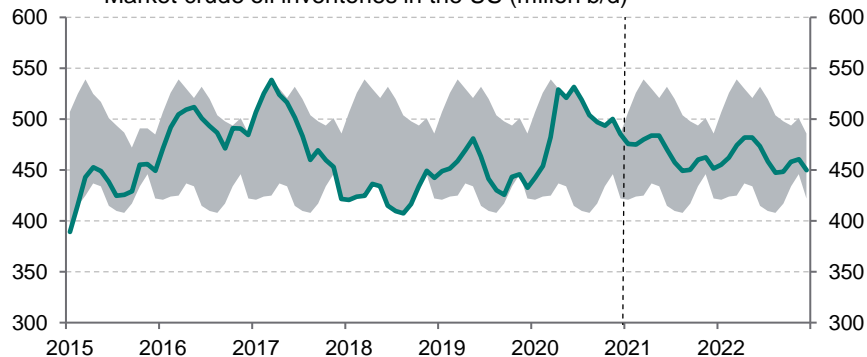
Global oil production, consumption and change in stocks (million b/d)



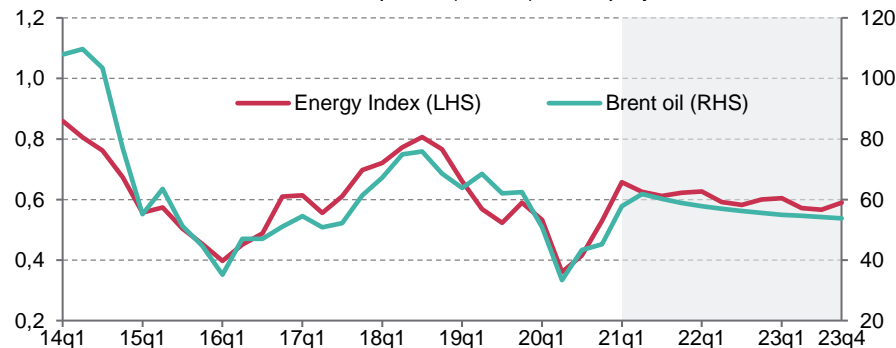
Changes in consumption of crude oil and liquid fuels worldwide (annual changes, mln b/d)



Market crude oil inventories in the US (million b/d)

