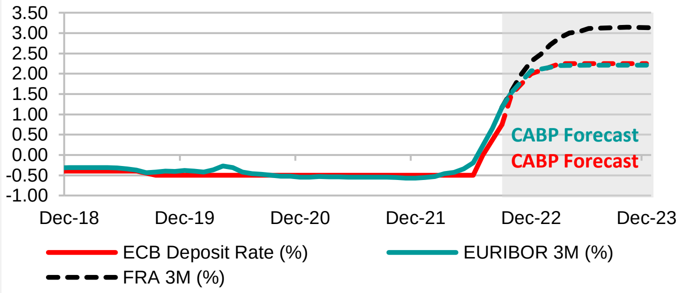
Is the boom in ICT equipment purchases over?

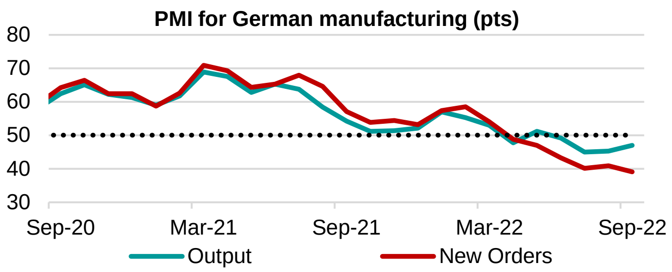
This week

- **The key event this week will be the ECB meeting planned for Thursday.** We expect the ECB to raise interest rates by 75bp, in line with market consensus. We believe that the conference after the ECB meeting will add to volatility in financial markets as Ch. Lagarde is likely to release information about the pace of monetary policy tightening in the coming months. We expect the ECB to hike interest rates further in December, by 50bp, and in February, by 25bp. Thus, the main interest rate will reach its target rate of 2.75%, and the deposit rate will stand at 2.25%.



Source: Refinitiv, Credit Agricole

- **Another important event this week will be today's release of flash business survey results for key European economies.** The market expects a drop in the Eurozone's composite PMI to 47.6 pts in October from 48.1 pts in September. Further deterioration in the Eurozone's economy is driven by the global economy slowdown and by growing uncertainty due to soaring energy prices. Investors also expect a further drop in German manufacturing PMI, to 47.1 pts in October from 47.8 pts in September. The key information in the PMI report will be businesses' assessment of the gas shock impact on their operations. Tuesday will see the release of the Ifo index, reflecting the sentiment of German businesses in the manufacturing, construction, trade, and services sectors. The market expect the index to have fallen to 83.3 pts in October from 84.3 pts in October. We believe that the release of Eurozone business survey results will be neutral for financial markets.



Source: Markit, Credit Agricole

- **Some significant data on the US economy will be released this week.** The preliminary GDP estimate for Q3 is planned to be released on Thursday. We expect annualized US GDP growth to have picked up to 2.3% from -0.6% in Q2, driven by higher contributions of investments and net exports. We forecast that headline PCE inflation rose to 6.3% in September from 6.2% in August, while core inflation rose to 5.2% YoY from 4.9% in August. We expect preliminary durable goods orders to have grown by 0.6% MoM in September compared to a drop of 0.2% in August. In our opinion, new home sales figures (582k in September vs. 685k in August) will confirm a slowdown in the US housing market. We expect the Conference Board index (106.0 pts in October vs. 108.0 pts in September) and the final University of Michigan index (59.5 pts vs. 58.6 pts) to confirm that household sentiment remains weak. We believe this week's US data will be neutral for financial markets.
- **The release of an update on Poland's long-term debt rating by Moody's is scheduled for Friday.** In May, Moody's affirmed Poland's long-term credit rating of A2 with a stable outlook. Explaining its decision, Moody's said that the current rating was based on several factors. Firstly, Moody's acknowledged Poland's efforts to enhance its energy security, NATO guarantees, and the presence of NATO troops, which mitigated geopolitical risks stemming from the Russian invasion of Ukraine. Secondly, the agency cited Poland's strong economic fundamentals and still strong institutional framework, although it faced challenges from a gradually eroding rule-of-law. Thirdly, Moody's acknowledged a favourable structure of Poland's debt and low cost of

