Economy 2022-2023

With shield or on it?

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Summary

- The global economy is on a cyclical peak. Growth will slow down from now on. The positive impact of restoring supply chains will be short. If the omicron is the end of the pandemic, the economy will not need such a large amount of goods to which companies constantly adapt production (and storage) capacity. In the coming quarters, we will see the delayed negative effects of changes in oil prices, increased inflation and the tightening of financing conditions. The EM interest rate hike cycle started early, now the DM countries are joining. In 2022, fiscal policy will continue to support growth. It will change in 2023. In the years 2023-2024, the negative effects of interest rate hikes will be close to apogee.
- The pandemic changed the Polish economy. While the short-term recession of 2020 allowed for the temporary covering of inflationary pressure with low good prices, in 2021 both inflation engines were already operating, pushing inflation to 8.6% in December 2021. Now there are only pro-inflationary factors and the risks for inflation in 2022 are up. The expansionary fiscal policy contributes (the budget for 2022 is already out-of-date, because of new fiscal elements). Permanent energy component will pull prices up in the coming years. In 2023+, the risks to inflation are more balanced, and global factors have here a key role to play (can lower goods inflation). Forecast for inflation in 2022 is 6.8%, in 2023 4.7%.
- The economy will slow down (2022 -> 4.1%, 2023 -> 2.8%). Consumer sentiment is weak. Real income does not look bad after all subsidies, shields and trends in the labor market, but consumers do not see it. There is potential for sudden slowdown. However, it will not be permanent - the turn of 2022/2023 will look better. But then we'll start to worry more about the private investment cycle, exports and the effects of interest rate hikes. There is also the problem of inventories, which, when problems with value chains are solved, may become an unwanted cost. Arithmetically, 2023 looks worse than 2022, but in fact, the economic momentum will be similar. The risks are balanced, but there is a lot of them in all directions.
- The inflation and wages suggests that the economy (also the global economy) is operating above the potential output (longer trends probably approximate it very poorly). In this situation, any additional increase in demand will pump nominal, not real, variables. We think that windfall income anti-inflationary shields will mostly be saved. An alternative is an additional inflation boost already in 2022. It is unlikely that we will see any significant impact on real production. The greater the fiscal expansion, the worse the current policy-mix and the lower the effectiveness of the distributed budgetary money.
- The peak of consumer loans demand is behind us. Corporate loans should accelerate due to the continuation of investment demand and deterioration of the liquidity situation (from excellent to very good). Interest rate hikes (rates will reach 4% this year) will limit the demand for loans and can provide inflation close to the range of permissible deviations from target at the end of 2023. We assume a zero-one ending of inflation shields (it's easier to show the risks), but in fact they may be withdrawn gradually, faster if inflation decreases rapidly. If the shields arithmetically boost inflation in 2023, the central bank will look at inflation through special glasses (as if shields were not there). It is why we forecast the end of rate hikes as early as 2022. It is very likely that in the fourth quarter of 2023 the rates will start to fall, but the central bank will not mention it now, keeping hawkish rhetoric, maximizing the impact on the stronger zloty and thus the final effect of disinflation. It is in the interest of the central bank to maintain the expected high interest rates.

Global economy:

Waiting for declines in food and crude oil prices

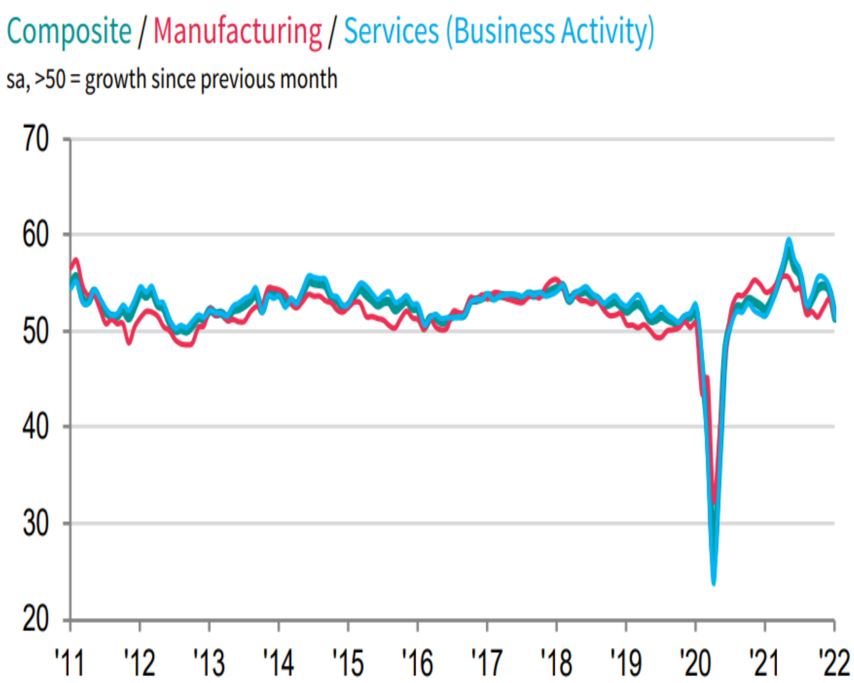
Supply constraints: it can only get better

