

Please note that the next issue of Poland Macro Weekly will be published on Friday, January 13.

## 2023 in preview

### TOP MACRO THEME(S):

- **2023 in preview (p. 2):** Central banks, including the NBP, face a 'tragic' choice in which there are no good solutions. They can either stabilize the economy at the price of a slower decline in inflation, or continue aggressive fight with inflation, accepting the risk of a deep economic downturn.
- **Birds's-eye view on the CEE region prospects (p.5):** Economic activity in 2023 will hover around recessionary levels in most of the CEE region, while inflation is expected to gradually decrease, driven by both domestic and external factors, yet not strongly enough to reach inflation targets next year.

### WHAT ELSE CAUGHT OUR EYE:

- **Real economy data for November surprised positively. Industrial output** held up well expanding by 4.6% y/y, driven mainly by exports of investment goods. **Construction output** surprisingly rebounded (+4.0% y/y) on improvement in civil engineering works despite harsh weather conditions. **Real retail sales** recovered a tad (1.6% y/y) on easing price pressures.
- **Broad (M3) money supply** grew by 5.6% y/y in November amid deepening decline of narrow money (M1), by 9.0% y/y. Banking statistics confirm a dry loan tap for consumers, with both consumer and mortgage lending declining in annual terms (PLN mortgages for the first time in over 20 years).
- Registered **unemployment rate** in November stood flat at 5.1%.

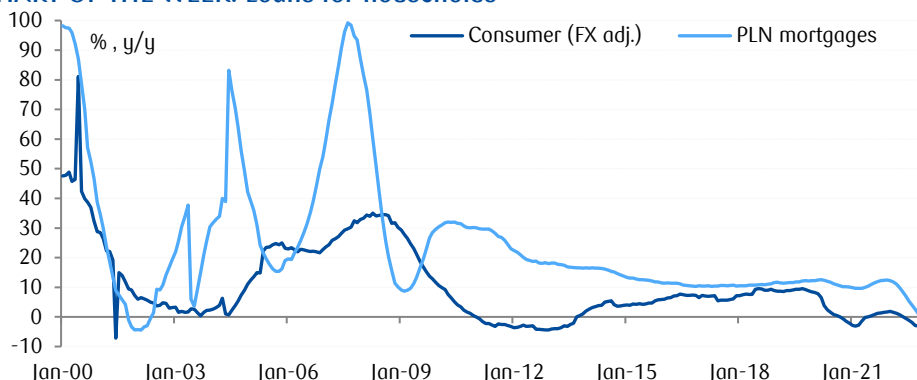
### THE WEEKS AHEAD:

- An idle period at the turn of the year will be followed by **manufacturing PMI and CPI inflation releases** (Jan 2 and Jan 5, respectively). Our early estimates suggest that sentiment in manufacturing somewhat improved in December while CPI inflation in December barely changed.
- **The MPC will be active in the first week of January.** We think a wait-and-see approach will be confirmed both at the meeting on Wednesday, Jan 4, with no changes to monetary policy (key policy rate at 6.75%), as well as in the minutes of the MPC meeting in December.
- **Balance of payments data for November** should mark a turning point in C/A deficit-to-GDP ratio with reduction of deficit looming on the horizon.

### NUMBER OF THE WEEK:

- **-0.2% y/y** –growth rate of PLN mortgages in November turned negative for the first time since May 2002.

### CHART OF THE WEEK: Loans for households



Source: NBP, PKO Bank Polski.

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	2021	2022 <sup>†</sup>
Real GDP (%)	6.8	4.5
Industrial output (%)	15.6	9.9
Unemployment rate <sup>#</sup> (%)	5.8	5.2
CPI inflation <sup>**</sup> (%)	5.1	14.3
Core inflation <sup>**</sup> (%)	4.1	9.1
Money supply M3 (%)	8.9	5.8
C/A balance (% GDP)	-1.4	-3.7
Fiscal balance (% GDP) <sup>*</sup>	-1.8	-1.7
Public debt (% GDP) <sup>*</sup>	53.8	50.8
NBP reference rate <sup>###</sup> (%)	1.75	6.75
EURPLN <sup>†††</sup>	4.60	4.76 <sup>^</sup>

Source: GUS, NBP, MinFin, <sup>†</sup>PKO BP Macro Research team forecasts; <sup>‡</sup>PKO BP Market Strategy team forecasts; <sup>\*</sup>ESA2010, <sup>\*\*</sup>period averages; <sup>#</sup>registered unemployment rate at year-end; <sup>##</sup>at year-end. <sup>^</sup>under revision.

## 2023 in preview

- Central banks, including the NBP, face a ‘tragic’ choice in which there are no good solutions. They can either stabilize the economy at the price of a slower decline in inflation, bearing the risk of de-anchoring inflation expectations, or continue aggressive fight with inflation, accepting the risk of a deep economic downturn. Regardless of the choice, the risk of a policy mistake is high. Below we have summarized our view on Poland’s economy and local policy mix in 2023.

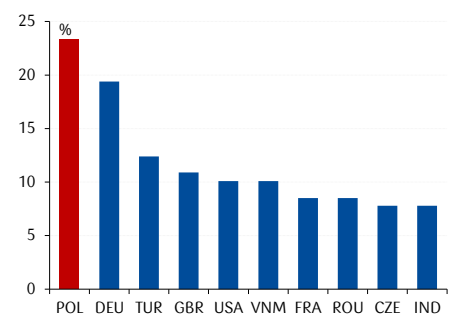
The external environment of the Polish economy remains difficult. In 2022 Europe managed to avoid the black scenario of the energy crisis, but this is only a battle that has been won, not a war. The next winter (2023), with lower stock levels and higher demand for gas from Asia, may be more difficult than this one. The energy crisis will continue, maintaining a negative impact on economic growth in Europe and in Poland, but reducing its impact on inflation.

Poland will be teetering on the brink of recession of a specific nature. The inventories accumulated in 2022 will weigh on GDP growth. Private consumption, increasingly suppressed by the decline in real income and the dry loan tap, will be the weakest link in the domestic final sales. In 2h23, as inflation falls, the situation will improve. The reaction of the labor market will be important for consumption – we expect that the economic slowdown will not cause a strong rise in unemployment. Reshoring/nearshoring/friendshoring will make Polish exports resist the global decline in demand. Poland is one of the main beneficiaries of changes in global production chains after the pandemic, ranking (according to the Reuters - Maersk study) 4<sup>th</sup> in the world on the list of preferred locations for relocating production. Among European companies, Poland is the number one choice. Investments may turn out to be an unobvious source of GDP growth support. The need to reduce the energy intensity of the economy and the inflow of foreign capital will support investment demand. The chances of a cyclical rebound in investments (which in our opinion has not yet fully occurred after the pandemic) will increase in 2h23. The implementation of the Recovery Plan from national funds (including Polish Development Fund, PFR) and defense spending will additionally stimulate public investment demand.

Labour market conditions remain favourable, although there are further signs of their deterioration. Registered unemployment rate in the last three months stood at record low 5.1% level. Nevertheless, in the 3q22 demand for labour has weakened. Households’ fears of unemployment have grown stronger, whereas businesses still find it hard to fill vacant places. These contradictory tendencies suggest that labour market adjustment to economic slowdown will take place mainly through the wage channel. Any reduction in employment is likely to apply in the first place to foreign workers, further amplifying the dual nature of the domestic labour market

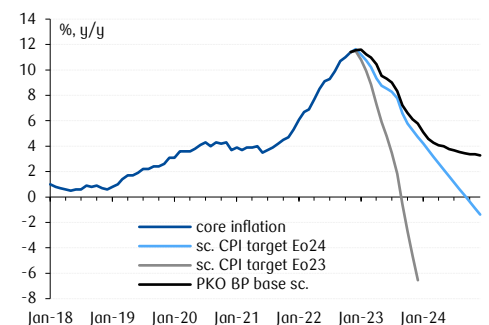
After the inflation shock in 2022, which in Poland was particularly strong, the time for disinflation is coming. The road towards the inflation target (2.5% +/- 1pp) will be however closer to a marathon than to a sprint. The pace of the “run” will be mostly determined by the path of energy prices. In 2023 the rise in electric energy prices for retail customers will reflect less than 1/10 of the scale of the market prices increase. This creates a significant inflation ballast for the coming years, which will make inflation more sticky. **We maintain our forecast that CPI inflation will return to the NBP target in 2025 at the earliest.** In the face of energy crisis core inflation would have to be deeply negative to enable reaching the target earlier (core inflation at app. -6% y/y to reach the target at the end of 2023, core inflation at app. -2% y/y to reach the target at the end of 2024). **In our base scenario CPI inflation declines slightly below 10% y/y at the end of 2023, on the base of waning 2022 shocks and moderating core inflation.** The

### Preferred location of reshoring/nearshoring for European corporations



Source: Reuters-Maersk, PKO Bank Polski.

