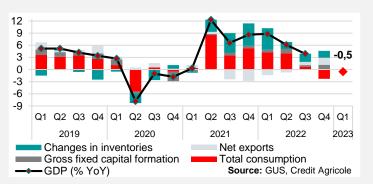




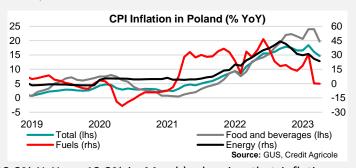
This week

The key event this week will be the release of Poland's flash GDP estimate for Q1, scheduled for Tuesday. We expect to see a slowdown in GDP growth to -0.5% YoY from 2.3% in Q4 last year. The main factor behind the slowdown in GDP growth between Q4 and Q1 was a deeper decline in consumption caused



by a drop in real household income. Another factor was a slowdown in investment. Our forecast is above market consensus (-0.8%), and thus its materialization would be slightly positive for the PLN and the yields on Polish bonds.

- Some important data from the US will be released this week. We expect nominal retail sales to have grown by 0.8% MoM in April compared to a 0.6% drop in March. The rise in growth is accounted for by higher sales in the automotive industry. We expect industrial production growth to have dropped to 0.0% MoM in April from 0.4% in March, in line with business survey results showing a slowdown in manufacturing. We expect data on housing starts (1390k in April vs. 1420k in March), new building permits (1410k vs. 1430k) and existing home sales (4.31M vs. 4.44M) to show a further slowdown in the US housing market. We believe that the impact of the US housing market figures on the PLN and yields on Polish bonds will be limited.
- Tuesday will see the release of significant data from China. Data on industrial production (10% YoY in April vs. 3.9% in March), retail sales (23.0% vs. -3,5%; low base effects), and urban investment growth will show gradual improvement in China's economy. We believe that data from China will be neutral for the PLN and yields on Polish bonds.
- Final data on inflation in Poland for April will be released today. We expect to see a YoY price growth of 14.7%, in line with the flash estimate, compared to 16.1% in March. The fall in inflation is accounted for primarily by slower rises in food and energy prices. At the same time, we expect to see



only a slight fall in core inflation (12.2% YoY vs. 12.3% in March), showing that inflationary pressures remain strong. We believe that the release of inflation figures will be neutral for the PLN and yields on Polish bonds.

Today will also see the release of data on Poland's balance of payments for March. We expect the current account balance to have fallen to EUR 546M from EUR 2.586M in February, primarily in consequence of a smaller trade balance. We forecast that growth in exports picked up from 10.0% YoY in February to 15.1% in March, while growth in imports picked up from -5.4% YoY to -1.6%. In our opinion, the balance of payments figures will be neutral for the PLN and yields on Polish bonds.



May, 15 - 21 2023

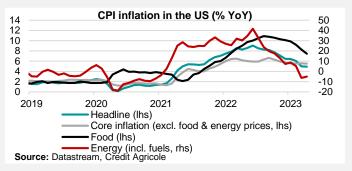


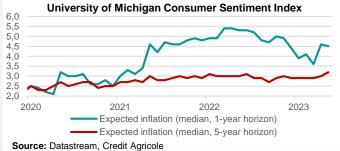
Inventory growth as a source of GDP growth is slowly being exhausted



Last week

- Last week, the Monetary Policy Council decided to keep interest rates unchanged (with the NBP reference rate standing at 6.75%). The MPC's decision was in line with our forecast and market consensus. The MPC maintained its assessment to the effect that the earlier strong monetary policy tightening undertaken by the NBP monetary policy would lead to a decline in inflation in Poland towards the NBP's inflation target. In the opinion of the MPC, the factors that would be driving inflation down include the weakening of external economic conditions, a decline in commodity prices as well as a weakening of GDP growth, including consumption, amid a significant decrease in credit growth. The MPC once again declared that its further decisions would depend on incoming information regarding prospects for inflation and economic activity (see MACROpulse of 10/05/2023). We believe, like in previous months, that the press release shows that high inflation in Poland is of secondary importance to the MPC and that its main goal is to prevent an excessive slowdown in economic growth the coming quarters. In our opinion, with inflation falling, the likelihood of the MPC announcing the end of the rate hiking cycle is growing. We may expect such a change, to be reflected in a marked change in the tone of the press release following the MPC's meeting and of the NBP' Governor's comments, in June, depending on the rate of the fall in inflation between April and May. The NBP Governor's usual press conference was held on Thursday. At the conference, A. Glapiński made a comment that while inflation was falling sharply, it is definitely premature to discuss any interest rate cuts. The press release following the MPC's meeting and comments made by the NBP Governor A. Glapiński support our scenario, which expects interest rates in Poland to remain unchanged until the end of 2023.
- Some important data from the US was released last week. US CPI inflation fell to 4.9% YoY in April from 5.0% in March, running below market expectations (5.0%). The fall in inflation was driven by slower rises in energy and food prices, and by a fall in core inflation, to 5.5% in April from 5.6% in March, in line with market expectations. It is worth noting that MoM core inflation did not change between March and April, standing at 0.4%, which shows that inflationary pressures in the US economy continue to be strong. Last week, a preliminary reading of the University of Michigan index was also released; the index fell to 57.7