Fiscal policy will still be expansionary in 2022, and new cards will be revealed over the year

Revenge time: higher oil prices and the withdrawal of monetary accommodation imply slower GDP growth

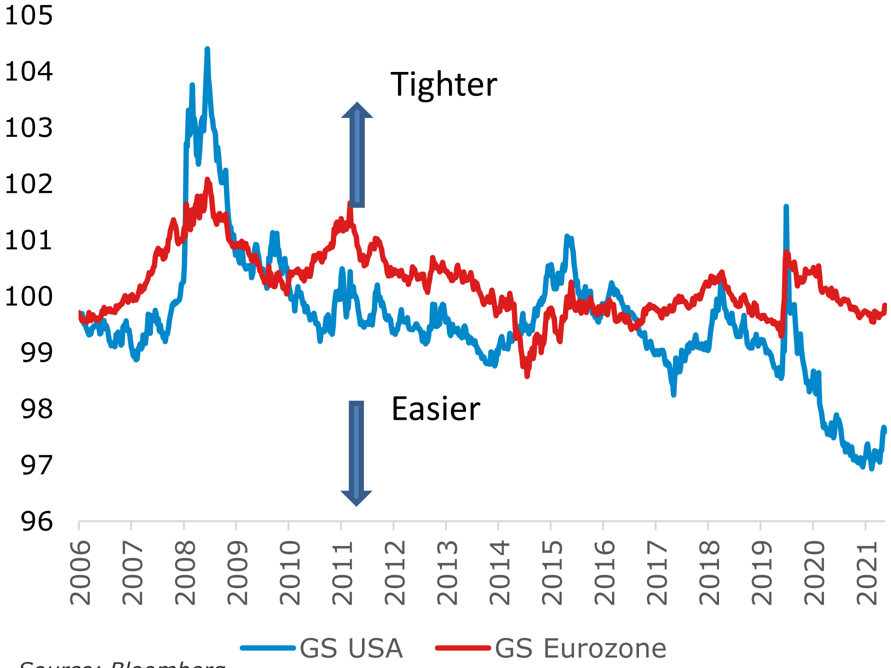
Global cycle topped

Global PMI: Production (behind the peak)



Sources: J.P.Morgan, IHS Markit.

Financial conditions indices: Easier? It was already.

