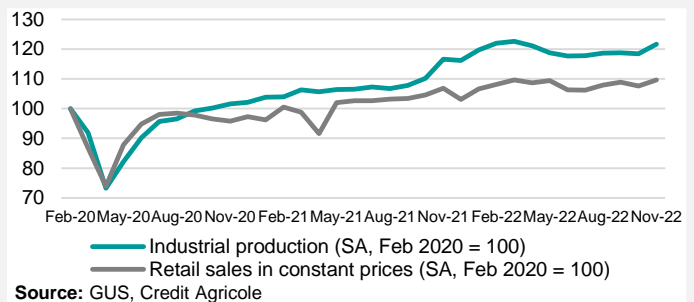
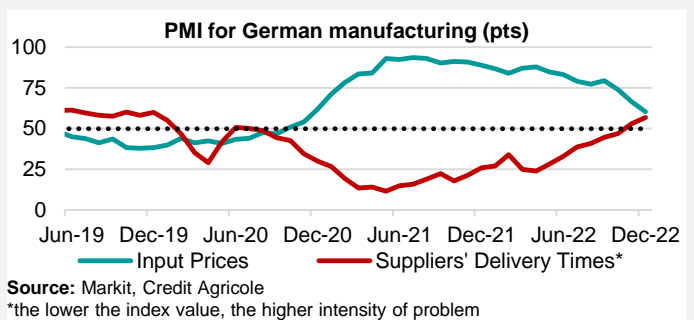


This week

▮ **The key event this week will be the release of Poland's industrial production and retail sales data, scheduled for today.** We expect industrial production growth to have slowed to 3.0% YoY in December from 6.6% in November. The slowdown is to some extent accounted for by unfavourable calendar effects. We expect to see a slowdown in retail sales growth in current prices to 18.0% YoY in December from 18.4% in November. At the same time, given our expectation of a slower growth in retail prices, we expect real retail sales growth to have picked up to 1.7% YoY in December from 1.6% in November, in line with the improvement in consumer sentiment seen in December. Our forecasts, for growth both in industrial production and in retail sales, are above market expectations (1.4% and 17.8%, respectively), and thus their materialization would be slightly positive for the PLN and yields on Polish bonds.



▮ **Tuesday will see the release of business survey results for key Eurozone economies.** The market expects a rise in the Eurozone's composite PMI to 49.8 pts in January from 47.8 pts in December. This would mean that the index improved for the third month in a row, in part thanks to an easing of supply chain bottlenecks. Nevertheless, PMI indices will remain at relatively low levels. Investors also expect a slight rise in German manufacturing PMI, to 47.8 pts in January from 47.1 pts in December. The key information in the PMI report will be businesses' assessment of the impact of a gas shock, if any, on their operations. Wednesday will see the release of the Ifo index, reflecting the sentiment of German businesses in the manufacturing, construction, trade, and services sectors. The market expects to see a rise in the index to 90.2 pts in January from 88.6 pts in November. We believe that the release of Eurozone business survey results will be neutral for financial markets.

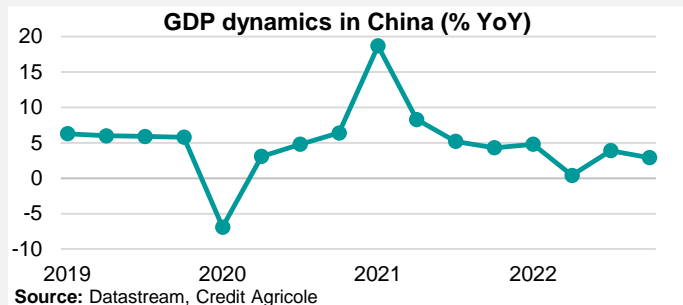


▮ **Some significant data on the US economy will be released this week.** A preliminary GDP estimate for Q4 2022 is scheduled to be released on Thursday. We expect annualized GDP growth to have slowed to 2.7% from 3.2% in Q3 due to a slowdown in investment growth. We forecast that headline PCE inflation dropped to 4.9% in December from 5.5% in November, and that core inflation dropped to 4.4% YoY from 4.7%. We expect preliminary durable goods orders to have grown by 4.0% MoM in December, compared to a drop of 2.1% in November, due to a higher volume of Boeing orders. We expect new home sales figures (610k in December vs. 640k in November) to show a further slowdown in the US housing market. We believe that the final University of Michigan index (64.6 pts in January vs. 59.7 pts in December) will show some improvement in household sentiment driven, among other things, by the continuing fall in inflation. We believe the release of US data will be neutral for financial markets.