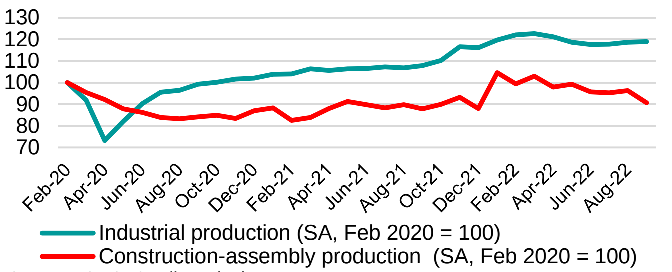
debt servicing. At that time, Moody's noted that a substantial further deterioration with respect to the rule of law, which would have a negative impact on the business climate and would lead to a further escalation of tensions between Poland and the EU, would be a factor adversely affecting Poland's credit rating. Two weeks ago, Moody's chief analyst for Poland S. Dyck made comments of a similar tone in the context of blocking funds from the EU 2021-2027 financial perspective. He noted that a further significant deterioration of the situation in the area of the rule of law, which would have a negative impact on locating business in Poland, as well as a further intensification of the conflict with EU institutions would be negative factors for credit assessment. We do not expect Moody's to change Poland's rating or outlook this week, however, the press release will contain comments noting the ongoing conflict between Poland and the EU. Moody's decision will be announced after the European markets close, so we cannot expect any reaction of the FX market or the debt market to the decision before the next week.

- **Significant data from China has been released today in the morning.** GDP grew by 3.9% YoY in Q3 compared to 0.4% in Q2 (+3.9% QoQ in Q3 vs. -2.7% in Q2), which is above market expectations (3.4% YoY and 3.5% QoQ, respectively) and our forecast (3.2% YoY and 3.1% QoQ, respectively). At the same time, data on industrial production (6.3% YoY in September vs. 4.2% in August), retail sales (2.5% vs. 5.4%), and urban investments (5.9% vs. 5.8%) give mixed signals about business activity in China at the end of Q3. On the one hand, industrial production figures are well above market expectations (4.5%), and on the other hand retail sales figures are below market consensus (3.3%). Thus, the data shows a further slowdown in demand in China and at the same time a recovery in industrial production. However, it is worth noting that the recovery in industrial production was driven primarily by an improvement in the epidemic situation in China and the end of power supply outages caused by drought. Data on China's trade balance has also been released today. China's trade balance grew to USD 84.7bn in September from USD 79.4bn in August, running above market expectations (USD 81.0bn). At the same time, growth in imports slowed to 5.7% YoY in September from 7.1% in August, while growth in exports did not change in September compared to August, and remained at 0.3%. Thus, the data confirms a weakening of internal demand in China amidst a slowdown in global trade. We forecast that in the coming months China's government will strengthen its economic policy measures aimed to boost economic growth. However, we forecast that GDP growth in China will slow to 3.0% in 2022 from 8.1% in 2021.