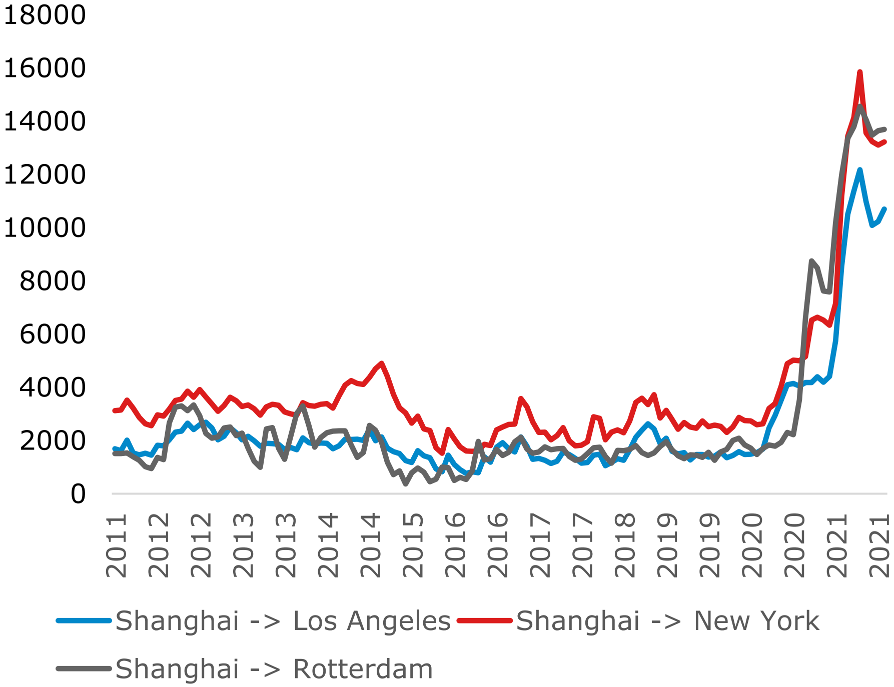


Source: Bloomberg

- Industrial cycle slows down to more neutral levels (expansion but not the boom). Part of the slowdown comes from the ongoing supply chain problems; part is the reflection of slowdown in demand. If omicron is the last phase of pandemic and the normality comes back, we will see higher importance of services (instead of manufacturing). Attention: automotive production is another story, because of the market overhang (we will see catching up, solving supply chain problems will result in boom).
- We enter 2022 with a definite end to monetary stimulation. The cycle of interest rate hikes in developing markets continues, developed countries are beginning to limit their monetary accommodation. Financial markets are tightening financing conditions (see chart).
- Oil price increases should limit the global growth in 2022 and 2023.
- Fiscal policy will have the opposite effect (mostly due to delayed effects of US programs and expected inflow of Next Generation EU funds). It will support the growth, especially in 2022.

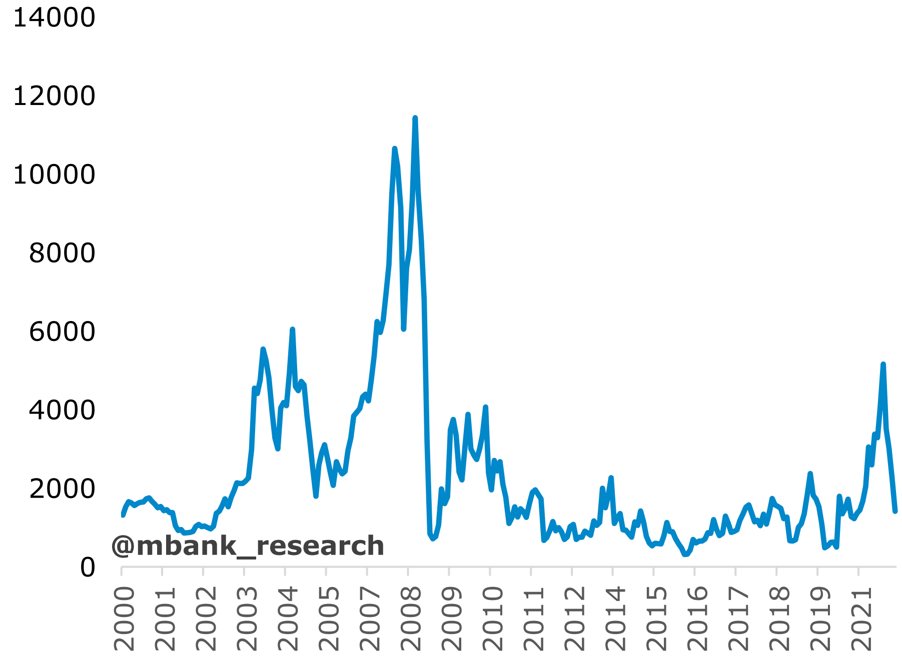
Peak of the supply chain problems

Shipping prices for a 40 square foot container ($)