Last week

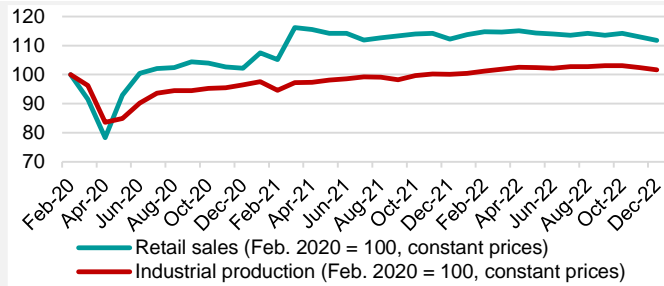
▮ **Nominal wage growth in Poland's business sector fell to 10.3% YoY in December from 13.9% in November, running well below market consensus and our forecast (12.4%).** In real terms, after adjustments for price changes, wages in businesses dropped by 5.4% YoY in December vs. a drop of 3.1% in November, which is the biggest drop on record. The strong slowdown in nominal wage growth is mainly accounted for by last year high base effects. Still, the data is in line with our assessment which expects annual wage growth to be on a slight downward trend despite continued strong pay pressures amidst rising costs of running a business and an economic growth slowdown we expect to see. Growth in employment in the business sector slowed to 2.2% YoY in December from 2.3% in November, running below market consensus and our forecast (2.3%). On a month-on-month basis, employment dropped by 2.8k. Particularly worth noting is a relatively strong drop in employment in manufacturing (8.5k). It is hard to draw conclusions based on data for one month only, however, this may be a result of restructuring processes going on in businesses, which was already signalled by December's PMI (see MACROpulse of 20/01/2023). The slowdown in employment growth and the stronger drop in real wages translated into a decline in businesses' real wage fund growth (the product of employment and average wage adjusted for changes in prices), to -3.3% YoY in December from -0.9% in November. On average in Q4 2022, the wage fund shrank by 2.0% YoY compared to 0.6% growth in Q3. The wage fund data is consistent with our forecast for a real consumption growth drop (2.0% YoY in Q4 vs. a drop of 0.9% in Q3).

▮ **Important data from China was released last week.** GDP grew by 2.9% YoY in Q4 compared to 3.9% in Q3 (0.0% QoQ in Q4 vs. 3.9% in Q3), which is well above market expectations (1.8% YoY and -0.8% QoQ, respectively) and our forecast (1.6% YoY and -1.1% QoQ, respectively). The sectoral



breakdown shows stronger growth in mining and agriculture, while slowdown is seen in manufacturing and services. For the whole of 2022, China's GDP growth slowed to 3.0% YoY, compared to 8.4% for 2021, well below the Chinese government's GDP growth target of 5.5%. Above market expectations are also industrial production figures (1.3% YoY in December vs. 2.2% in November, with expectations at 0.2%), retail sales figures (-1.8% vs. -5.9%; -8.5%), and urban investment data (5.1% vs. 5.3%; 5.0%). Thus, the data shows that positive effects of China moving away from its 'zero COVID' policy on activity in China's economy are stronger than negative effects of a rise in COVID infections. We believe that China passed its pick of infections in late December and early January. Consequently, we expect to see a marked improvement in the epidemic situation in the coming months, which will translate into further economic recovery. Thus, we forecast that in 2023 China's GDP growth will pick up to 5.2%, driven mainly by strong recovery in consumption we expect to see (7.5% YoY in 2023 vs. 10.2% in 2022 r.), supported by a release of pent-up demand. GDP growth will also be driven by a slightly stronger investment growth, forecast by us to stand at 4.0% YoY in 2023 vs. 3.7% in 2022), due to further infrastructure and housing projects supported by Chinese government. These growth drivers will be partially offset by a lower contribution from net exports (-0.4 pp in 2023 vs. 0.5 pp in 2022 r.) resulting from stronger domestic demand amidst a slowdown in global trade. Key risks factors that may affect our scenario include the further development of the pandemic, situation in the housing market, the scale of slowdown in global trade, and geopolitical factors (mainly economic relations between the US and China).