- pts in May from 63.5 pts in April, running well below market expectations (63.0 pts). The fall in the index is accounted for by drops in its components both for the assessment of the current situation and for expectations. The median expected inflation over one-year horizon, released together with the University of Michigan index, fell, too (to 4.5% YoY in May from 4.6% in April), which shows a small drop in US households' inflation expectations. Last week's data from the US does not change our forecast that the Fed has ended its rate hiking cycle in May.
- China's trade balance widened to USD 90.2bn in April from USD 88.2bn in March, well above market expectations (USD 71.6bn). Growth in exports slowed to 8.5% YoY from 14.8% and growth in imports fell to -7.9% from -1.4%, running above and below, respectively, market

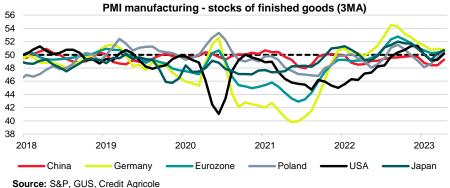




expectations (8.0% and 0.0%, respectively). Despite the relatively strong growth in China's exports, we believe that the prospects for export growth remain poor due to a weakening of external demand, in particular from the US and the EU, which account for ca. one-third of China's exports. At the same time, surprisingly poor China's import figures are accounted for by a sharp drop in the prices of input goods imported by China and lower orders reported by China's manufacturing. In the coming months, growth in China's imports can be expected to reach positive values, supported by gradual recovery in domestic demand as a result of China's government having moved away from its 'zero COVID' policy. However, we believe that the recovery in China's domestic demand will be seen primarily in services, and thus we do not expect it to strongly boost imports of goods. Therefore, we forecast that despite the domestic demand recovery prospects, with weaker foreign demand, China's foreign trade surplus will remain high. Such a scenario is in line with our forecast, which expects China's GDP growth to pick up to 5.0% YoY in 2023 from 3.0% in 2022, in line with the Chinese government's GDP growth target of 'ca. 5%' (see MACROmap of 06/03/2023).

We have revised our EURPLN forecast. In recent weeks, the PLN exchange rate has been strengthening due to the intensification of market expectations of interest rate cuts by the ECB and the Fed over the horizon of a few quarters and the associated increase in global risk appetite. Such a trend will also be positive for the PLN exchange rate in the following months. However, we continue to believe that the EURPLN exchange rate will rise temporarily at the end of Q2 2023 (to 4.60) due to a temporary increase in risk aversion, which will be consistent with our forecast of a decline in the EURUSD. Nevertheless, in the longer term, we expect the EURPLN exchange rate to fall due to the recovery in economic growth. Good data on the Polish trade balance and current account balance is going to support the PLN additionally (see MACROmap of 24/04/2023). As a result we forecast the EURPLN rate to stand at 4.54 at the end of 2023 and 4.45 at the end of 2024.

Inventory growth as a source of GDP growth is slowly being exhausted



PMI manufacturing - stocks of purchases (3MA) 60 58 56 54 52 50 48 46 44 42 40 2018 2022 China - Eurozone Poland -USA Japan Germany

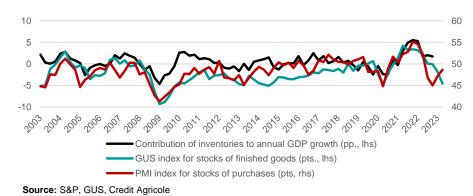
Source: S&P, GUS, Credit Agricole

The COVID-19 pandemic and the war in Ukraine have disrupted global supply chains in recent years. As a result, many businesses, in order to safeguard the continuity of production, as well as to guarantee timely deliveries to their customers, have decided to adopt a model of inventory new management involving the maintenance of relatively high stocks of both intermediate goods and finished goods. The results of the manufacturing PMI survey indicate that this phenomenon particularly picked up starting from the beginning of 2022, which can be linked to the receding supply constraints caused by pandemic and the consequent increased availability of materials and intermediate goods used in





production, and peaked in Q3 2022. For this reason, inventory growth has been one of the main drivers of economic growth in the major economies in 2022. Similar trends were also observed in Poland. The subject of the following analysis is an attempt to answer the question of how inventory growth will affect economic growth in Poland in the coming quarters.