Source: Bloomberg

Baltic Dry Index

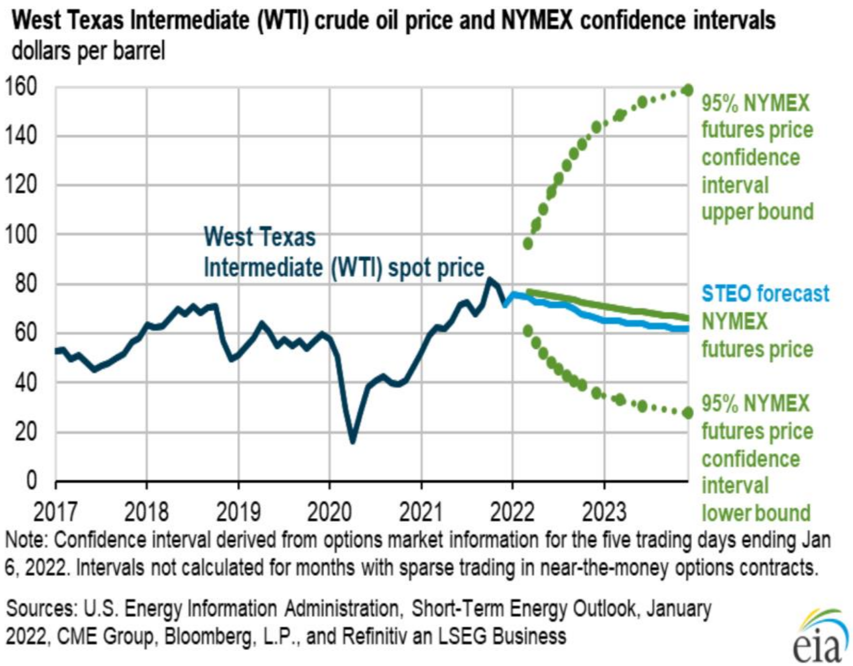


Source: Bloomberg

- Container freight costs are stabilizing. Most forecasts suggest that they will remain relatively high in 2022. But dynamically, the period of rapid increases (including large increases in the cost of transport) is already behind us. The costs of sea transport (Baltic Dry Index) are optimistic. The slowdown in the industrial cycle and the shift to services should drive down freight prices.
- The risk is in China and some other Asian countries (zero covid policies). Relatively low vaccination rates (plus weaker efficiency of vaccines) mean that production interruptions may persist. But so far, the risks associated with the omicron do not materialize as strongly as expected (no significant production interruptions). Years 2022-23 is also too short period for China to re-orient its policy towards the consumer (it has not been successful so far). We believe that global competition will lead to an increase in traded goods, and the demand-supply mechanism will result in lower prices.