▮ **Important data from the US was released last week.** MoM industrial production growth slowed to -0.7% in December from -0.6% in November, running below market expectations (-0.1%). The slowdown in industrial production growth was driven by a slowdown in manufacturing and in utilities,



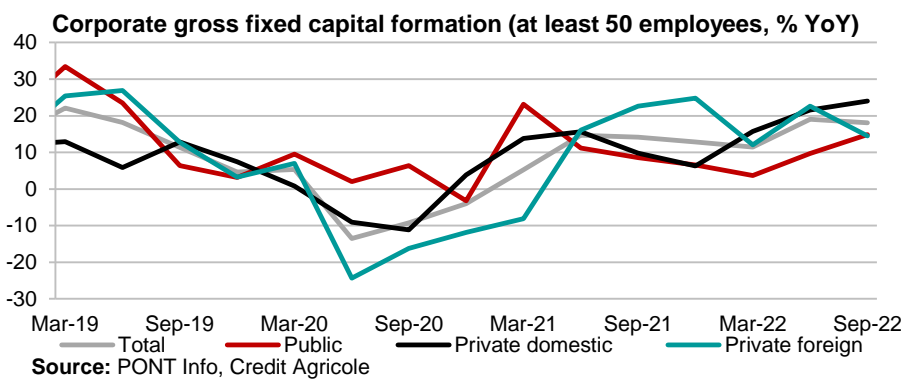
Source: Datastream, Credit Agricole

partially offset by faster growth in mining. At the same time, capacity utilization dropped to 78.8% in December from 79.4 in November. Last week also saw the release of retail sales figures; nominal retail sales growth slowed to -1.1% MoM in December from -1.0% in November, running below market expectations (-0.8%). Excluding vehicles, MoM sales growth dropped further, to -1.1% in December from -0.6% in November. At the same time, the strongest drop in sales is seen in the 'shopping malls' category, which suggests that high inflation translates into lower purchasing power of US consumers, which leads to a drop in their shopping. Data on the number of building permits (1,330k in December vs. 1.351k in November), housing starts (1.382k vs. 1401k) and existing home sales (4.02M vs. 4.08M) show a further slowdown in the US housing market. Business survey results were also released last week. The regional NY Empire State index (-32.9 pts in January vs. -11.2 pts in December) and Philadelphia Fed index (-8.9 pts vs. -13.7 pts) provided mixed signals about US manufacturing. We see a slight downside risk to our scenario, which expects US GDP to have grown by 1.9% in 2022, compared to 5.7% growth in 2021, to grow by 0.5% in 2023.

▮ **We have revised our scenarios for interest rates in the US and the EURUSD rate.** Recent statements made by FOMC members combined with a string of weaker-than-expected data concerning the US economy (see above) have made us smoothen our interest rates path for the US. We are now expecting Fed to raise interest rates by 25bp in February (previously, we were expecting a 50bp hike), 25bp in March (25bp), and 25bp in May (we previously expected the hikes to end in March), and then the rate hiking cycle will come to an end with the target range for federal funds standing at [5.00%; 5.25%]. We expect the interest rates to go down for the first time only in H2 2024. We assume that in 2024 they will be lowered by 100bp in total. We have also raised our EURUSD path given our expectations concerning slower monetary policy tightening in the US, an improving economic outlook for China (abandoning the "Zero COVID" policy) and Europe (due to falling energy prices thanks to mild winter). Currently, we forecast the EURUSD to stand at 1.05 at the end of March 2023 (1.00 before the revision), 1.07 at the end of June (1.03), 1.09 at the end of September (1.06) and 1.10 at the end of December (1.09). Consequently, taking into consideration our EURPLN path, we expect the USDPLN to stand at 4.55 at the end of March 2023, 4.42 at the end of June, 4.31 at the end of September and 4.23 at the end of December.

Exports will grow in 2023 thanks to foreign direct investments

In accordance with the results of studies published in the literature, the inflow of foreign direct investments usually has a positive impact on exports of the country in which they are made. This impact is particularly clearly visible in the case of developing countries. An increase in production (and export) capacities of a given country through capital accumulation and employment rise is one of the channels such impact can show through. Investments also involve the transfer of know-how, skills and technologies, increasing efficiency in the country in which they are made. Furthermore, the presence of large international corporations facilitates competition from domestic companies having a similar profile, and makes it easier for them to become part of global value chains. In simple terms, those transmission channels can be called the supply effects of foreign investments on exports. Below you will find our analysis of how the said supply effects will translate into the export growth acceleration in Poland.