### Core inflation – base case vs two hypothetical scenarios resulting in headline CPI reaching NBP target Eo2023 and Eo2024



Source: GUS, PKO Bank Polski, all scenarios assuming PKO BP base forecast for energy, fuels and food.

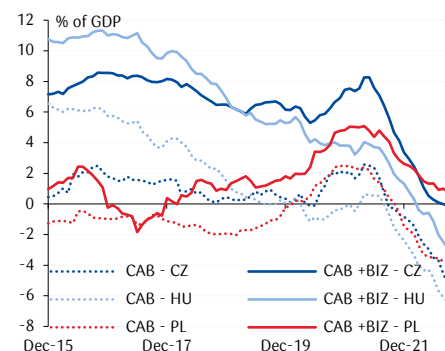
latter will mainly reflect frozen private consumption putting pressure on margins and reducing the space for price increases.

**The adverse terms-of-trade shock deepens trade deficits in Europe, but the turn of 2022/2023 will mark a turning point.** Poland's balance of payments stands out positively against the background of other CEE economies, e.g. thanks to large inflow of FDIs. We expect that at the end of 2022 the CA deficit will widen further to app. 4% of GDP. However, the next year will bring a narrowing of the deficit towards 3% of GDP. We consistently believe that even if the deficit increases further, it would not pose a threat to the external balance of the economy. In the medium term, we see solid grounds for CAB improvement – including solid exports resulting from past FDIs inflow and the unwinding of the inventory cycle.

**A 'pause' in the NBP rate hikes cycle will turn into its definitive end, with the key policy rate at the current level of 6.75%.** The MPC accepts that CPI inflation's return to the target will be slow, as central bankers fear of negative effects of further rate hikes. We believe that markets and analyst will soon start expecting cautious rate cuts by the end of 2023 – the interest rate path we now have as our baseline scenario.

**2023 will be a year of unprecedented challenges for public finances** (due to high borrowing needs and tense market conditions). We estimate that the fiscal deficit in 2023 will increase to 5.1% of GDP. Protective measures against energy shock will be the key driver of fiscal deficit deterioration. Defense spending will become a permanent part of the public spending landscape – we assume that in 2023 the increase in spending on defense may reach 0.8% of GDP y/y. An increase in interest rates will also increase debt servicing costs - we estimate that by approx. 0.7-0.9% of GDP. We do not expect, as suggested by the central bank, that in 2023 it will provide the state budget with a profit transfer. In 2023, most of the fiscal deficit will be recorded by off-budget units. In the central budget alone a deficit of PLN 68bn (i.e. approx. 2% of GDP) is planned. Solid nominal GDP growth will mean that the ratio of public debt to GDP (ESA) will increase only slightly in 2023.

### External balance in the CE region



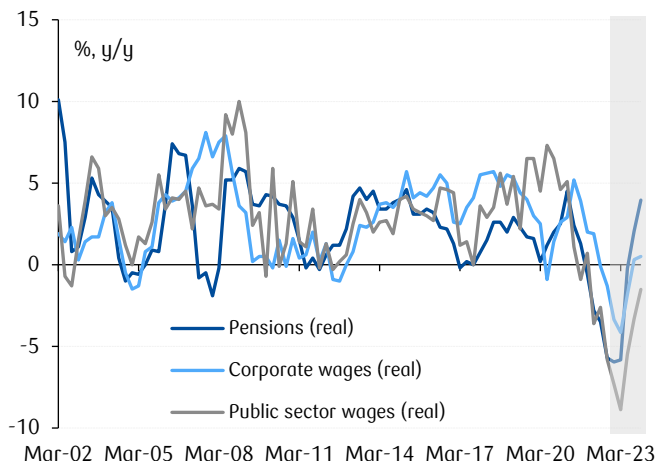
Source: Macrobond, PKO Bank Polski.

### Main macroeconomic indicators

	1q22	2q22	3q22	4q22	1q23	2q23	3q23	4q23	2021	2022	2023
Real GDP (% y/y)	8.6	5.8	3.6	0.9	-0.6	0.3	-0.5	1.2	6.8	4.5	0.1
LFS unemployment rate (%)	3.1	2.6	2.9	3.0	3.4	3.2	3.4	3.2	3.4	2.9	3.3
CPI inflation (% y/y, period avg.)	9.7	14.0	16.3	17.5	20.1	15.4	12.7	9.7	5.1	14.3	14.4
Core inflation (% y/y, period avg.)	6.6	8.4	10.0	11.3	11.3	9.8	8.2	6.2	4.1	9.1	8.8
Current account balance (% of GDP)	-2.7	-3.5	-3.7	-3.7	-3.3	-2.8	-2.9	-2.7	-1.4	-3.7	-2.7
Fiscal balance (% of GDP) ‡*	-1.5	-1.5	-1.4	-1.7	-2.3	-3.2	-4.0	-5.1	-1.8	-1.7	-5.1
Public debt (% of GDP) ‡*	52.0	51.5	50.3	50.8	50.4	50.6	50.7	52.7	53.8	50.8	52.7
NBP reference rate (%)	3.50	6.00	6.75	6.75	6.75	6.75	6.50	6.25	1.75	6.75	6.25

Source: GUS, NBP, MinFin, PKO Bank Polski. Shaded areas denote forecasts., ‡ESA2010, \*quarterly data – 4q rolling window.