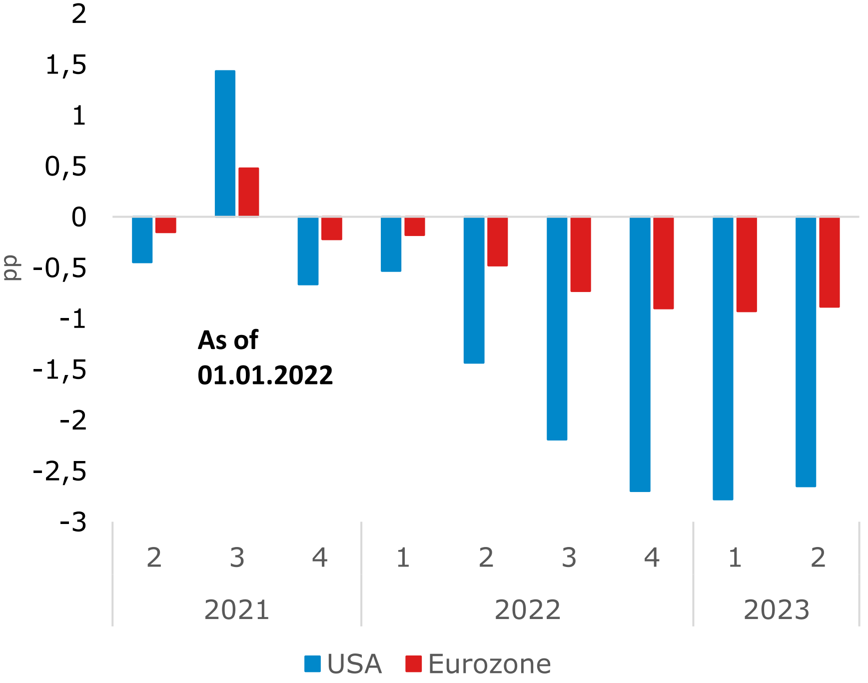
Crude oil: A little bit up, then down

EIA crude oil forecasts



Source: EIA

Cumulative impact of oil price increases on GDP growth

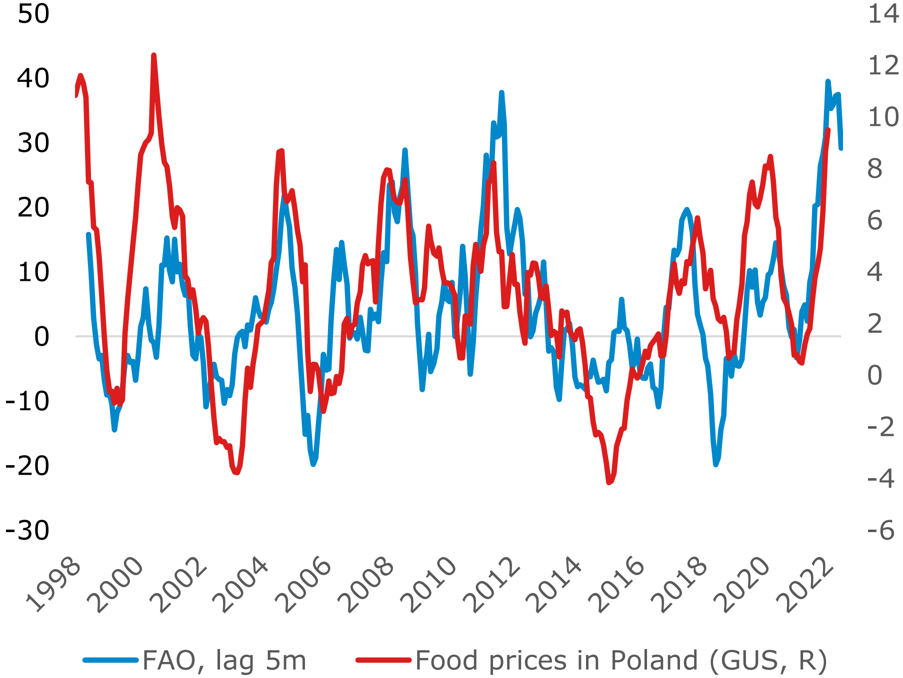


Source: own elaboration based on article linked below

- Going down from the peak in crude oil prices this year is very likely. But we do not know yet where is the peak. EIA's baseline scenario is on average 75$ in 2022 (+6%) and 67.5$ in 2023 (-10%). In our inflation calculations we assume +10% and -10%.
- Oil prices are slowing down economies. Estimates suggest that the negative impact of oil prices on growth reaches a maximum after 6-8 quarters. The 10% change in oil prices in the quarter (shock) reduces US GDP growth by almost 0.4% and eurozone's by 0.1%.
- Impulse responses of shocks are perfect tools for measuring impact of oil price changes on GDP since the start of the pandemic. Previously oil prices were quite stable, and therefore they were not so important. So, we start summing up shocks from the neutral level (but in real world shocks happen at the same time). We cumulated them starting from the 6th quarter after the beginning of the pandemic. Results are presented on the graph above. In 2022 and 2023 we will see cumulation of negative oil price impact on GDP. The peak of positive effects was in mid-2021.

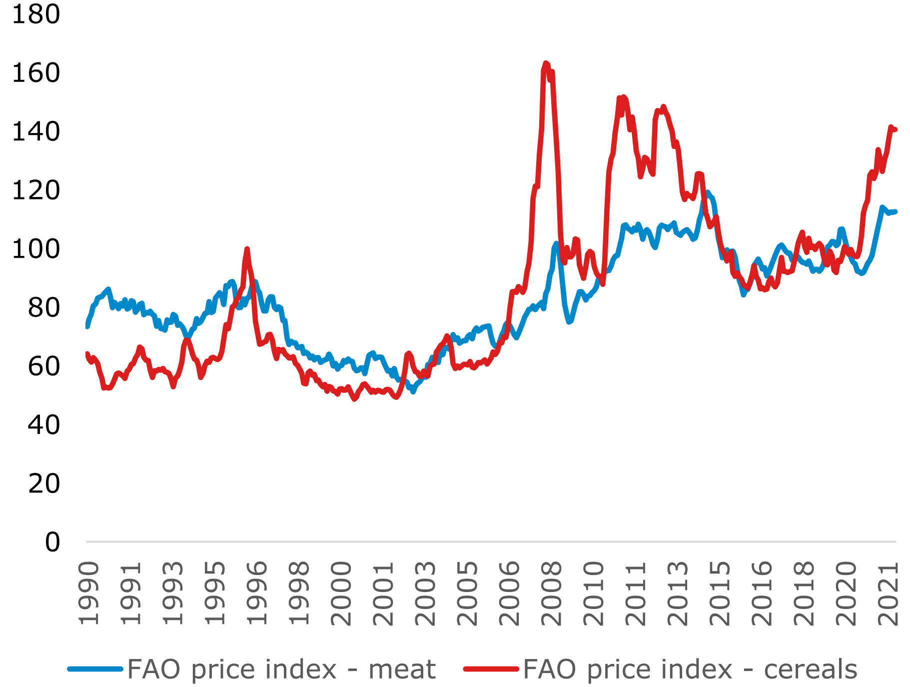
Food prices: Global perspective with some local flavor