Last week

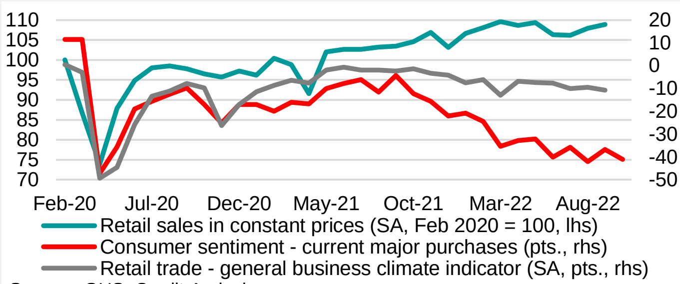
- **Nominal wage growth in the Polish enterprise sector increased from 12.7% YoY in August to 14.5% YoY in September, running above the market consensus (13.0%) and our forecast (12.5%).** In real terms, after adjusting for price changes, wages in businesses dropped by 2.3% YoY in September vs. a 3.0% drop in August. According to the GUS press release, the increase in average wages in September vs. August was due to, among other things, payments of quarterly bonuses, length-of-service bonuses, as well as salary increases and bonus payments due to inflation. This means that rising inflation remains one of the main factors driving wage growth as it reduces the purchasing power of wages and intensifies wage pressures (see MACROpulse of 20/0/2022). Employment growth went down to 2.3% YoY in September vs. 2.4% in August, running below the market consensus (2.4%) and our forecast (2.5%). In monthly terms, the number of employed dropped by 8.8k. According to the GUS press release, the drop in average employment in September 2022 was, as in August, the result of, i.a., layoffs, as well as the expiry of fixed-term contracts and their non-renewal. In the following months, we expect a further reduction in the annual employment growth rate due to weaker demand for labour linked to the expected slowdown in economic growth. Slowing employment growth and a slower decline in real wages in the enterprise sector contributed to an increase in the real wage fund growth rate in the enterprise sector (the product of employment and average wage adjusted for changes in prices), to -0.1% YoY in September vs. -0.7% in August. Consequently, the real wage fund grew by 0.6% YoY in Q3 vs. 2.1% in Q2. The wage fund data supports our forecast of a strong slowdown in consumption growth in Q3 to 1.1% YoY vs. 6.4% in Q2).

- **Growth in industrial production in Poland slowed to 9.8% YoY in September from 10.9% in August, running above market consensus (8.8%) and slightly above our forecast (9.7%).** Seasonally adjusted industrial production grew by 0.3% MoM in September compared to 0.7% in August. What is particularly worth noting about the breakdown of industrial production is an acceleration of growth in export-driven sectors, which, in our opinion, is supported by a reduction in production backlogs combined with an easing of supply constraints caused by shortages of raw materials and components (see MACROpulse of 20/10/2022). Construction related sectors saw some acceleration of growth in production, while slowdown in production was seen in the remaining categories. Construction and assembly production grew by 0.3% YoY in September compared to 6.1% in August, running well below market consensus (6.5%) and our forecast (8.0%). Seasonally-adjusted construction and assembly production shrank by 5.9% MoM in June. What is also worth noting about the data is a further slowdown in construction and assembly production in the 'civil engineering' category (in consequence of limited investment activity of the private sector) and in the 'specialised construction activities' category (in consequence of a slowdown in new business and housing investment). At the same time, relatively strong growth is seen in the 'construction of buildings' category of construction and assembly production, which, in our opinion, is an effect of private investment projects, especially housing projects, started in previous quarters being completed. However, it should be noted that this effect will be fading out in the coming months, which will add to the slowdown in construction (see MACROpulse of 21/10/2022). Industrial production and construction and assembly production data for September, combined with data on retail sales, employment, and average wage in the business sector (see below) support our forecast for GDP growth in Q3 (3.9% YoY vs. 5.5% in Q2).



Source: GUS, Credit Agricole

- **Nominal retail sales growth in Poland increased to 21.9% YoY in September vs. 21.5% in August, running above the market consensus (21.5%) and our forecast (19.9%).** Retail sales in constant prices grew by 4.1% YoY in September vs. 4.2% in August. Seasonally adjusted retail sales in constant prices increased in September by 0.9% MoM. Despite the continued relatively high growth rate of retail sales at constant prices, data shows more and more increasing signs of a slowdown in consumer demand (see MACROpulse of 21/10/ 2022). The deterioration in the outlook for consumer demand is also noticeable in the business survey results published this week. The Current Consumer Confidence Index set a new historic low in October, while the Leading Consumer Confidence Index has remained at its lowest level since May 2020, the time of the first lockdown. Retail sales data for July-September pose a slight upward risk to our Q3 consumption forecast (1.1% YoY vs. 6.4% in Q2). However, this does not change our assessment that the following quarters will bring a clear



Source: GUS, Credit Agricole

slowdown in consumption and that, over the entire horizon of our forecast, i.e. until the end of 2023, its annual growth rate will not exceed 0.5% YoY.