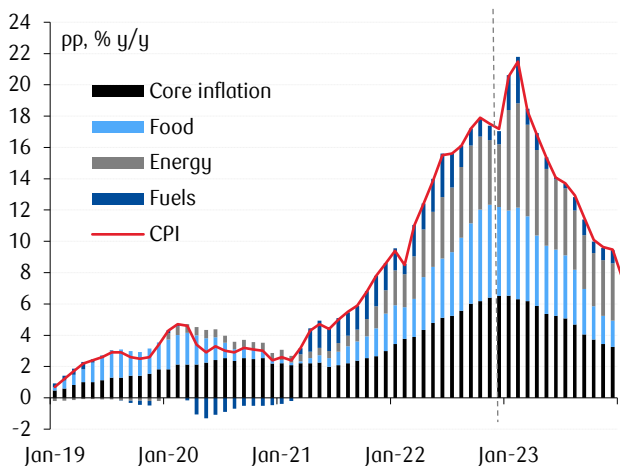
### Real households' income



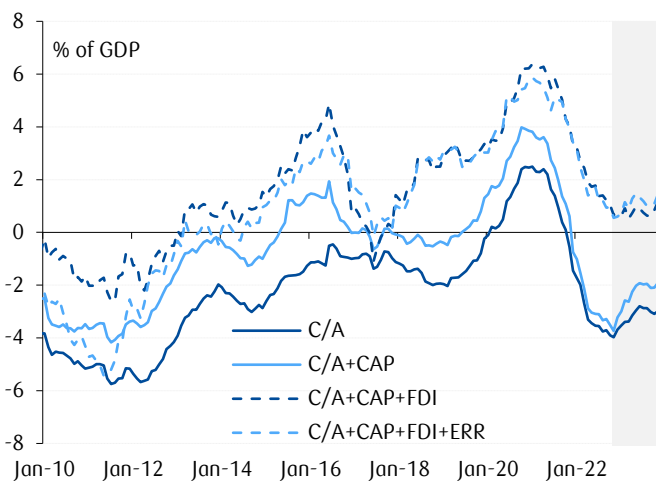
### Vacancies



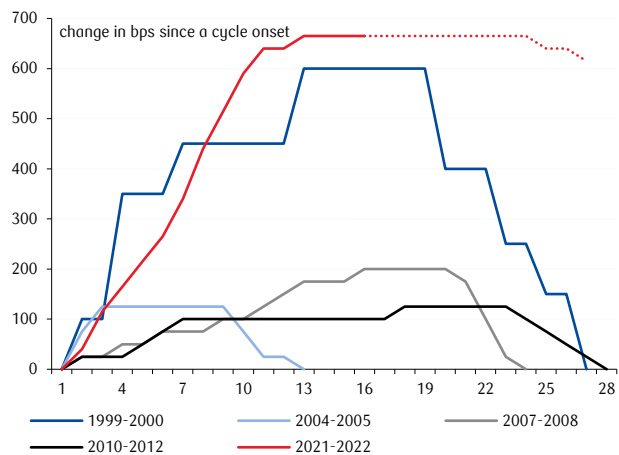
### CPI inflation forecast



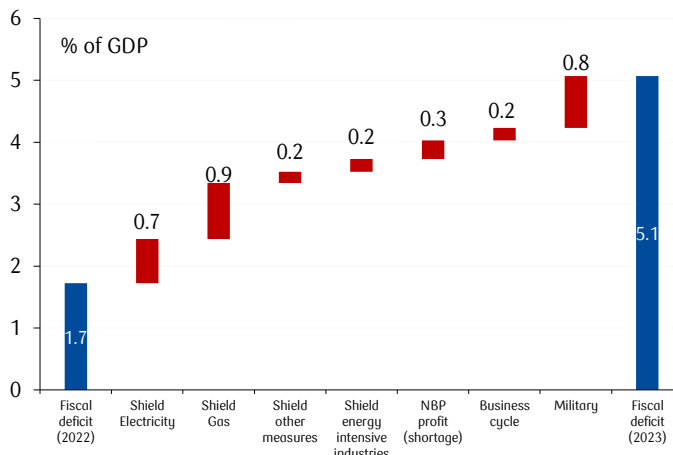
### External balance indicators



### Monetary policy tightening cycles in Poland



### Key drivers of fiscal deficit change



Source: GUS, NBP, MinFin, PKO Bank Polski.

## Birds's-eye view on the CEE region prospects

- 2h22 have seen a gradual deterioration of economic conditions in the CEE, in particular with regard to domestic demand. In view of a further slowdown of private consumption and weakening external demand, economic activity in 2023 will hover around recessionary levels in most of the region.
- While being elevated, inflation has recently shown some signs of easing in the Czech Republic and Poland, while it kept accelerating in Hungary and Romania. In 2023 inflation is expected to gradually decrease across the region driven by both domestic and external factors, yet not enough to reach inflation targets next year.

**Amidst global slowdown, economic conditions in Central and Eastern Europe have been deteriorating recently.** Czech GDP growth in 3q22 slowed down to 0.2% q/q, mainly as a result of a significant fall (by 3.1% q/q) in private consumption, the deepest in history (if the period of first pandemic lockdown is excluded). Hungarian economy also contracted by 0.2% against 2q22, while Romania remained more resilient growing by 1.3% q/q, though with a relatively weak performance of private consumption. Meanwhile, Polish GDP growth rate rebounded from negative territory in 2q22 and stood at 1.0% q/q in 3q22.

**Both weakening domestic demand and the deterioration of economic conditions abroad draw a rather gloomy economic picture of 2023 in the CEE.** Czech economy most likely will not avoid a recession, and its growth projections remain the lowest in the region. Available forecasts point to a stagnation in Hungary in 2023, very likely preceded by a technical recession in 4q22. The risk of a recession in 2023 cannot be excluded taking into account uncertainty regarding the inflow of EU funds and further developments on the domestic fx market. Meanwhile GDP growth in Romania is expected to slow down further, yet in 2023 it will be relatively robust. With regard to Poland we remain rather cautious about GDP growth next year, which we see above zero just by a small margin.

**Inflation rates across the CEE region are among the highest in the EU, giving way only to the Baltic states.** The exception is Hungary, where elevated inflation is boosted by the highest in the EU growth in food prices, despite price limits introduced on some basic items. In contrast to Hungary and Romania where inflation continues to accelerate, deflationary tendencies were noticeable in the latest CPI figures from Poland and the Czech Republic, though in the latter case driven to a large extent by price limits on electricity and gas prices for households and SMEs, which have been applicable since November. Nevertheless, it is only in Czech Republic that core inflation has stabilised in recent months.

**Inflation in all economies of the CEE region is expected to fall in 2023, supported by the easing of cost pressures, slowdown in global economic activity and a fall in the domestic demand.** Czech National Bank (CNB) predicts that inflation will peak at the beginning of 2023, approaching 20,0% and in the course of 1.5 year fall close to the 2% inflation target. Central bank of Hungary (MNB) expects that inflation will slow down in 2023 and reach the band of deviations from the target in 2024. National Bank of Romania (NBR) assumes that inflation will gradually decelerate and reach one digit figures in 1h24. We see the inflation peak in Poland in the first quarter of 2023 followed by a gradual fall slightly below 10,0% by the end of the year.

**Meanwhile central banks in the CEE, in particular CNB, MNB and NBP have put on hold interest rate increases and assume the stabilization of interest rates** (in our opinion most likely turning into the termination of the tightening cycle) as their baseline scenarios. In turn, NBR may continue to tighten monetary policy due to higher inflation figures than expected in the November projection. What is more NBR was the last among the CEE central banks to embark on the

tightening path and the scale of its interest rates increases was the lowest so far, therefore it may still have a way to go.

**The main source of uncertainty regarding the economic outlook in the CEE stems from the further course of the war in Ukraine and the developments on the global energy market.** Amplification of the military conflict may reinforce the perception of the region as a high-risk one, contributing to domestic currencies depreciation and an increase in yields, just as it did at the outbreak of the conflict. The exacerbation of the energy crisis will prolong the persistence of inflationary pressure and take its toll on economic growth in the longer term. Both of these factors would constitute a strain on already tight fiscal budgets in the CEE region. On the other hand, an end to the war would significantly improve the regions prospects, as it shall greatly benefit from the stabilization of commodity prices, but – above all – from becoming a kind of a hub for the Ukrainian reconstruction.

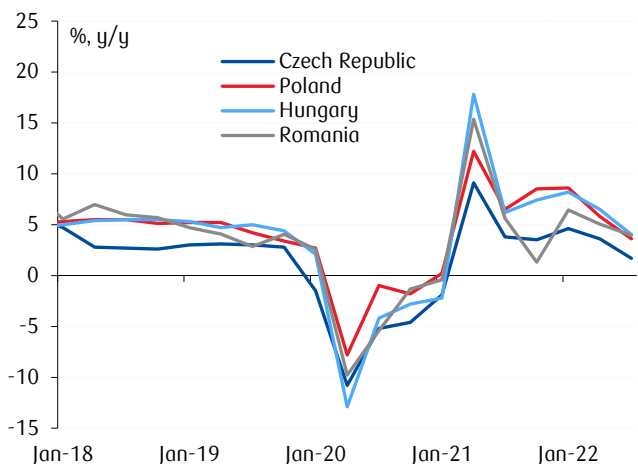
### Central banks' and European Commission's forecasts of GDP and inflation in the CEE