FAO (in PLN) vs food prices in Poland



Source: own elaboration based on Bloomberg and Statistics Poland

Cereals price shock = meat price shock is not here yet

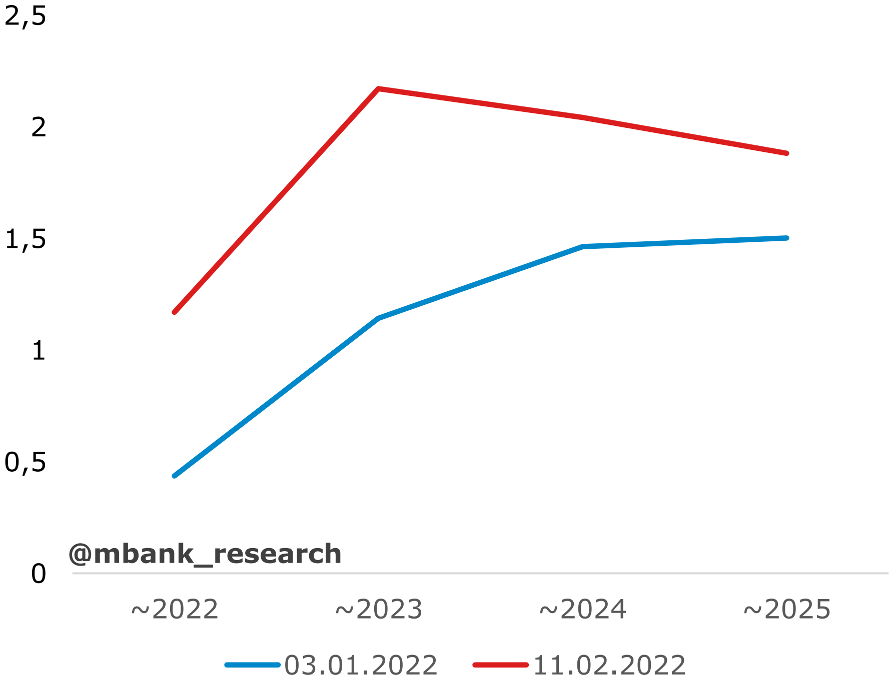


Source: own elaboration based on Bloomberg and Statistics Poland

- The FAO food price index has reached (dynamically) highs. However, we do not expect an immediate fall in prices. It will take a while and there are many risks ahead of us. However, the risk of further price increases is low, and we are entering a period of high base.
- Futures for wheat are still close to record highs. There was almost no market reaction on the reduction in the export of nitrogen fertilizers by Russia. Perhaps most of the scares are already priced in and new information is needed to make the market moving. Moreover, in the case of meat prices, there is a risk that the adjustment to current prices is not yet complete (upside risk).
- Over the next few months, the growth rate of food prices in Poland should reach the highest level and start to decrease. However, it is not known from what levels we will fall. In our opinion, further declines will be slowed down by meat prices,. They are currently at low levels, supported by increased supply due to ASF (higher supply today, lower in the future). We are entering the following months with a low swine population. Either production will be rebuilt with higher feed prices (higher cost -> higher price), or the market will encounter a supply barrier (high prices driven by the supply and demand).

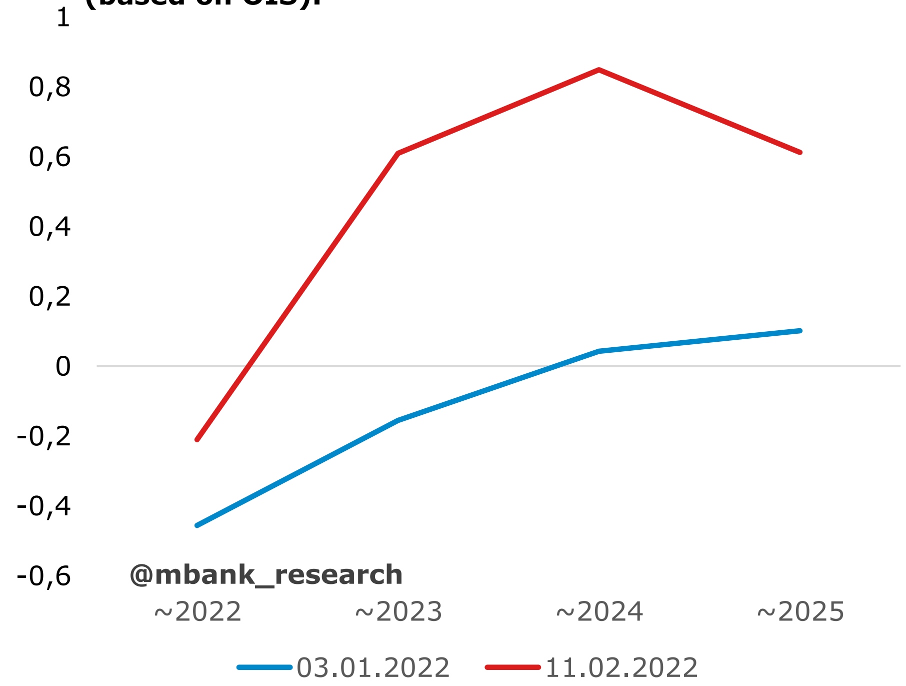
DM central banks: Lift-off!