Given the current slowdown in global economic activity, more and more firms are reporting the problem of excess inventory. According to the NBP Quick Monitoring survey, the percentage of businesses indicating in Q1 2023 that their inventories of materials were too high was 9%, of goods—12% and of finished goods—15%, and at historically very high levels.

According to the NBP, this may prompt businesses to reduce inventories in the near term. Some signs of this process are already being signalled by the index for stocks of finished goods (GUS) and the PMI index for stocks of purchased items. At the same time, it is worth noting that these two indicators are characterised by a fairly strong correlation with the contribution of inventory growth to annual GDP growth (between 2003 and 2022, the correlation was 0.58 and 0.60 respectively) and have historically been helpful in drawing conclusions on the prospects for the contribution of inventory growth to economic growth.



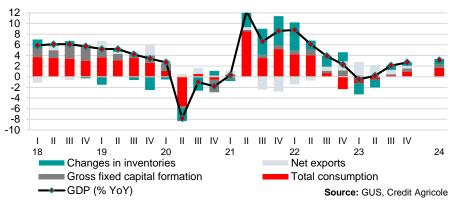
The accumulation of stocks of finished goods means that businesses, in an environment of falling orders, are increasingly fulfilling them by selling off previously accumulated stocks while reducing current production. It is easy to see if we put together the components of the PMI for current production and finished goods stocks. The correlation

coefficient between these variables for the period 2018 – 2023 is -0.58. This relationship can be interpreted as follows: the faster the increase in stocks of finished goods, the stronger the fall in current production. Consequently, the recent increase in inventories explains the currently observed decline in industrial production in Poland (see i.a. MACROpulse of 20/03/2023) and worldwide, e.g. in Germany (see MACROmap of 08/05/2023).

We used an econometric model to estimate the impact of the contribution of inventory growth to the annual growth rate in the coming quarters. We made the contribution of stock growth to annual GDP growth conditional on the annual economic growth rate (lagged by one quarter) and the NBP reference rate (lagged by two quarters). According to the results obtained from the model, an acceleration in GDP growth results in an increase in the contribution of stock growth to GDP, while a higher level of interest rates results in a decrease. The positive relationship between past GDP growth rate and the contribution of inventory growth is due to expectations formulated by firms about future demand on the basis of past economic activity. The stronger the demand in the previous period, the more firms increase their inventories. In contrast, the negative relationship between stocks and interest rates reflects the higher cost of financing stocks.



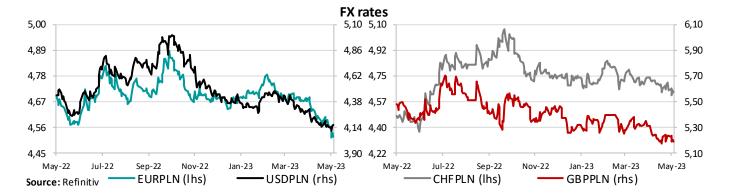




Then, using the model built, we made a forecast of the contribution of stock growth to GDP over the period Q1 - Q4 2023. In Q1 and Q2, we expect a marked reduction in the contribution of inventory growth to annual GDP growth, which will reach a negative value. In contrast, the contribution of inventory growth to annual GDP growth will increase and turn positive in the H2

2023, supported by the recovery in economic growth that we expect. An upward risk factor for our forecast is the process observed in recent quarters of reorientation of production processes by global companies to Poland, which is conducive to increased inventory accumulation in the economy (see MACROmap of 24/04/2022). The projection of the contribution of stock growth to annual GDP growth rate presented above is consistent with our economic growth scenario assuming that Poland's GDP will increase by 1.2% in 2023, compared to 5.1% growth in 2022, i.e. a 'soft landing' scenario for the Polish economy.

Domestic GDP data may strengthen the PLN



Last week, the EURPLN rate dropped to 4.5197 (the PLN strengthened by 1.1%). The first part of the week saw a strengthening of the PLN and other emerging market currencies, helped by a reduction in global risk aversion reflected by a fall in the VIX index. On Wednesday there was a correction and the PLN weakened, although it did not return to the levels of the beginning of the week. The NBP Governor's press conference had a limited impact on the PLN.