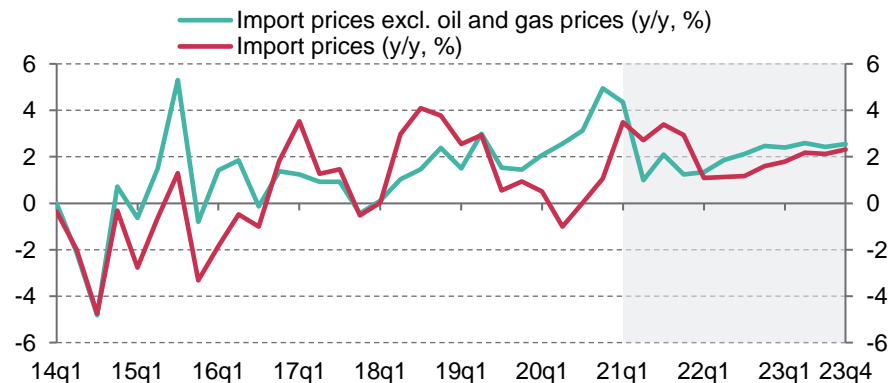
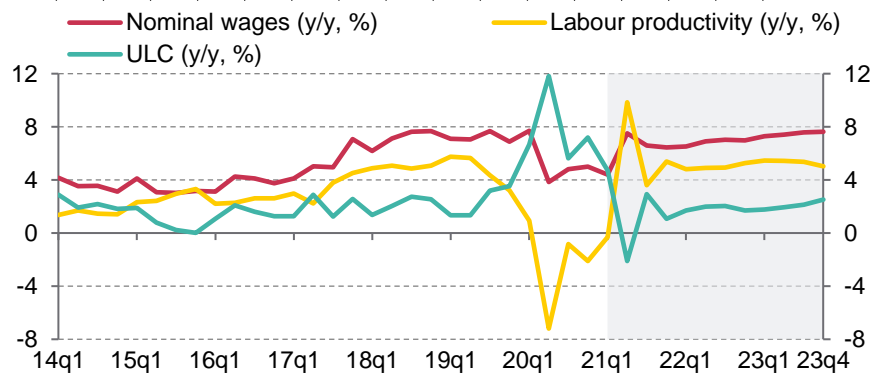
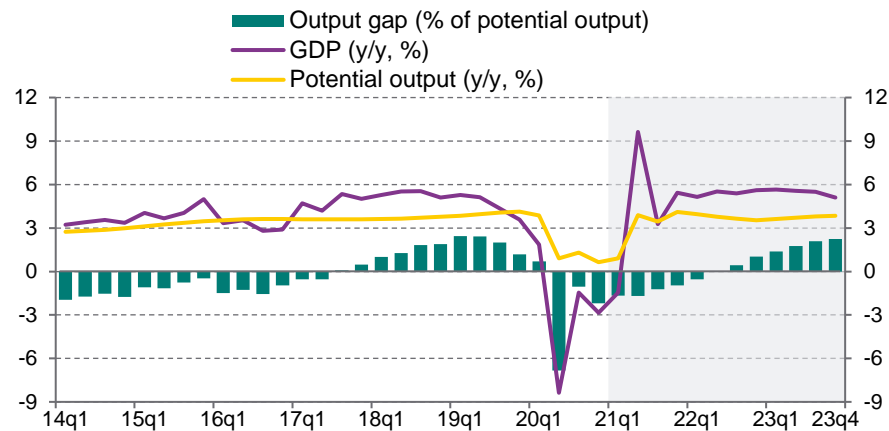
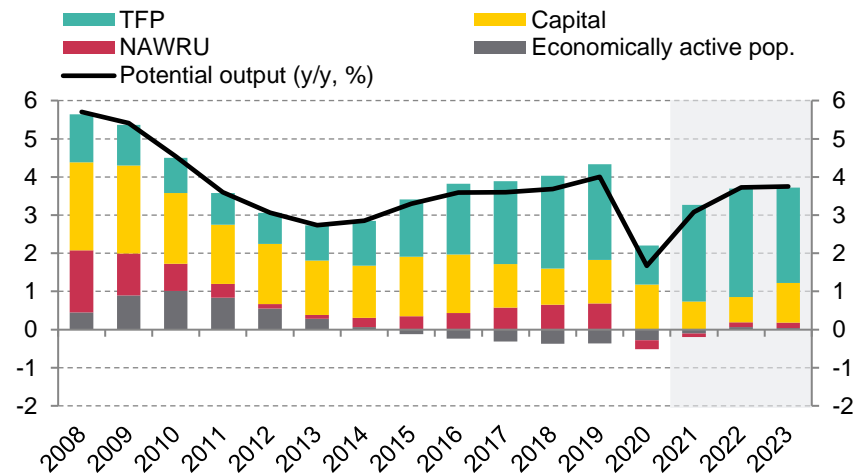


Energy commodities' prices index (USD, 2011=1) and crude oil prices (USD/b) in the projection