- **Important data from the US was released last week.** Monthly industrial production growth increased to 0.4% in September MoM from -0.1% in August, running above market expectations (0.1%). The increase in industrial production growth was driven by higher production growth in mining and utilities. At the same time, capacity utilisation increased to 80.3% in September vs. 80.1% in August. Further declines in the US real estate market were indicated by the data on the number of building permits (1,564k in September vs. 1,542k in August), housing starts (1,439k vs. 1,566k) and existing home sales (4.71m vs. 4.78m). Last week also saw the release of business survey results. The regional NY Empire State index (-9.1 pts in October vs. -1.5 pts in September) and the Philadelphia Fed (-8.7 pts vs. -9.9 pts) provided mixed signals from US manufacturing. Last week's data from the US economy supports our forecast that US GDP will expand by 1.7% in 2022 vs. 5.7% growth in 2021, and will grow by 0.5% in 2023.

Is the boom in ICT equipment purchases over?

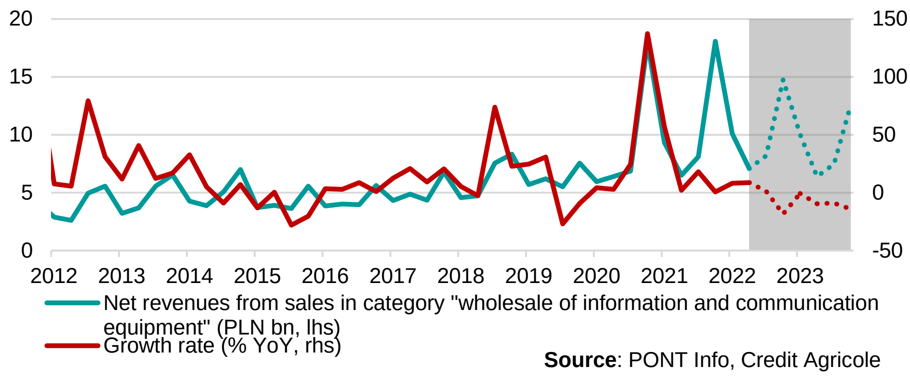
The COVID-19 pandemic and the related restrictions drove the information and communication technology equipment ("ICT equipment") purchases up with schools forced to run classes for students remotely, people working from their homes in growing numbers, and companies facing the need to replace old equipment or buy new devices necessary for videoconferencing and other purposes. Below we present our analysis of the outlook for demand for ICT equipment in the quarters to come.

For the purposes of our analysis, we have approximated the demand for ICT equipment using quarterly net revenues from the sale of products, goods and materials in the "wholesale of information and communications technology (ICT) equipment" category. We have used data from the PONT Info database. The information contained in the database is based on full, official GUS data included in reports filled in by enterprises employing at least 50 staff members. Until 2019, the revenues on the wholesale of ICT equipment followed a slight upward trend. After the outbreak of the pandemic, we saw a surge in terms of the activity in this sector caused by the factors described above. In 2020, the demand for ICT equipment rose by 48.7% comparing to 2019, and then in 2021 it grew by another 13.1% YoY.

To prepare an outlook for demand for ICT equipment in the quarters to come, we have used an econometric model where quarterly, not-seasonally adjusted growth in the revenues mentioned above depends on two variables:

- **Quarterly growth in gross capital expenditures**, which represents the economic cycle in the model. It reflects, to a significant extent, the business undertakings' demand for ICT equipment, but also indirectly shows the consumption demand (private consumption and investment growth rates are highly correlated). For the purposes of our analysis, we have assumed that the nominal investment growth will be consistent with our forecast presented in the quarterly table and adjusted to take the deflator into consideration.
- **Growth in the quarterly number of COVID-19 deaths.** This variable does not have a direct impact on the demand for IT equipment, but it reflects the increase in the demand for such equipment during the pandemic well. We believe that the COVID pandemic will be gradually fading. We assumed that the number of COVID-19 deaths in 2022 will fall by 25% comparing to 2021, and then in 2023 by another 25% YoY. If this assumption materialises, it will be reflected by a gradually-falling demand for ICT equipment when the missing equipment is depleted and when the old devices are replaced as part of the equipment modernisation carried out in 2020-2021.