	Inflation (CPI)			Core inflation			GDP*		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
<b>Central bank's projections</b>	%								
CNB (Nov-22)	15.8	9.1	2.4	13.2	8.4	3.1	2.2	-0.7	2.5
NBP (Nov-22)	14.5	13.1	5.9	9.1	10.3	6.0	4.6	0.7	2.0
MNB (Dec-22)	14.5-14.7	15.0-19.5	2.3-4.5	15.4-15.9	14.9-17.4	3.2-5.5	4.5-5.0	0.5-1.5	3.5-4.5
NBR (Nov-22)**	16.3	11.2	4.2	13.6	7.9	4.0	-	-	-
<b>European Commission forecast (Oct-22)</b>									
Czech Republic	15.6	9.5	3.5	12.5	8.9	3.4	2.5	0.1	1.8
Poland	13.1	13.8	4.9	10.4	10.9	5.6	4.0	0.7	2.6
Hungary	14.8	15.7	3.9	14	14.4	5.0	5.5	0.1	2.6
Romania	11.8	10.2	6.8	8.6	10.5	7.5	5.8	1.8	2.2

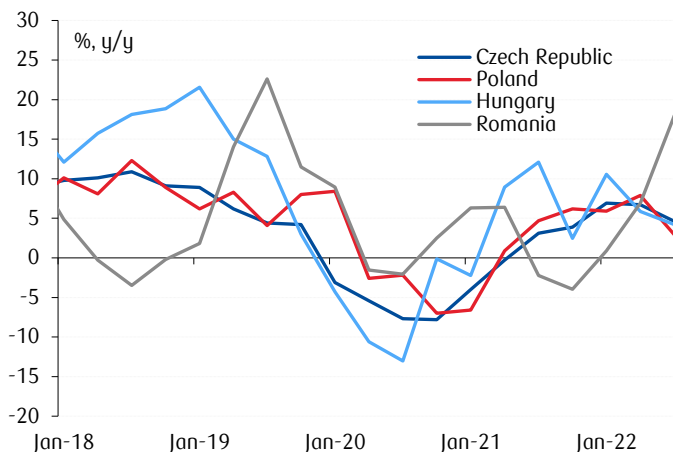
Source: CNB, NBP, MNB, NBR, EC, PKO Bank Polski. \*in case of Romania the central bank only presents output gap forecast

\*\*forecast for 4q with the exception of 2024 (3q).

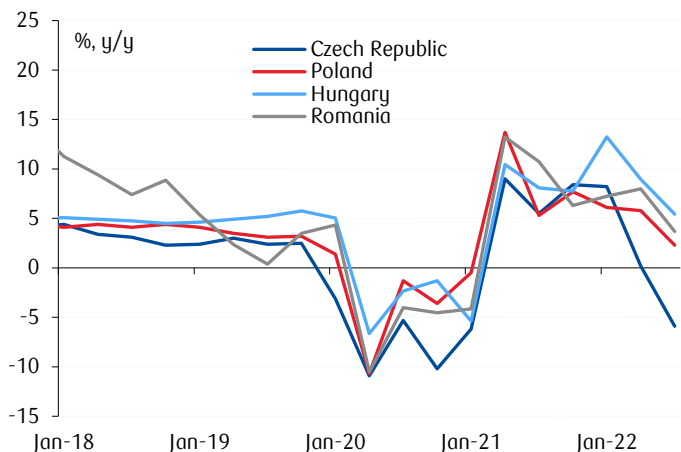
**Real GDP**



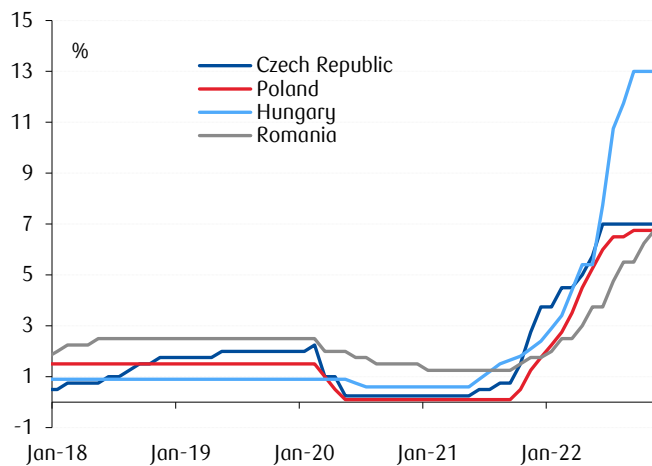
**Gross fixed capital formation**



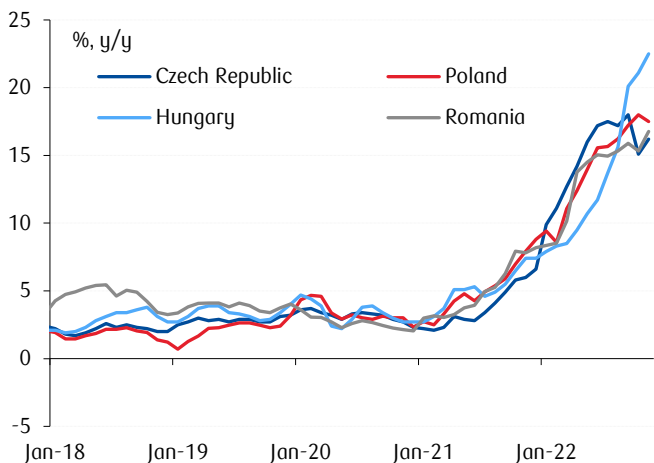
**Private consumption**



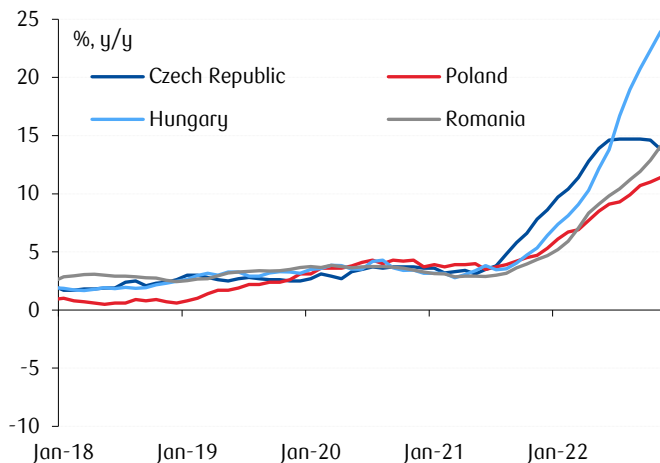
**Interest rates**



**Inflation (CPI)**



**Core inflation**



Source: Macrobond, PKO Bank Polski.



## Economic calendar ahead

Indicator	Time (UK)	Unit	Previous	Consensus*	PKO BP	Comment
<b>Tuesday, 27 December</b>						
USA: S&P Case Shiller 20 Cities price index (Oct)	14:00	%	10.4	--	--	--
<b>Thursday, 29 December</b>						
EUR: M3 money supply (Nov)	9:00	% y/y	5.1	5.0	--	--
POL: Current account balance (3q)	13:00	EUR mn	-4726	--	--	External debt to GDP ratio most likely kept falling after 3q.
<b>Monday, 2 January</b>						
POL: Manufacturing PMI (Dec)	8:00	pts.	43.4	--	--	Our tentative estimates suggests a further improvement of sentiment in manufacturing.
GER: Manufacturing PMI (Dec)	8:55	pts.	46.2	47.4	--	--
EUR: Manufacturing PMI (Dec)	9:00	pts.	47.1	47.8	--	--
<b>Tuesday, 3 January</b>						
GER: Inflation CPI (Dec, prelim.)	13:00	% y/y	10.0	--	--	--
GER: Inflation HICP (Dec, prelim.)	13:00	% y/y	11.3	--	--	--
USA: Manufacturing PMI (Dec, fin)	14:45	pts.	47.7	46.2	--	--
<b>Wednesday, 4 January</b>						
SWI: Inflation CPI (Dec)	7:30	% y/y	3.0	--	--	--
POL: NBP reference rate	--	%	6.75	6.75	6.75	MPC will open 2023 with a continuation to the wait-and-see approach in the monetary policy in Poland.
USA: ISM manufacturing (Dec)	15:00	pts.	49.0	--	--	--
USA: Minutes FOMC (Dec)	19:00	--	--	--	--	--
<b>Thursday, 5 January</b>						
GER: Exports (Nov)	7:00	% m/m	-0.6	--	--	--
POL: Inflation CPI (Dec, flash)	9:00	% y/y	17.5	--	--	Our nowcast suggests that headline inflation has barely changed. Minutes should confirm that a pause in tightening cycle is a baseline for the MPC.
POL: Minutes MPC (Dec)	13:00	--	--	--	--	--
USA: ADP report (Dec)	13:15	thous.	127	--	--	--
<b>Friday, 6 January</b>						
GER: Industrial orders (Nov)	7:00	% m/m	0.8	--	--	--
EUR: ESI business sentiment (Dec)	10:00	pts.	93.7	--	--	--
EUR: Inflation HICP (Dec, flash)	10:00	% y/y	10.0	--	--	--
USA: Non-farm payrolls (Dec)	14:30	thous.	263	--	--	--
<b>Monday, 9 January</b>						
GER: Industrial output (Nov)	7:00	% m/m	-0.1	--	--	--
EUR: Index Sentix (Jan)	9:30	pts.	-21.0	--	--	--
<b>Wednesday, 11 January</b>						
CZE: Inflation CPI (Dec)	8:00	% y/y	16.2	--	--	--
<b>Thursday, 12 January</b>						
USA: Inflation CPI (Dec)	13:30	% y/y	7.1	--	--	--
<b>Friday, 13 January</b>						
HUN: Inflation CPI (Dec)	8:00	% y/y	22.5	--	--	--
POL: Current account balance (Nov)	13:00	EUR bn	-549	--	--	A turning point in C/A deficit to GDP ratio should be confirmed.
USA: Consumer sentiment U.Mich (Jan, flash)	15:00	pts.	--	--	--	--