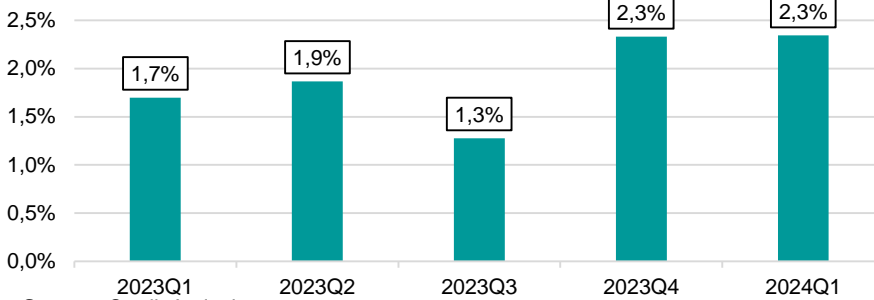


In accordance with the data provided by PONT Info (based on official, comprehensive information derived by the GUS from F-01 questionnaires completed by enterprises), foreign companies' investments were growing quickly over the last couple of quarters. From mid-2021 onwards, the growth in gross fixed capital formation of the foreign enterprises having at least 50 employees stood on average at ca. 20% YoY, and accounted for approximately half of total investment growth reported by 50+ companies during that time.

We have focused on the analysis of the impact of foreign 50+ manufacturing enterprises' investments on the revenues from export sales reported by all (domestic and foreign) 50+ manufacturing enterprises. Export sales reported by foreign companies account for over 60% of export sales reported by all medium-sized and large companies. Manufacturing has an approx. 75% share in total export sales of the enterprises having at least 50 employees. We have used econometric modelling to explain changes in manufacturing companies' exports over the last couple of years. Apart from foreign companies' investments, other explanatory variables that we have used for our model include the Eurozone's GDP (reflecting the demand for Polish exports) and the PLN real effective exchange rate, which represents the impact of foreign currency exchange rates' fluctuations on the Polish exporters' price competitiveness. At the same time, it should be noted that foreign companies' investments have been included in our model with a lag of 6 quarters. This is meant to reflect the delay before the supply effects of gross capital expenditures are seen. For example, the beginning of works on construction of a factory will not immediately translate into an increase in production and exporting capacities; a given investment project needs to be completed first, and that takes time (6 quarters on average in accordance with our model).

It is worth noting that, in accordance with the results of our model, the demand in the Eurozone and exchange rate fluctuations were the main drivers of Polish medium-sized and large manufacturing companies' exports over the last couple of years. Those two variables account for approx. 85% of variability in export sales revenues. Nonetheless, the aforementioned supply effects also have a statistically significant impact on exports. Based on our model we estimate that a 10% growth in foreign companies' investments translates ceteris paribus into a ca. 1% growth in exports after 6 quarters.