As regards our medium-term macroeconomic scenario, we expect the growth in gross capital expenditures to slow down strongly. The increased uncertainty regarding the economic outlook (including the developments of the war in Ukraine and the prices of energy), investment climate deterioration, growing costs and declining margins and gains of enterprises will drive the enterprises' investments down. Given the continuing tensions between Poland and the European Union, we do not think the National Recovery Plan will be launched in 2023, which will be driving the public investments down. A slower growth in nominal investments will be driving the demand for IT equipment down in the quarters to come in accordance with the econometric modelling results.

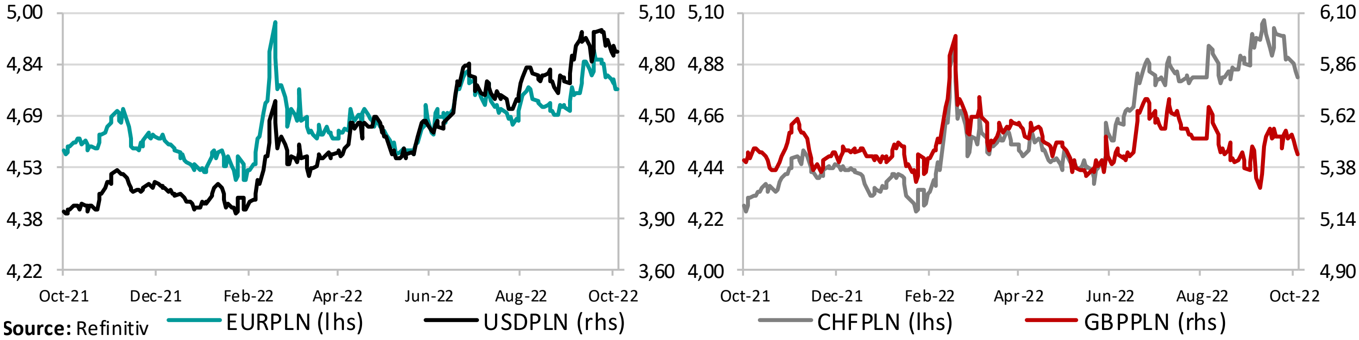


Consequently, we forecast that the revenues in the "wholesale of information and communications technology (ICT) equipment" category will fall from PLN 42.0bn in 2021 to PLN 40.2bn in 2022 (-4.5% YoY), and then to PLN 36.6bn in 2023 (-8.9% YoY) due to the fading of the boom seen in 2020-2021 and a reduced investment activity.

However, it should be noted that the demand for ICT equipment will still be much higher comparing to the pre-pandemic times due to a change in the model of operation in certain enterprises and a change in behaviour observed among households. Our assumption concerning the COVID-19 pandemic not disappearing entirely (the number of deaths in 2023 falling to 50% of the number reported in 2021) reflects a lasting increase in the demand for ICT equipment in the long-term perspective. The increase in demand will be connected, among others, with remote work becoming more and more common and companies making an increasing use of remote communication means. Therefore, we forecast the revenues from the wholesale of ICT equipment in 2022 and 2023 to be higher by 60.7% and 46.4% respectively comparing to 2019.