Source: GUS, NBP, Parkiet, PAP, Bloomberg, Reuters, PKO Bank Polski. Parkiet for Poland, Bloomberg, Reuters for others.



## Monetary policy monitor

MPC Members	Hawk-o-meter*	Recent policy indicative comments^
J. Tyrowicz	5.0	"In November, the Council decided to leave rates unchanged, guided by the optimistic projection, in which the decrease in the inflation rate results from completely exogenous factors: a rapid and permanent decrease in energy prices and an equally permanent and rapid strengthening of the zloty. If these assumptions fail, the projection will be revised upwards and, in order to maintain cohesion, the MPC will have to leave interest rates at today's level longer than the majority of MPC members assume today." (23.12.2022, rp.pl, PKO transl.)
L. Kotecki	4.8	"We still have 17% inflation; talking [about rate cuts] in a situation when inflation is at such a level and expectations are even higher ... is premature." (9.12.2022, Parkiet TV, PAP)
P. Litwiniuk	3.7	"In the environment where borrowers have a cushion in the form of credit holidays, which will last throughout 2023, it would be advisable, in my opinion, to tighten monetary policy more. Additional rate hikes would make the return path to the inflation target steeper. In my opinion, tolerating higher inflation generates higher costs than possible minor labour market perturbations that could result from interest rate hikes." (15.12.2022, Parkiet, PAP)
H. Wnorowski	2.7	"I hope that as of February every consecutive month will be slightly lower [PAP: with respect to CPI readings]" (21.12.2022, TVP 3 Bialystok, PAP).
A. Glapinski	2.4	"The cycle is still suspended, we are not saying it's the end. (...) If inflation rises, we will hike rates. (...) The Council has not discussed ending the cycle. The March projection will tell us a lot. If the projection will show falling inflation, the council will discuss whether to put an end to the hiking cycle." (8.12.2022, NBP press conference, PAP)
C. Kochalski	2.4	"In the light of the current data the level is adequate. The MPC has not been raising rates since September as we have many cues indicating the impact of previously passed hikes They have already started to work. They lowered inflation by 0.5 pps this year, in 2023 it will be 3 pps." (13.12.2022, Biznes 24, PAP).
W. Janczyk	2.0	"The current rates level seems adequate given the information we have today. (...) " in my opinion, in the course of the last few weeks, there has come no information that would prompt resumption of rate hikes in December. Currently, no premises can be seen that would prompt such steps." (2.12.2022, PAP).
I. Duda	2.3	"In the current situation, in the light of available data and forecasts, particularly NBP's inflation projection, the rates level is optimal." (30.11.2022, PAP)
G. Maslowska	2.1	"In my opinion, the base scenario in the interest rates policy of Poland's central bank seems to be stabilization at the to-date level for 10+ months as of the moment of making the latest decision of an interest rate hike. A return to the phase of rate hikes would be possible only if the pace of the economic growth in 2023 would settle at a surprisingly high level, and moreover, if no symptoms of inflation processes waning away could be seen." (20.12.2022, PAP)
I. Dabrowski	1.9	"The markets are right to assume that we might see the first rate cuts as soon as next year. (...) Our interest rates are well calibrated to bring down the headline and core inflation. (...) We will fight inflation, but not at the cost of a dramatic fall in GDP. Crazy rate hikes won't do anything and could be counterproductive, hitting growth hard."(28.10.2022, Bloomberg)

\*the higher the indicator the more hawkish views. The positioning has been made based positively on PAP survey conducted among economists at banks in Poland (scale 1-5). ^Quotes in bold have been modified in this issue of Poland Macro Weekly.

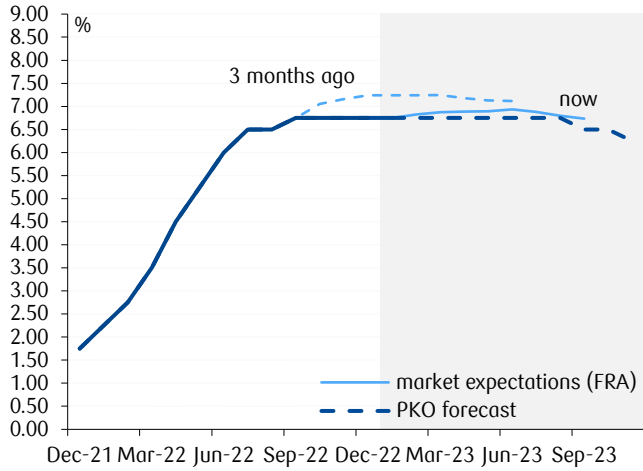
### Interest rates – PKO BP forecasts vs. market expectations

		1M	2M	3M	4M	5M	6M	7M	8M	9M
Date	22-Dec	22-Jan	22-Feb	22-Mar	22-Apr	22-May	22-Jun	22-Jul	22-Aug	22-Sep
WIBOR 3M/FRA†	7.05	7.05	7.13	7.18	7.19	7.20	7.24	7.18	7.10	7.04
implied change (b. p.)		0.00	0.08	0.13	0.14	0.15	0.19	0.13	0.05	-0.01
MPC Meeting	7-Dec	4-Jan	8-Feb	8-Mar	5-Apr	10-May	6-Jun	6-Jul	-	6-Sep
PKO BP forecast*	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.50
market pricing*		6.75	6.83	6.88	6.89	6.90	6.94	6.88	6.80	6.74

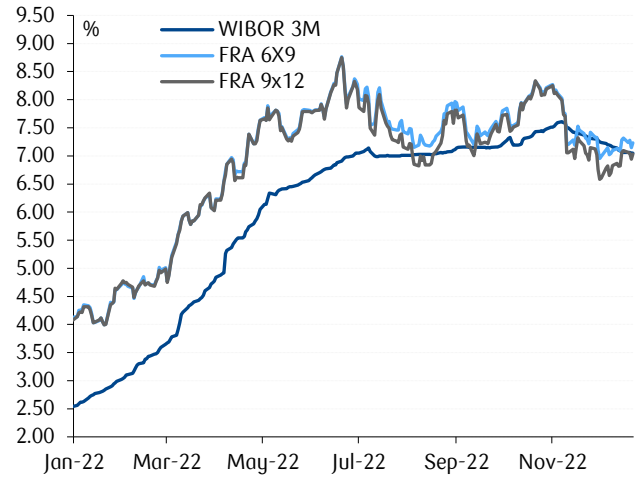
†WIBOR 3M from the last fixing, FRA transactions based on WIBOR 3M for subsequent periods, ‡in basis points, \*PKO BP forecast of the NBP reference rate.