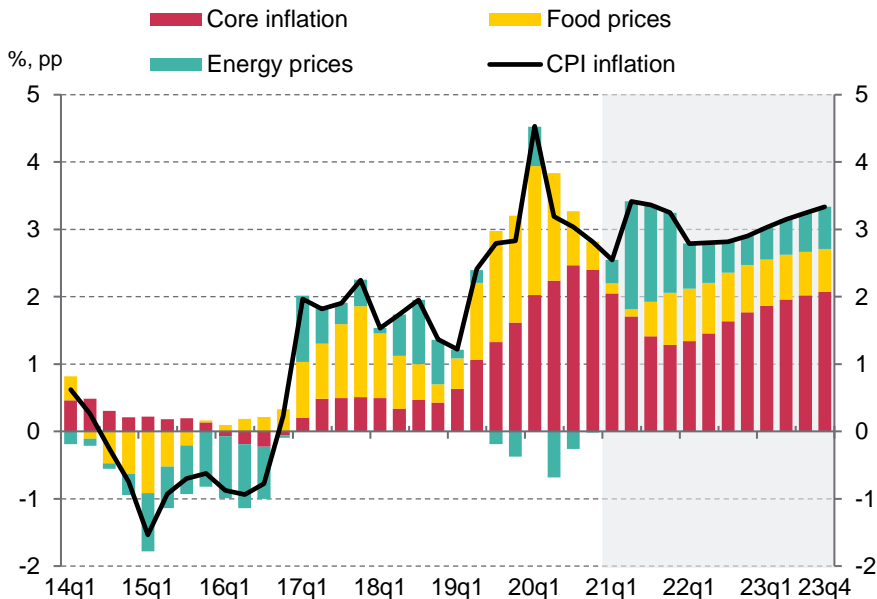
Source: GUS, Bloomberg, Reuters, EIA, NBP calculations.

The decline in demand observed in 2020 impacts price growth with a delay. In the following years inflation will be driven by the recovery of domestic and foreign demand.



Source: GUS, NBP calculations.

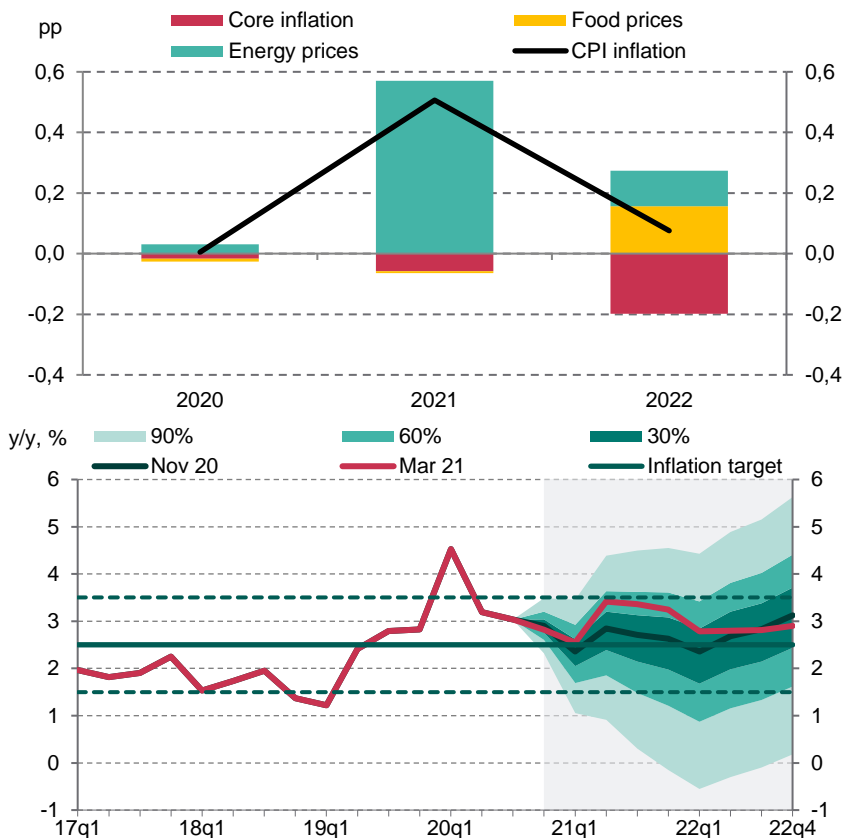
Throughout the projection horizon, CPI inflation will remain within the range for deviations from the NBP inflation target set at 2.5% +/- 1 percentage point.