ECB meeting may favour increased volatility of the PLN

FX rates



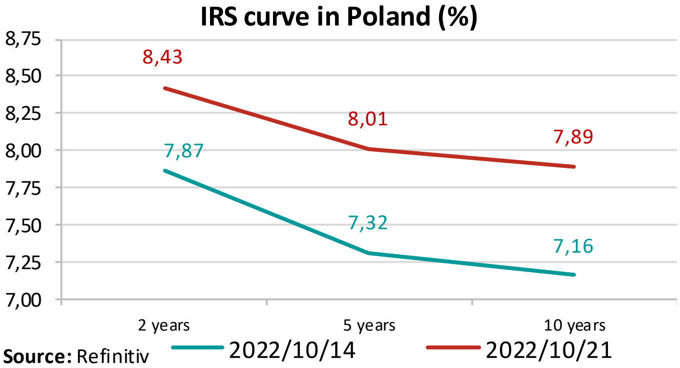
Source: Refinitiv

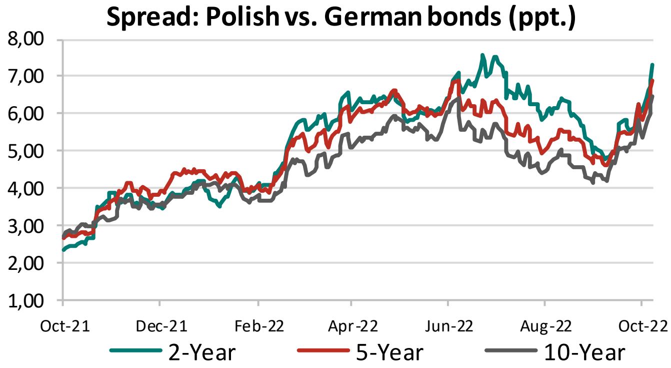
Last week, the EURPLN rate dropped to 4.7672 (the PLN strengthened by 0.9%). Throughout last week, the EURPLN exchange rate followed a mild downward trend. A decline was also observed in the EURHUF exchange rate, indicating that the appreciation of the PLN and the HUF resulted from a reduction in risk aversion in the region. The publication of numerous domestic macroeconomic data (see above) did not have a significant impact on the PLN.

The EURUSD exchange rate, on the other hand, was characterised by relatively low volatility due to the relatively poor calendar of macroeconomic events in the global economy. It was only on Friday towards the end of day that the dollar weakened against the euro. The dollar did so in the wake of media publications suggesting that the Fed will be calibrating their interest rate hikes in the future to avoid too strong tightening of the monetary policy. Furthermore, a statement made by FOMC Member M. Daly, who suggested that the Federal Reserve is becoming increasingly aware of risk factors connected with recent strong hikes in the US was also negative for the USD.

This week, the ECB meeting will be crucial for the PLN, which may contribute to its increased volatility. We believe that other data releases from global economies planned for this week will not have a significant impact on the PLN. Friday's update of the Polish rating by Moody's will be announced after the closure of European markets, hence its impact on the PLN will not materialize until next week. Information concerning the assessment of the risk of production disruptions as a result of the gas shock in Europe and the course of hostilities in Ukraine will remain an important factor determining the PLN exchange rate as it could significantly affect the assessment of the economic growth prospects in the Eurozone and Poland.

ECB meeting in the spotlight





Source: Refinitiv

Last week, 2-year IRS rates increased to 8.43 (up by 56bp), 5-year rates to 8.01 (up by 69bp) and 10-year ones to 7.89 (up by 73bp). Last week saw further rise in IRS rates across the curve following the core markets. The rise in yields in the core markets was driven by investor expectations of further interest rate hikes by major central banks. Locally, a factor contributing to the rise in IRS rates was BGK's announcement that the value of bonds to be issued for the Armed Forces Support Fund could reach PLN 15.2bn by the end of 2022. IRS rates were also driven up by the debt auction in which the Ministry of Finance sold bonds for PLN 5.3bn with the demand of PLN 7.3bn. BGK's Friday's decision to call off the auction of bonds issued on behalf of the Covid-19 Response Fund and bonds issued on behalf of the Armed Forces Support Fund did not have a significant impact on the IRS rates. The auction was planned to take place today, and the decision is most likely to have been connected with a high volatility of market conditions.

We believe that the ECB meeting may lead to increased volatility of IRS rates this week. Data releases from the global economy planned for this week will not have a significant impact on the IRS, in our opinion. Friday's update of the Polish rating by Moody's will be announced after the closure of European markets, hence its impact on the IRS rates will not materialize until next week. Information concerning the assessment of the risk of production disruptions as a result of the gas shock in Europe and the course of hostilities in Ukraine will remain an important factor shaping the curve as it could significantly affect the assessment of the economic growth prospects in the Eurozone and Poland.