## Poland macro chartbook

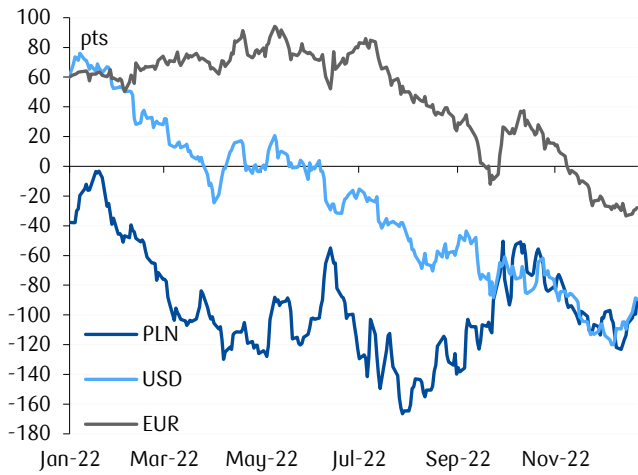
NBP policy rate: PKO BP forecast vs. market expectations



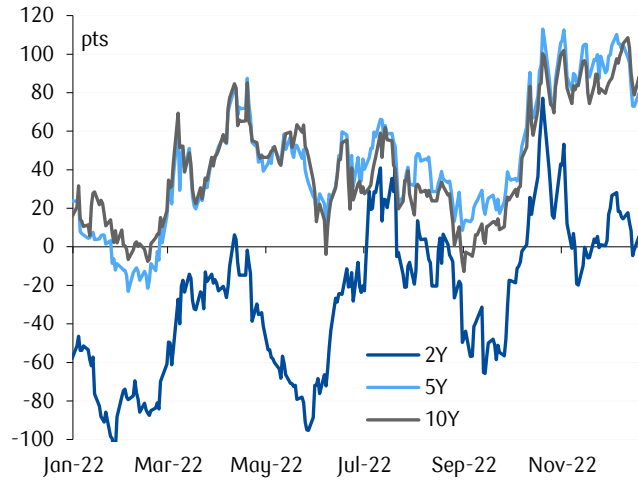
Short-term PLN interest rates



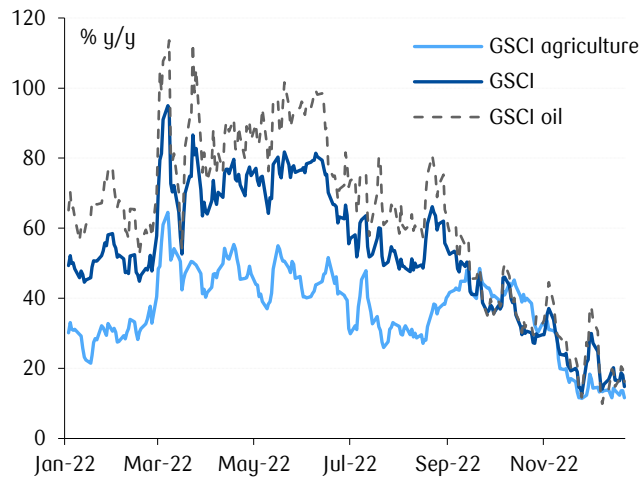
Slope of the swap curve (spread 10Y-2Y)\*



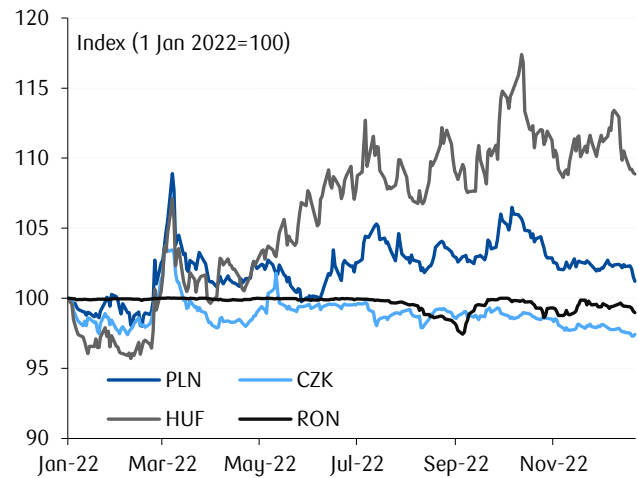
PLN asset swap spread



Global commodity prices (in PLN)

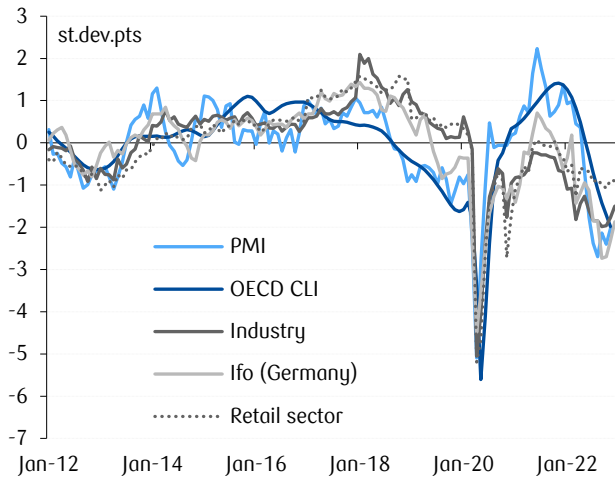


Selected CEE exchange rates against the EUR

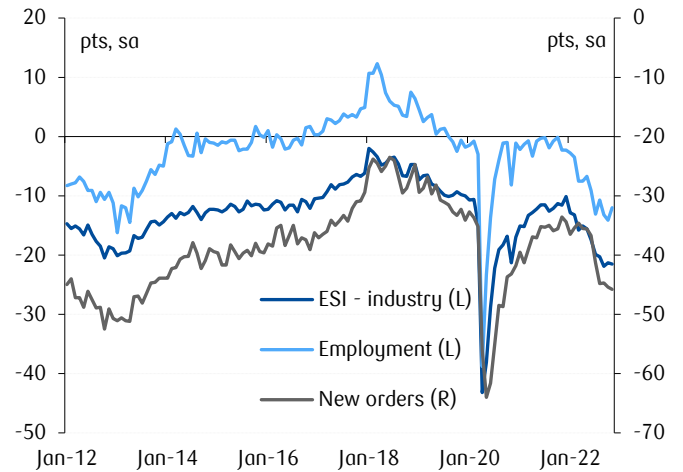


Source: Datastream, NBP, PKO Bank Polski. \*for PLN, and EUR 6M, for USD 3M.

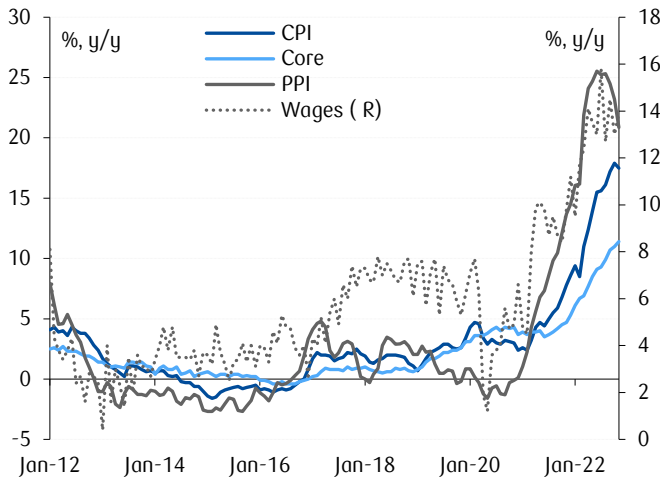
### Economic sentiment indicators



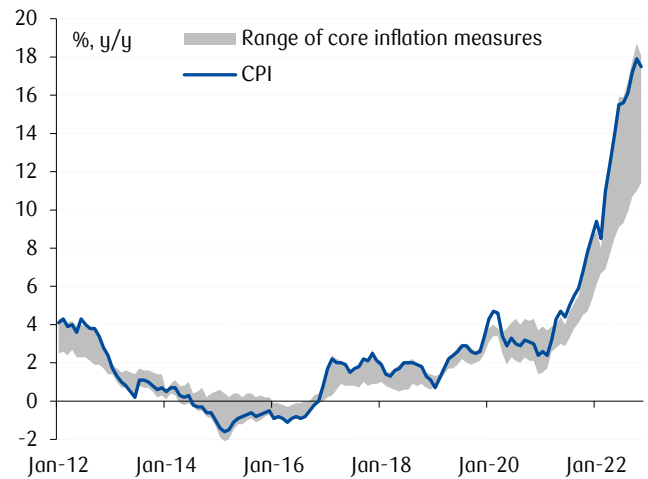
### Poland ESI for industry and its components