Expected 1-year interest rates path in the US (based on OIS).



Source: own elaboration based on Bloomberg

Expected 1-year interest rates path in the Eurozone (based on OIS).

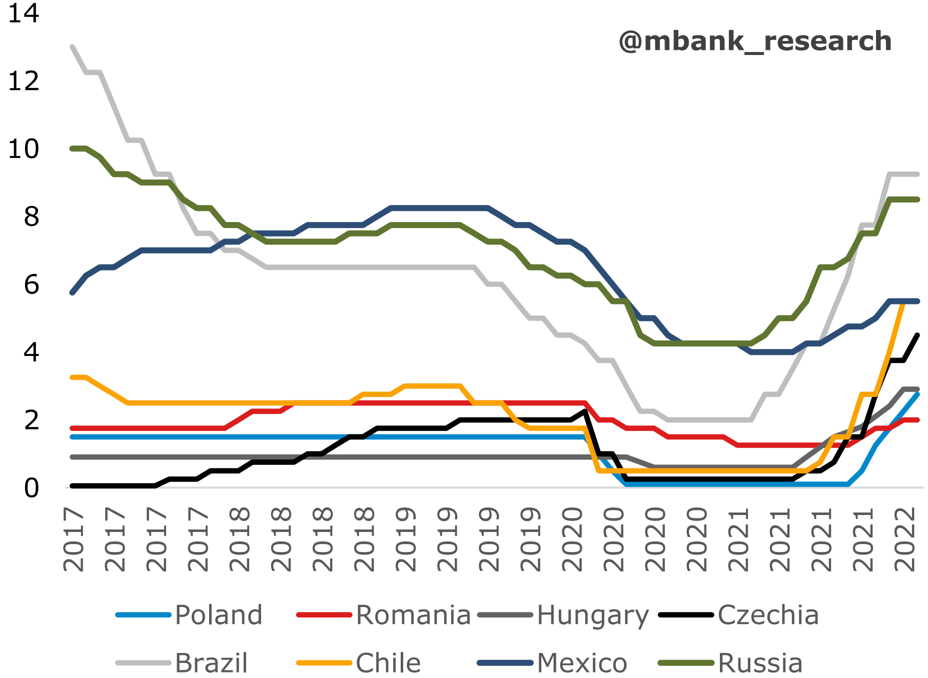


Source: own elaboration based on Bloomberg

- Since the beginning of the year, investors have significantly raised the path of expected interest rates in the US and the Eurozone. Now the market scenario in the US is the start of hiking cycle in March (QT in the second half of the year), and hikes in the Eurozone around the third quarter. We agree with the scenario for the US, although we think that the expected pace of hikes is too fast. We disagree with the expectations on the Eurozone. In our opinion we will see later but more intense hikes (target rate 1% 2023/2024; end of PEPP in March, expiration of APP by the end of the year, first rate hike in December 2022).
- In both economies, inflation remains high above central banks' targets. In both cases, however, goods are the main determinant of inflation. Our assumptions about value chains (here), food prices (here) and oil prices (here) suggest that we are approaching peak in inflation, and then it will decline quite dynamically towards central banks’ targets.
- So far, inflation in services remains quite stable. The tightening of the US labor market will keep it at the current (or even slightly higher) level. From a cyclical point of view, the current scale of monetary accommodation is excessive. In the Eurozone, the labor market - and mainly wage growth - is weaker than in the US. However, fiscal stimulation will help. Moreovoer, we can see some episodes with bets on the fragmentation of the euro area at higher rates. The ECB can wait and will wait, although the window for rate hikes in 2023 will be used.