The EURUSD was also in a downtrend last week, supported by investors' expectations that the Fed had not yet completed its interest rate hike cycle. The USD weakened against the EUR on Wednesday in response to the release of lower-than-market-consensus US inflation data, although it did not reverse the EURUSD's downward trend.

This week, the publication of domestic GDP data scheduled for Tuesday will be crucial for the Polish currency; if our forecast, higher than the market consensus, is realized, the PLN might strengthen slightly. Other publications from the Polish and global economy planned for this week will not have a significant impact on the PLN.



Weekly economic May, 15 - 21 commentary 2023

Inventory growth as a source of GDP growth is slowly being exhausted





Publication of domestic GDP data in the spotlight



Last week the 2-year IRS rates increased to 6.15 (up by 6bp), 5-year rates remained unchanged at 5.24, and 10-year ones increased to 5.21 (up by 1pb). Throughout last week, we saw IRS rates stabilise following the core markets. This was largely due to the scarce calendar of macroeconomic events. US inflation data had a limited impact on the curve.

We believe that this week the publication of domestic GDP data scheduled for Tuesday will be in the spotlight; it may favour a rise in IRS rates. Other data releases from the Polish and global economy planned for this week will not have a significant impact on the IRS, in our opinion.





Forecasts of the monthly macroeconomic indicators

Main monthly macroeconomic indicators in Poland														
Indicator	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
NBP reference rate (%)	4,50	5,25	6,00	6,50	6,50	6,75	6,75	6,75	6,75	6,75	6,75	6,75	6,75	6,75
EURPLN*	4,67	4,58	4,70	4,73	4,72	4,85	4,71	4,67	4,69	4,71	4,70	4,68	4,59	4,53
USDPLN*	4,43	4,27	4,48	4,63	4,70	4,95	4,77	4,48	4,38	4,33	4,45	4,31	4,16	4,16
CHFPLN*	4,55	4,45	4,69	4,86	4,80	5,01	4,76	4,74	4,72	4,70	4,72	4,71	4,66	4,66
CPI inflation (% YoY)	12,4	13,9	15,5	15,6	16,1	17,2	17,9	17,5	16,6	16,6	18,4	16,1	14,7	
Core inflation (% YoY)	7,7	8,5	9,1	9,3	9,9	10,7	11,0	11,4	11,5	11,7	12,0	12,3	12,2	
Industrial production (% YoY)	12,3	14,9	10,4	7,1	10,9	9,8	6,6	4,4	0,9	1,8	-1,0	-2,9	-3,0	
PPI inflation (% YoY)	24,1	24,7	25,6	25,5	25,5	24,6	23,1	21,1	20,5	20,1	18,2	10,1	6,7	
Retail sales (% YoY)	33,4	23,6	19,9	18,4	21,5	21,9	18,3	18,4	15,5	15,1	10,8	4,8	3,8	
Corporate sector wages (% YoY)	14,1	13,5	13,0	15,8	12,7	14,5	13,0	13,9	10,3	13,5	13,6	12,6	11,6	
Employment (%YoY)	2,8	2,4	2,2	2,3	2,4	2,3	2,4	2,3	2,2	1,1	0,8	0,5	0,2	
Unemployment rate* (%)	5,6	5,4	5,2	5,2	5,2	5,1	5,1	5,1	5,2	5,5	5,5	5,4	5,3	
Current account (M EUR)	-2963	-1373	-273	-1070	-2847	-2208	-416	262	-2530	2133	2586	546		
Exports (%YoY EUR)	16,7	27,5	22,4	20,9	28,1	26,5	23,2	24,2	10,6	13,1	10,0	15,1		
Imports (% YoY EUR)	35,9	33,8	28,1	21,7	29,6	31,4	24,1	18,3	11,3	5,1	-5,4	-1,6		