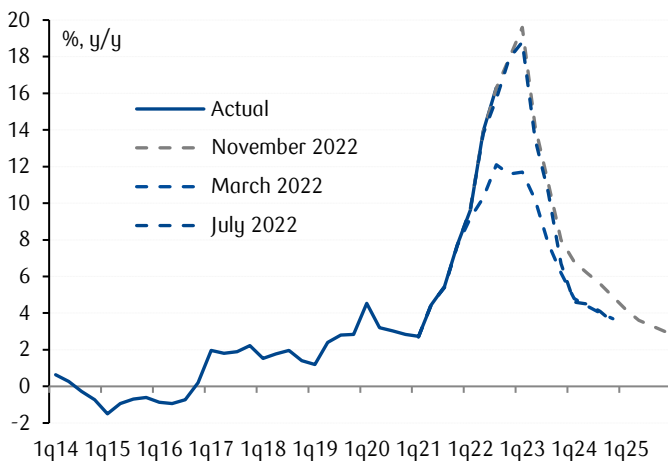
### Broad inflation measures



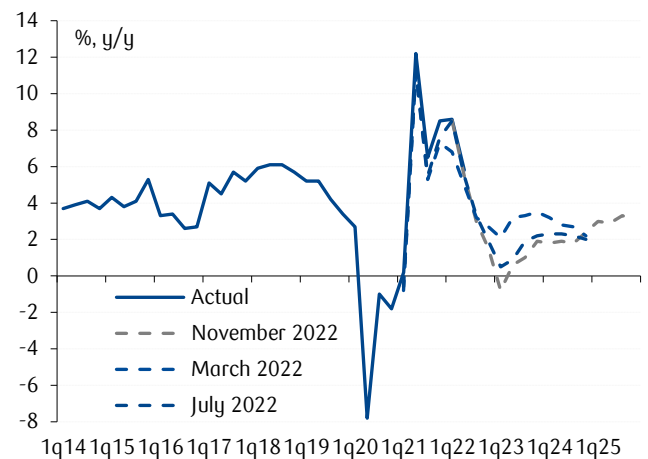
### CPI and core inflation measures



### CPI inflation – NBP projections vs. actual

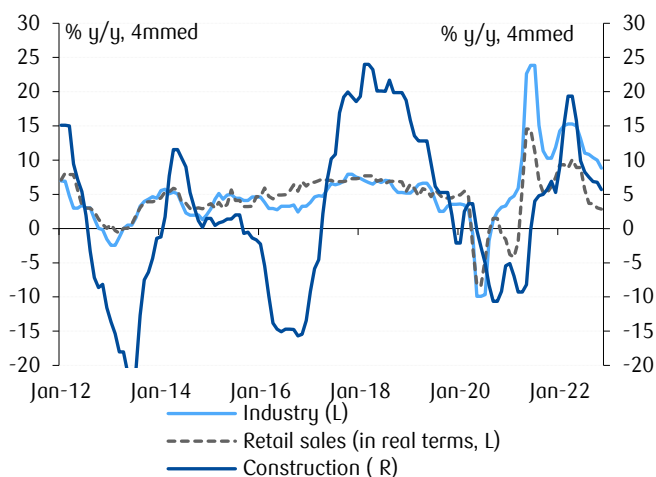


### Real GDP growth – NBP projections vs. actual

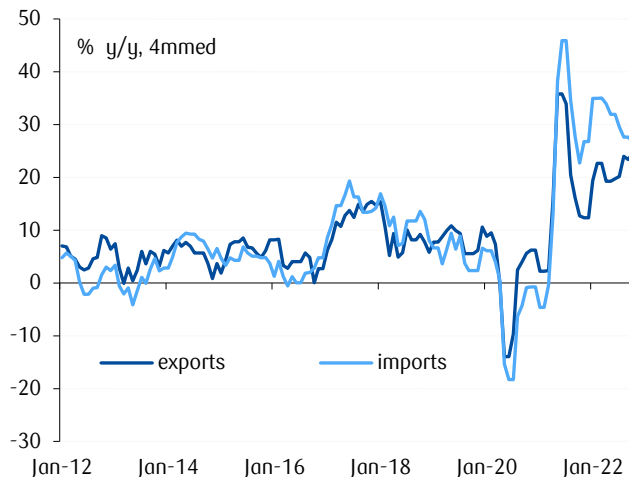


Source: Datastream, GUS, EC, NBP, PKO Bank Polski.

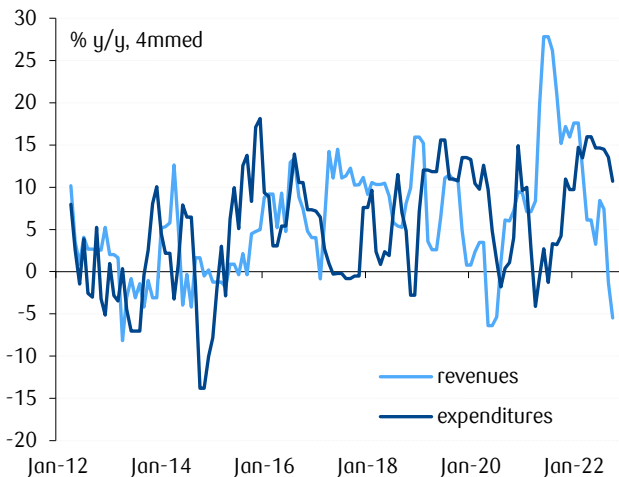
**Economic activity indicators**



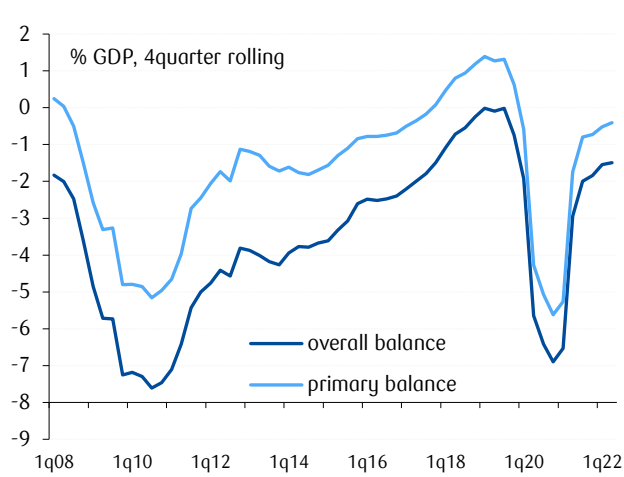
**Merchandise trade (in EUR terms)**



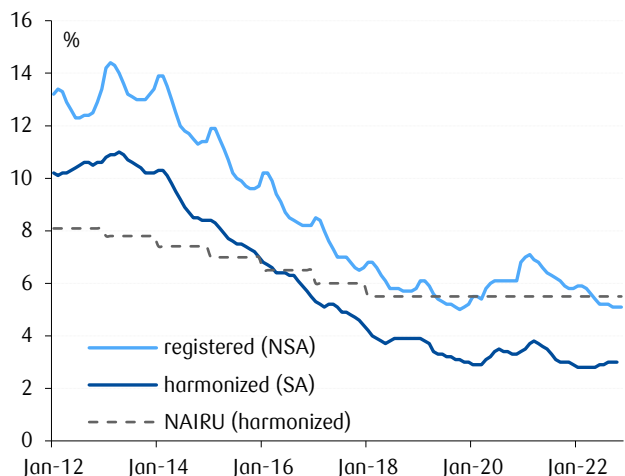
**Central government revenues and expenditures\***