Supply effects of foreign investment on exports



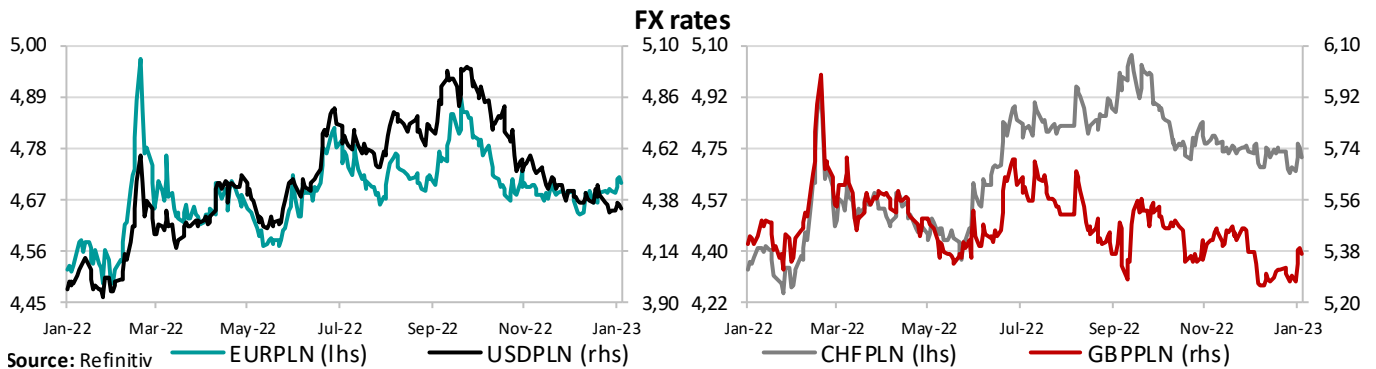
Source: Credit Agricole

The strong growth in foreign companies' investments seen from mid-2021 will stimulate the exports of Polish companies in 2023 due to the delays described above. To assess the impact of supply effects on exports, we have applied a counterfactual scenario for the period ending in Q3 2022 (which is vindicated with the availability of data on

investments and exports). In that scenario, the seasonally-adjusted level of foreign 50+ companies' investments does not change in Q3 2021-Q3 2022, and stays at the level reported in Q2 2021. Should that have materialised, we estimate that the exports of Polish 50+ manufacturing companies' in Q1 2023-Q1 2024 on average would be 1.9% lower comparing to the scenario in which those investments are actually made (i.e. the true, actual scenario).

Our analysis is focused on medium-sized and large manufacturing companies, but supply effects will be an important factor stimulating overall exports in 2023. Furthermore, the economic recovery that we expect to take place in the Eurozone in H2 2023 and only limited PLN appreciation will also support Polish exports. Amidst a weaker domestic demand driving the imports down, we expect the increase in the net exports contribution to be an important stabilising factor for the Polish economic growth in 2023. Therefore, we maintain our forecast, in which the GDP growth will stand at 1.2% YoY in 2023.

Domestic data on industrial production and retail sales may strengthen the PLN



Source: Refinitiv

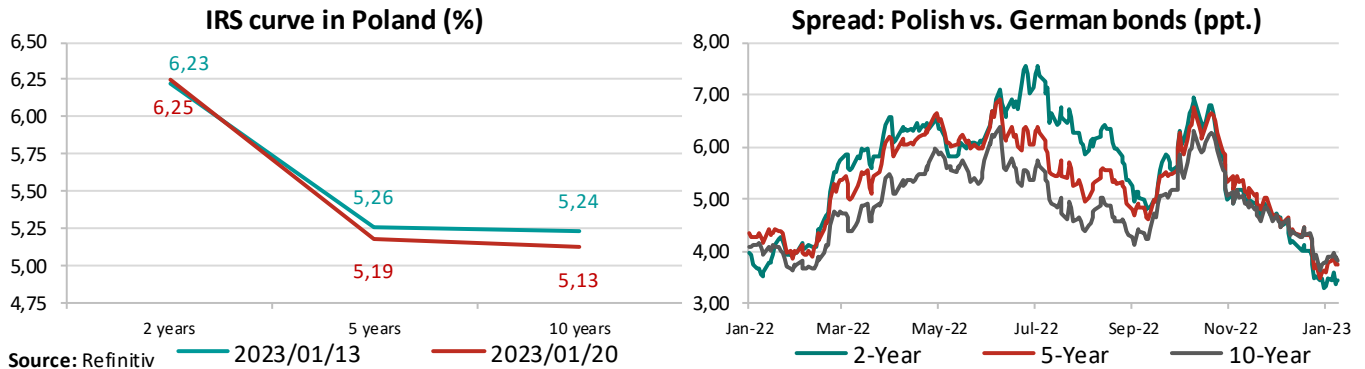
Last week, the EURPLN rate increased to 4.7067 (the PLN weakened by 0.4%). Last week the PLN weakened slightly against the EUR. The continuing uncertainty surrounding the disbursement of funds under the National Recovery Plan to Poland due to the prolonged dispute between Poland and the EU is one of the factors driving the EURPLN up.

In turn, the EURUSD exchange rate experienced greater volatility. On Wednesday, the USD temporarily weakened against the EUR following the publication of worse-than-expected industrial production and retail sales data for the US, which weakened some of the investors' expectations for further strong interest rate hikes by Fed.

This week the publication of domestic data on industrial production and retail sales planned for today will be crucial for the PLN as the PLN may slightly strengthen after the publication. We believe that other

publications from the Polish and global economies planned for this week will not have any significant impact on the PLN. It will be the information suggesting any potential changes in the Federal Reserve’s and ECB’s approach towards the monetary policy as well as the information on the developments in the war in Ukraine that will continue to have a key impact on the PLN rate.