^{*}end of period

Forecasts of the quarterly macroeconomic indicators

		М	ain mac	roecon	omic ind	dicators	in Pola	nd				
	lu dia etco	2022			2023				0000	0000	0004	
Indicator		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Gross Domestic Product (% YoY)		8,8	6,1	3,9	2,3	-0,5	0,2	2,1	2,7	5,1	1,2	3,1
Private consumption (% YoY)		6,8	6,7	1,1	-1,1	-3,5	-1,0	0,5	2,0	3,3	-0,5	3,0
Gross fixed capital formation (% YoY)		5,4	7,1	2,5	5,4	2,0	0,2	1,4	2,6	5,0	1,7	4,0
Export - constant prices (% YoY)		5,6	6,4	9,0	3,9	2,8	3,5	3,7	4,8	6,2	3,7	3,8
Import - constant prices (% YoY)		8,7	8,2	7,7	0,7	-1,5	0,1	2,5	4,0	6,2	1,4	4,3
GDP growth contributions	Private consumption (pp)	4,0	3,8	0,6	-0,5	-2,1	-0,6	0,3	1,0	1,8	-0,3	1,7
	Investments (pp)	0,7	1,1	0,4	1,2	0,2	0,0	0,2	0,6	0,9	0,3	0,7
GDP	Net exports (pp)	-1,4	-0,7	0,8	1,7	2,6	2,2	0,8	0,5	0,2	1,5	-0,2
Current account (% of GDP)***		-2,5	-3,3	-3,4	-3,0	-1,2	-0,8	-0,9	-1,1	-3,0	-1,1	-2,3
Unemployment rate (%)**		5,8	5,2	5,1	5,2	5,4	5,2	5,3	5,5	5,2	5,5	5,4
Non-agricultural employment (% YoY)		2,3	0,6	-0,9	0,3	-0,6	-0,5	-0,5	-0,5	0,6	-0,5	-1,0
Wages in national economy (%YoY)		9,7	11,8	14,6	12,3	14,3	12,8	11,4	9,9	12,1	12,1	7,5
CPI Inflation (% YoY)*		9,6	13,9	16,3	17,3	17,0	13,1	10,1	7,1	14,3	11,8	4,9
Wibor 3M (%)**		4,77	7,05	7,21	7,02	6,89	6,88	6,88	6,88	7,02	6,88	5,88
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	4,68	4,60	4,57	4,54	4,69	4,54	4,45
USDPLN**		4,19	4,48	4,95	4,38	4,31	4,30	4,19	4,13	4,38	4,13	4,24

^{*} quarterly average

^{**} end of period

 $^{{\}ensuremath{^{***}}}\xspace^{\cdot}$ cumulative for the last 4 quarters



Weekly economic May, 15 - 21 commentary 2023

Inventory growth as a source of GDP growth is slowly being exhausted



Calendar

TIME	COUNTRY	INDICATOR	PERIOD	PREV. VALUE	FORECAST*		
				VALUE	CA	CONSENSUS**	
		Monday 05/15/2023					
10:00	Poland	CPI (% YoY)	Apr	16,1	14,7	14,7	
11:00	Eurozone	Industrial production (% MoM)	Mar	1,5		-2,5	
14:00	Poland	Current account (M EUR)	Mar	2586	546	2134	
14:30	USA	NY Fed Manufacturing Index (pts)	May	10,8		-2,0	
		Tuesday 05/16/2023					
4:00	China	Retail sales (% YoY)	Apr	10,6	23,0	20,1	
4:00	China	Urban investments (% YoY)	Apr	5,1	5,6	5,2	
4:00	China	Industrial production (% YoY)	Apr	3,9	10,0	10,1	
10:00	Poland	Flash GDP (% YoY)	Q1	2,3	-0,5	-0,8	
11:00	Eurozone	GDP flash estimate (% YoY)	Q1	1,3	1,3	1,3	
11:00	Eurozone	Preliminary GDP (% QoQ)	Q1	0,1	0,1	0,1	
11:00	Germany	ZEW Economic Sentiment (pts)	May	4,1		-5,5	
14:00	Poland	Core inflation (% YoY)	Apr	12,3	12,2	12,2	
14:30	USA	Retail sales (% MoM)	Apr	-0,6	0,8	0,6	
15:15	USA	Capacity utilization (%)	Apr	79,8		79,7	
15:15	USA	Industrial production (% MoM)	Apr	0,4	0,0	0,0	
16:00	USA	Business inventories (% MoM)	Mar	0,2		0,0	
		Wednesday 05/17/2023					
11:00	Eurozone	HICP (% YoY)	Apr	6,9	7,0	7,0	
14:30	USA	Building permits (k)	Apr	1430	1410	1440	
14:30	USA	Housing starts (k MoM)	Apr	1420	1385	1400	
		Thursday 05/18/2023					
14:30	USA	Philadelphia Fed Index (pts)	May	-31,3		-19,0	
16:00	USA	Existing home sales (M MoM)	Apr	4,44	4,31	4,30	

^{*}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



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^{**} Refinitiv