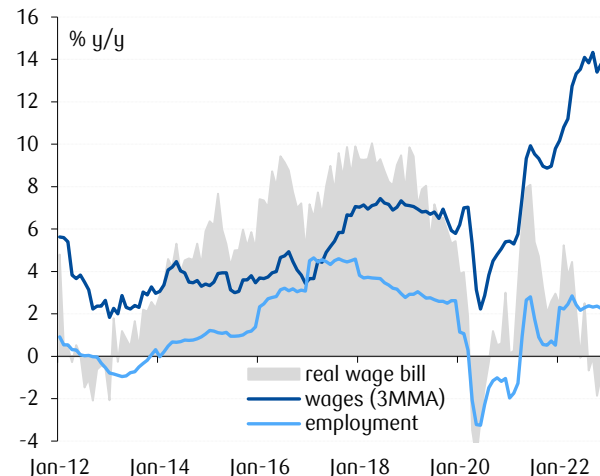
**General government balance (ESA2010)**



**Unemployment rate**

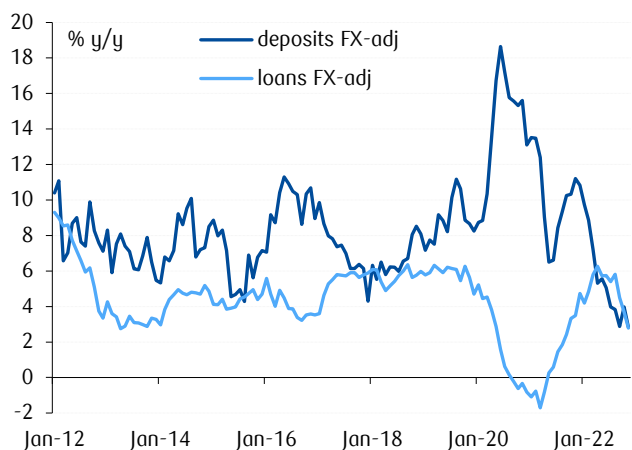


**Employment and wages in the enterprise sector**

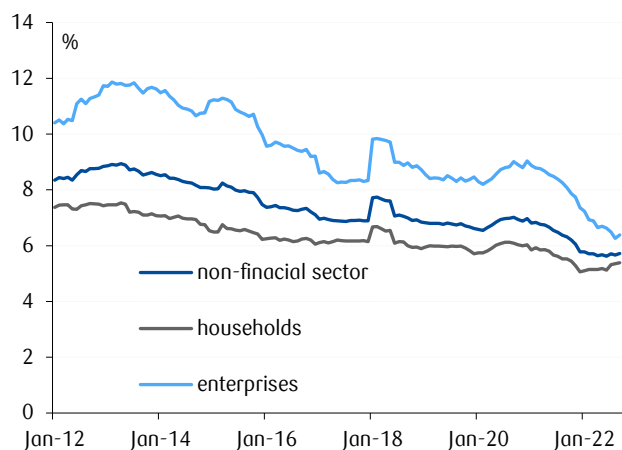


Source: NBP, Eurostat, GUS, MinFin, PKO Bank Polski. \*break in series in 2010 due to methodological changes.

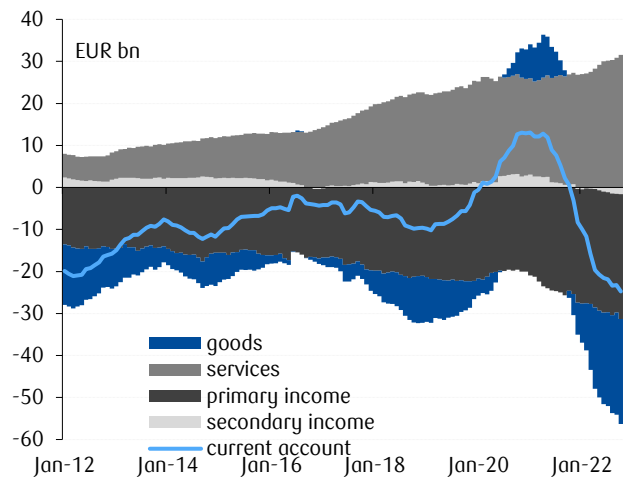
### Loans and deposits



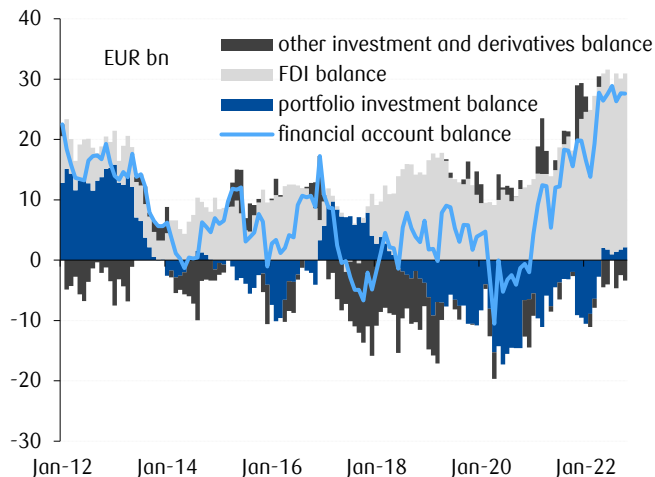
### Non-performing loans (NPLs) - by sectors\*



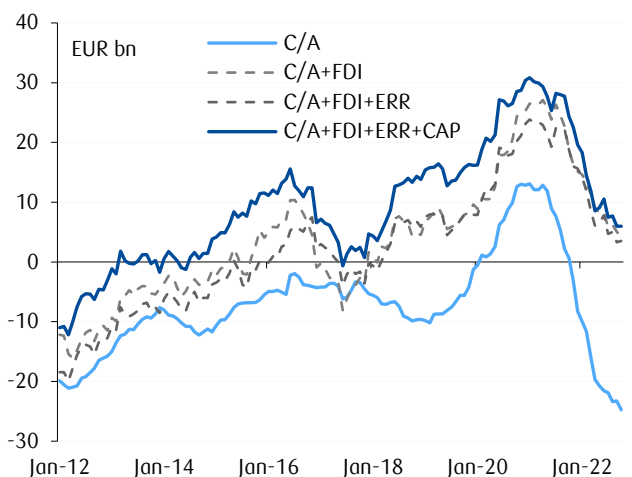
### Current account balance



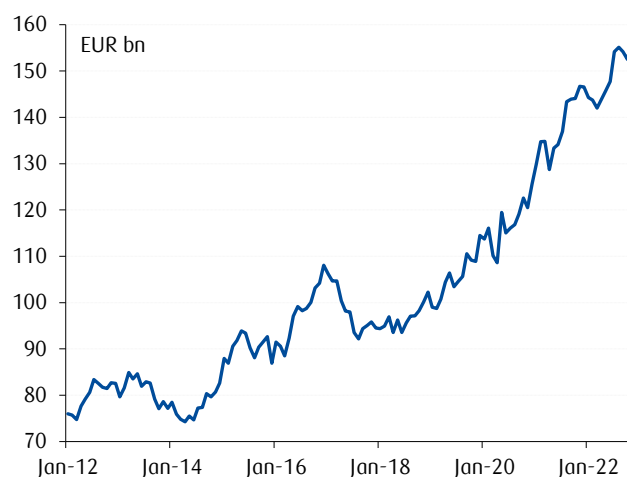
### Financial account balance



### External imbalance measures



### NBP FX reserves (in EUR terms)



Source: NBP, PKO Bank Polski. \*break in series in Jan2018 due to methodological changes.

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