Domestic data on production and retail sales in the spotlight



Source: Refinitiv

Last week the 2-year IRS rates increased to 6.25 (up by 2bp) while 5-year rates decreased to 5.19 (down by 7bp) and 10-year rates to 5.13 (down by 11bp). Last week saw a further decrease in IRS rates, particularly visible at the long end of the curve, following core markets. Yield in the core markets was driven down by weaker expectations for further, strong interest rate hikes by Fed amidst signals of economic downturn in the US.

This week the publication of domestic data on industrial production and retail sales planned for today will be in the spotlight as they may drive the yield of Polish bonds up should our higher-than-market-consensus forecasts materialise. We believe that other publications from the Polish and global economies planned for this week will not have a significant impact on the IRS rates. It will be the information suggesting any potential changes in the Federal Reserve’s and ECB’s approach towards the monetary policy as well as the information on the developments in the war in Ukraine that will continue to have a key impact on the yield curve.

Forecasts of the monthly macroeconomic indicators

Main monthly macroeconomic indicators in Poland														
Indicator	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
NBP reference rate (%)	1,75	2,25	2,75	3,50	4,50	5,25	6,00	6,50	6,50	6,75	6,75	6,75	6,75	6,75
EURPLN*	4,58	4,58	4,69	4,64	4,67	4,58	4,70	4,73	4,72	4,85	4,71	4,67	4,69	4,70
USDPLN*	4,03	4,08	4,18	4,19	4,43	4,27	4,48	4,63	4,70	4,95	4,77	4,48	4,38	4,39
CHFPLN*	4,42	4,40	4,56	4,54	4,55	4,45	4,69	4,86	4,80	5,01	4,76	4,74	4,72	4,80
CPI inflation (% YoY)	8,6	9,4	8,5	11,0	12,4	13,9	15,5	15,6	16,1	17,2	17,9	17,5	16,6	
Core inflation (% YoY)	5,3	6,1	6,7	6,9	7,7	8,5	9,1	9,3	9,9	10,7	11,0	11,4	11,5	
Industrial production (% YoY)	16,3	18,0	17,3	15,4	12,3	14,9	10,4	7,1	10,9	9,8	6,6	4,5	3,0	
PPI inflation (% YoY)	14,4	16,1	16,1	21,9	24,1	24,7	25,6	25,5	25,5	24,6	23,1	20,8	19,3	
Retail sales (% YoY)	16,9	20,0	16,5	22,0	33,4	23,6	19,9	18,4	21,5	21,9	18,3	18,4	18,0	
Corporate sector wages (% YoY)	11,2	9,5	11,7	12,4	14,1	13,5	13,0	15,8	12,7	14,5	13,0	13,9	10,3	
Employment (% YoY)	0,5	2,3	2,2	2,4	2,8	2,4	2,2	2,3	2,4	2,3	2,4	2,3	2,2	
Unemployment rate* (%)	5,8	5,9	5,9	5,8	5,6	5,4	5,2	5,2	5,2	5,1	5,1	5,1	5,2	
Current account (M EUR)	-3883	-1091	-2032	-4206	-2834	-1078	-499	-1206	-2743	-1839	-597	-422		
Exports (% YoY EUR)	25,0	27,4	20,3	11,9	17,6	26,8	21,5	20,3	27,6	26,5	24,4	20,3		
Imports (% YoY EUR)	39,6	38,7	29,7	31,4	36,0	32,7	27,1	21,8	29,4	30,1	25,3	17,7		