Forecasts of the monthly macroeconomic indicators

Main monthly macroeconomic indicators in Poland															
Indicator	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
NBP reference rate (%)	0,10	0,50	1,25	1,75	2,25	2,75	3,50	4,50	5,25	6,00	6,50	6,50	6,75	6,75
EURPLN*	4,60	4,60	4,65	4,58	4,58	4,69	4,64	4,67	4,58	4,70	4,73	4,72	4,85	**4,83**
USDPLN*	3,98	3,98	4,10	4,03	4,08	4,18	4,19	4,43	4,27	4,48	4,63	4,70	4,95	**4,98**
CHFPLN*	4,27	4,35	4,47	4,42	4,40	4,56	4,54	4,55	4,45	4,69	4,86	4,80	5,01	**5,02**
CPI inflation (% YoY)	5,9	6,8	7,8	8,6	9,4	8,5	11,0	12,4	13,9	15,5	15,6	16,1	17,2	
Core inflation (% YoY)	4,2	4,5	4,7	5,3	6,1	6,7	6,9	7,7	8,5	9,1	9,3	9,9	10,7	
Industrial production (% YoY)	8,7	7,6	14,9	16,3	18,0	17,3	15,4	12,3	14,9	10,4	7,1	10,9	9,8	
PPI inflation (% YoY)	10,3	12,0	13,6	14,4	16,1	16,1	21,9	24,1	24,7	25,6	25,5	25,5	24,6	
Retail sales (% YoY)	11,1	14,4	21,2	16,9	20,0	16,5	22,0	33,4	23,6	19,9	18,4	21,5	21,9	
Corporate sector wages (% YoY)	8,7	8,4	9,8	11,2	9,5	11,7	12,4	14,1	13,5	13,0	15,8	12,7	14,5	
Employment (% YoY)	0,6	0,5	0,7	0,5	2,3	2,2	2,4	2,8	2,4	2,2	2,3	2,4	2,3	
Unemployment rate* (%)	5,6	5,5	5,4	5,4	5,5	5,5	5,4	5,2	5,1	4,9	4,9	4,8	**4,7**	
Current account (M EUR)	-1653	941	-1482	-3883	-1091	-2032	-4206	-2844	-1340	-541	-1887	-3967		
Exports (% YoY EUR)	11,0	6,2	13,7	25,0	27,4	20,3	11,9	18,2	26,9	21,3	19,0	24,8		
Imports (% YoY EUR)	22,3	22,0	31,2	39,6	38,7	29,7	31,4	36,4	32,5	26,6	20,6	28,2		