y/y, %	2020	2021	2022	2023
CPI inflation	3.4	3.1	2.8	3.2

- ↓ ↑ Fall in demand in 2020 affecting prices with a delay; in subsequent years inflation driven by the recovery of domestic and foreign demand.
- ↓ ↑ Slow growth of unit labour costs, and its acceleration in the longer projection horizon.
- ↑ ↓ Increase in energy commodity prices in the world markets at the end of 2020; their stabilisation in the following years.
- ↑ Increase in electricity prices for households from January 2021, due to the increase in prices of CO₂ emission allowances, wholesale prices on the Polish Power Exchange and the introduction of the capacity charge.
- ↑ Introduction of the sugar levy in January 2021.
- ↓ High harvest of vegetables and fruits in 2020.
- ↓ Further spread of the ASF epidemic (among others in Poland and Germany) - an increase in the supply of pork in Poland in 2021.
- ↓ The waning impact of the so-called „Covid fees”.

March CPI projection compared to the November projection



↑ Significant increase of crude oil prices in the world markets after the *cut-off date* of the previous projection.

↑ Higher than expected prices of CO₂ emission allowances related to the tightening of the EU carbon dioxide emission target by 2030 and, consequently, an upward trend in wholesale prices on the the Polish Power Exchange in recent months.

CPI y/y, %	2020	2021	2022
November 2020	3.4	2.6	2.7
March 2021	3.4	3.1	2.8

Outline:

Pandemic: economic
fallout

Projection 2021 – 2023

- Economic conditions
abroad
- Polish economy

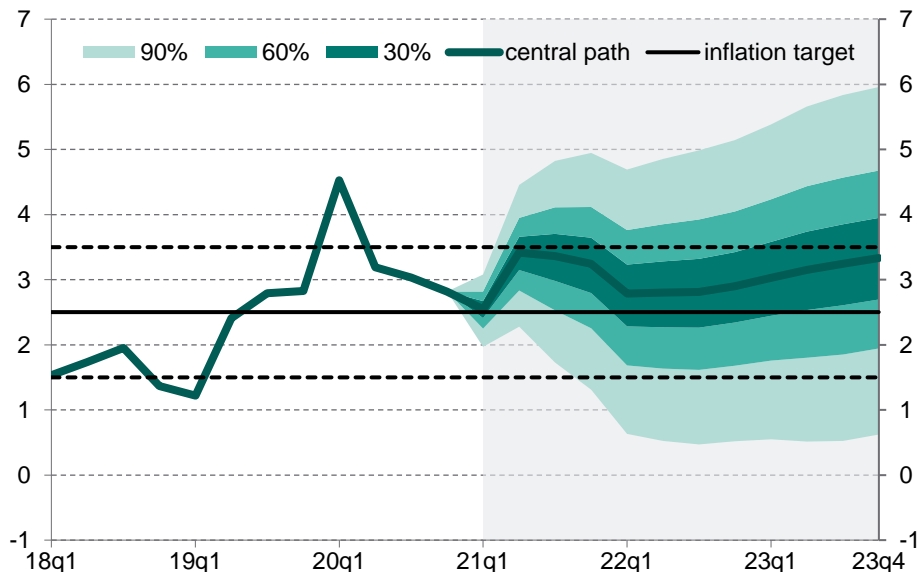
Uncertainty

Uncertainty

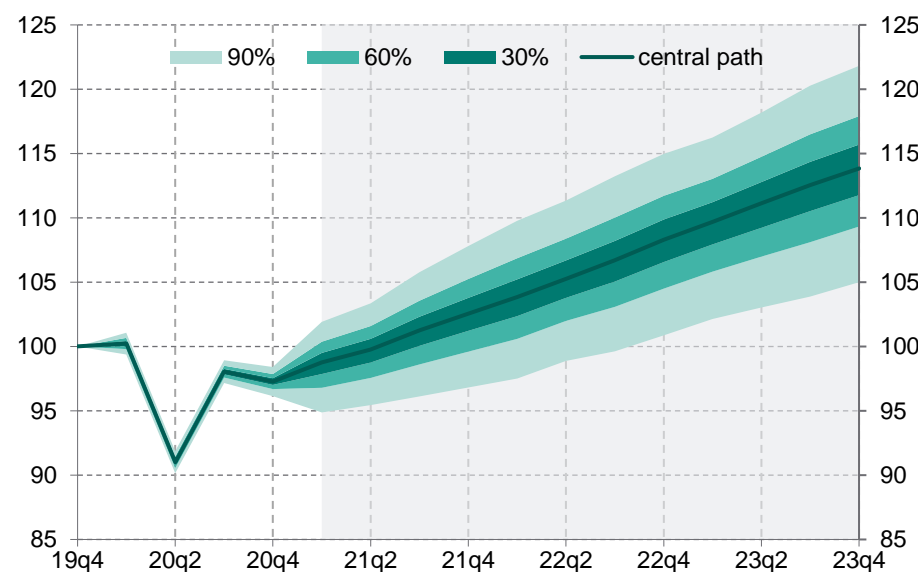
- Risk factors
- Fan charts

Risk area	Description	Impact	Scale of impact
More severe course of the pandemic, combined with a permanent decline in economic activity in Poland	<ul style="list-style-type: none"> ▪ Smaller effectiveness of the measures to contain the COVID-19 pandemic, especially in terms of new infection and illness prevention: emergence of new coronavirus mutations with higher transmission, increased mortality or resistance to the vaccines used; shorter than expected vaccine-induced immunity; slower vaccination pace due to supply constraints. As a result, recurring periods of epidemic expansion and return of restrictions in Poland and around the world. ▪ Permanent change in the economic behaviour of the population – decline in demand for certain services. ▪ Increase in the number of bankruptcies of enterprises, mainly in the service industries, in particular hotels, recreation, culture and catering. High uncertainty and pessimistic business sentiment. ▪ Intensification of international trade disputes, resulting in: higher barriers to world trade, foreign investment reduction and a slowdown in technology transfer to less developed economies. Limited productivity growth in the global economy. ▪ Sustained loss of potential output in Poland (reduction in corporate investment, increase in equilibrium unemployment rate, lower participation rate, slower growth of total factor productivity). 	Inflation ↓ GDP ↓↓	**
Milder course of the pandemic	<ul style="list-style-type: none"> ▪ Significant progress in reducing the pandemic in Poland and abroad (high vaccination effectiveness and acceleration of vaccination pace, milder mutations of the coronavirus). ▪ Increase in optimism of economic agents, return of consumer and investor behaviour to the pre-pandemic patterns. Unleashing of households' pent up demand. ▪ Improvement in the global sentiment and stronger positive impact of anti-crisis packages launched due to pandemic in Poland and abroad. 	Inflation ↑ GDP ↑	**
Prices of energy and agricultural commodities	<ul style="list-style-type: none"> ▪ Volatility of the global prices of energy commodities due to changes in demand and actions taken by the major producers. ▪ Risk of a significant deviation of meteorological conditions compared to the long-term average in countries that are important food producers and in Poland. Spread of ASF disease in the European Union. 	Inflation ⇕ GDP ⇕	*
Summary		Inflation ↓	GDP ↓

Inflation CPI y/y, %



GDP level (Q4 2019 = 100)



CPI y/y, %	below 1.5%	below 2.5%	below 3.5%	below centr. path	within 1.5-3.5% range
2021	1%	20%	73%	53%	72%
2022	15%	42%	73%	52%	58%
2023	13%	33%	60%	51%	46%

CPI y/y, %	central path	50% probability interval	
2021	3.1	2.7	3.6
2022	2.8	2.0	3.6
2023	3.2	2.2	4.2

GDP y/y, %	central path	50% probability interval	
2021	4.1	2.6	5.3
2022	5.4	4.0	6.9
2023	5.4	4.0	6.8

Source: GUS, NBP calculations.

We protect the value of money