*end of period

Forecasts of the quarterly macroeconomic indicators

Main macroeconomic indicators in Poland												
Indicator	2022				2023				2022	2023	2024	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Gross Domestic Product (% YoY)	8,6	5,8	3,6	1,1	-1,0	0,0	2,5	3,2	4,5	1,2	3,1	
Private consumption (% YoY)	6,7	6,4	0,9	-2,0	-0,7	-0,9	0,7	2,5	2,9	0,3	3,0	
Gross fixed capital formation (% YoY)	4,7	6,6	2,0	-1,8	-2,4	-0,3	1,4	2,8	2,1	0,8	4,0	
Export - constant prices (% YoY)	4,2	5,2	6,9	4,5	2,3	1,0	3,3	4,6	5,2	2,8	3,8	
Import - constant prices (% YoY)	9,4	6,9	6,0	2,3	0,3	-1,0	3,1	4,0	5,9	1,6	4,3	
GDP growth contributions	Private consumption (pp)	4,0	3,6	0,5	-1,0	-0,4	-0,5	0,4	1,2	1,6	0,2	1,7
	Investments (pp)	0,6	1,0	0,3	-0,4	-0,3	-0,1	0,2	0,6	0,3	0,1	0,7
	Net exports (pp)	-2,7	-0,7	0,6	1,3	1,2	1,3	0,2	0,4	-0,2	0,8	-0,2
Current account (% of GDP)***	-2,7	-3,5	-3,5	-4,0	-3,9	-3,8	-3,7	-3,6	-4,0	-3,6	-3,0	
Unemployment rate (%)**	5,8	5,2	5,1	5,2	5,6	5,4	5,3	5,5	5,2	5,5	5,4	
Non-agricultural employment (% YoY)	2,3	0,6	-0,9	-0,5	-0,5	-0,5	-0,5	-0,5	0,4	-0,5	0,1	
Wages in national economy (% YoY)	9,7	11,8	14,6	14,0	14,5	13,2	11,4	9,9	12,5	12,3	7,5	
CPI Inflation (% YoY)*	9,6	13,9	16,3	17,3	17,3	13,0	10,6	7,3	14,3	12,1	4,8	
Wibor 3M (%)**	4,77	7,05	7,21	7,02	6,88	6,88	6,88	6,88	7,02	6,88	5,76	
NBP reference rate (%)**	3,50	6,00	6,75	6,75	6,75	6,75	6,75	6,75	6,75	6,75	5,75	
EURPLN**	4,64	4,70	4,85	4,69	4,78	4,73	4,70	4,65	4,69	4,65	4,50	
USDPLN**	4,19	4,48	4,95	4,38	4,55	4,42	4,31	4,23	4,38	4,23	4,29	

* quarterly average

** end of period

***cumulative for the last 4 quarters

Calendar

TIME	COUNTRY	INDICATOR	PERIOD	PREV. VALUE	FORECAST*	
					CA	CONSENSUS**
Monday 01/23/2023						
10:00	Poland	PPI (% YoY)	Dec	20,8	19,3	19,4
10:00	Poland	Industrial production (% YoY)	Dec	4,6	3,0	1,4
10:00	Poland	Retail sales (% YoY)	Dec	18,4	18,0	17,8
16:00	Eurozone	Consumer Confidence Index (pts)	Jan	-22,2		-20,0
Tuesday 01/24/2023						
9:30	Germany	Flash Manufacturing PMI (pts)	Jan	47,1		47,8
10:00	Eurozone	Flash Services PMI (pts)	Jan	49,8		50,2
10:00	Eurozone	Flash Manufacturing PMI (pts)	Jan	47,8		48,5
10:00	Eurozone	Flash Composite PMI (pts)	Jan	49,3		49,8
14:00	Poland	M3 money supply (% YoY)	Dec	5,6	6,2	6,0
15:45	USA	Flash Manufacturing PMI (pts)	Jan	46,2		46,2
16:00	USA	Richmond Fed Index	Jan	1,0		
Wednesday 01/25/2023						
10:00	Germany	Ifo business climate (pts)	Jan	88,6		90,2
10:00	Poland	Registered unemployment rate (%)	Dec	5,1	5,2	5,2
Thursday 01/26/2023						
14:30	USA	Preliminary estimate of GDP (% YoY)	Q4	3,2	2,7	2,6
14:30	USA	Durable goods orders (% MoM)	Dec	-2,1	4,0	2,6
16:00	USA	New home sales (k)	Dec	640	610,0	614
Friday 01/27/2023						
10:00	Eurozone	M3 money supply (% MoM)	Dec	4,8		4,6
14:30	USA	Real private consumption (% MoM)	Dec	0,0		
14:30	USA	PCE Inflation (% YoY)	Dec	5,5	4,9	
14:30	USA	PCE core inflation (% YoY)	Dec	4,7	4,4	4,4
16:00	USA	Final U. of Michigan Sentiment Index (pts)	Jan	64,6	64,6	64,6

*The forecasts of macroeconomic indicators for Poland were prepared by Credit Agricole Bank Polska S.A. The forecasts of foreign indicators were prepared by Crédit Agricole Corporate and Investment Bank

** Refinitiv