*end of period

Forecasts of the quarterly macroeconomic indicators

Main macroeconomic indicators in Poland													
Indicator		2022				2023				2021	2022	2023
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Gross Domestic Product (% YoY)		8,5	5,5	3,9	0,5	-1,0	0,1	2,6	3,2	6,8	4,3	1,2
Private consumption (% YoY)		6,6	6,4	1,1	0,5	0,2	0,4	0,5	0,5	6,3	3,5	0,4
Gross fixed capital formation (% YoY)		4,3	7,1	4,2	0,6	-1,4	0,2	1,9	2,4	2,1	3,5	1,1
Export - constant prices (% YoY)		2,0	5,2	4,5	3,3	1,6	0,5	2,9	4,5	12,5	3,8	2,3
Import - constant prices (% YoY)		8,8	7,8	2,2	0,9	0,7	-1,5	4,7	6,5	16,1	4,6	2,4
GDP growth contributions	Private consumption (pp)	3,9	3,6	0,6	0,2	0,1	0,2	0,3	0,2	3,5	2,0	0,2
	Investments (pp)	0,6	1,1	0,7	0,1	-0,2	0,0	0,3	0,5	0,4	0,6	0,2
	Net exports (pp)	-3,8	-1,2	1,4	1,4	0,6	1,3	-0,9	-1,0	-1,0	-0,3	0,0
Current account (% of GDP)***		-2,7	-3,5	-3,9	-4,0	-3,8	-3,4	-3,7	-4,3	-1,4	-4,0	-4,3
Unemployment rate (%)**		5,4	4,9	4,7	5,0	5,3	5,0	4,7	5,0	5,4	5,0	5,0
Non-agricultural employment (% YoY)		2,3	0,6	2,0	2,2	2,2	1,2	0,7	0,3	1,8	1,8	1,1
Wages in national economy (% YoY)		9,7	11,8	10,8	10,6	11,1	9,4	9,2	8,5	8,9	10,7	9,6
CPI Inflation (% YoY)*		9,6	13,9	16,3	18,3	16,6	11,8	8,7	4,6	5,1	14,5	10,4
Wibor 3M (%)**		4,77	7,05	7,21	7,38	7,38	7,38	7,26	6,26	2,54	7,38	6,26
NBP reference rate (%)**		3,50	6,00	6,75	7,25	7,25	7,25	7,25	6,50	1,75	7,25	6,50
EURPLN**		4,64	4,70	4,85	4,90	4,90	4,85	4,70	4,65	4,58	4,90	4,65
USDPLN**		4,19	4,48	4,95	5,05	4,95	4,80	4,48	4,35	4,03	5,05	4,35

* quarterly average
** end of period
***cumulative for the last 4 quarters

Calendar

TIME	COUNTRY	INDICATOR	PERIOD	PREV. VALUE	FORECAST* CA	FORECAST* CONSENSUS**
		Monday 10/24/2022				
9:30	Germany	Flash Manufacturing PMI (pts)	Oct	47,8		47,0
10:00	Eurozone	Flash Services PMI (pts)	Oct	48,8		48,2
10:00	Eurozone	Flash Manufacturing PMI (pts)	Oct	48,4		47,8
10:00	Eurozone	Flash Composite PMI (pts)	Oct	48,1		47,5
14:00	**Poland**	**M3 money supply (% YoY)**	**Sep**	**7,4**	**7,6**	**7,4**
15:45	USA	Flash Manufacturing PMI (pts)	Oct	52,0		51,2
		Tuesday 10/25/2022				
10:00	**Poland**	**Registered unemplyment rate (%)**	**Sep**	**4,8**	**4,7**	**4,8**
10:00	Germany	Ifo business climate (pts)	Oct	84,3		83,3
15:00	USA	Case-Shiller Index (% MoM)	Aug	-0,4		
16:00	USA	Richmond Fed Index	Oct	0,0		
16:00	USA	Consumer Confidence Index	Oct	108,0	106,0	106,5
		Wednesday 10/26/2022				
10:00	Eurozone	M3 money supply (% MoM)	Sep	6,1		6,1
16:00	USA	New home sales (k)	Sep	685	582	590
		Thursday 10/27/2022				
14:15	Eurozone	EBC rate decision (%)	Oct	1,25	2,00	2,00
14:30	USA	Initial jobless claims (k)	w/e	269		
14:30	USA	Preliminary estimate of GDP (% YoY)	Q3	-0,6	2,3	2,4
14:30	USA	Durable goods orders (% MoM)	Sep	-0,2	0,6	0,5
		Friday 10/28/2022				
10:00	Germany	Preliminary GDP (% QoQ)	Q3	0,1	-0,2	-0,2
11:00	Eurozone	Business Climate Indicator (pts)	Oct	0,81		
14:00	Germany	Preliminary HICP (% YoY)	Oct	10,9		10,9
14:30	USA	Real private consumption (% MoM)	Sep	0,1		
14:30	USA	PCE Inflation (% YoY)	Sep	6,2	6,3	
14:30	USA	PCE core inflation (% YoY)	Sep	4,9	5,2	5,2
16:00	USA	Final U. of Michigan Sentiment Index (pts)	Oct	59,8	59,5	59,8

*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

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