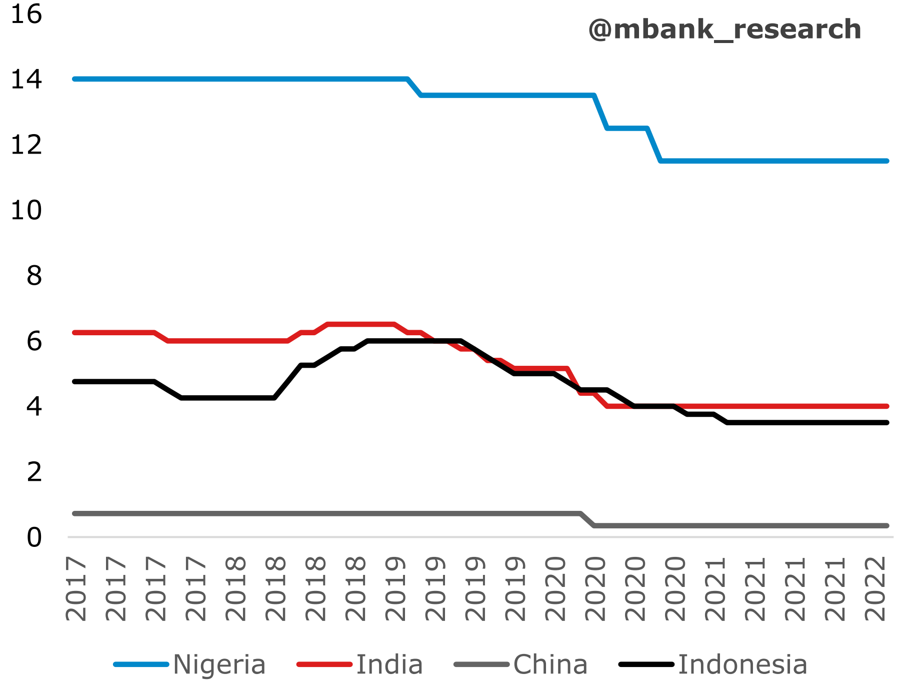
EM central banks: Some have already started hikes, some are still waiting

Some have already started



Source: own elaboration based on Bloomberg

Some are still waiting



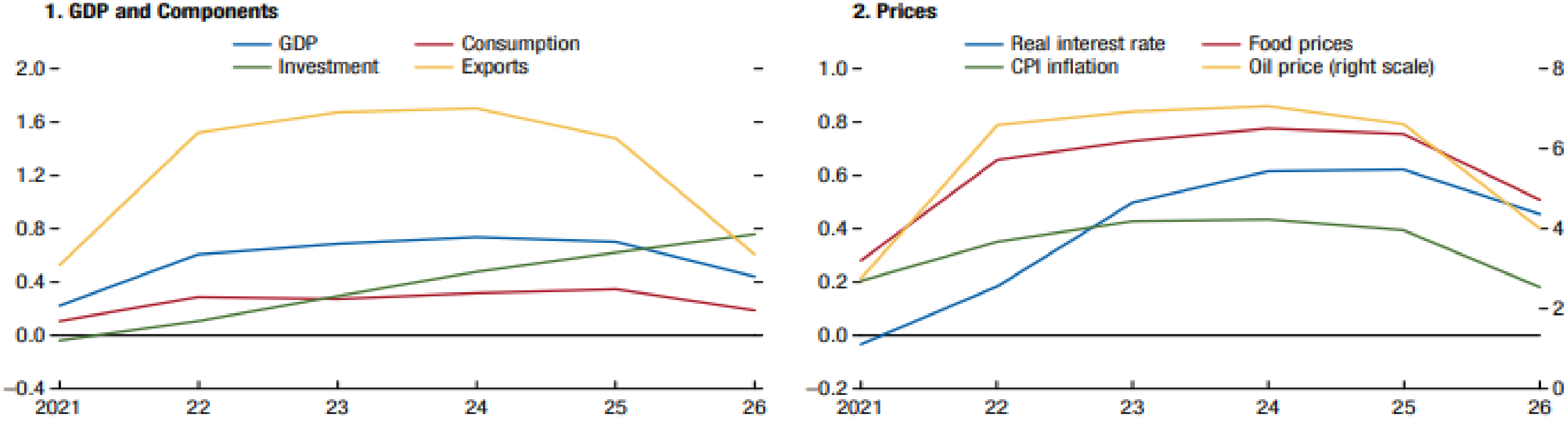
Source: own elaboration based on Bloomberg

- Central banks in developing countries have already started the tightening cycle. But not in Asia, where inflation remains relatively low (due to both different consumption structure and transport costs, which result in higher inflation pressure mostly in importing countries).
- Will it be enough to avoid more (and higher) hikes when Fed starts hiking? We ask this question mainly regarding Poland. Standard reasoning is that tightening of Fed is a problem for the zloty and further pressure on interest rates in Poland (and this is probably current opinion in MPC). However, nothing like this happened during the previous tightening cycle in the US. Moreover, currently EURUSD (and it is a surprise) responds positively to the change in main central banks' rhetoric (normalization of monetary policy is expected almost everywhere). Regarding ECB, market expectations are also probably too high, which should have a soothing effect on the PLN through the disparity channel, when the ECB starts. We bet that investors trust Polish economy and consider it still closer to DM than EM. Therefore, we treat the tightening of monetary policy abroad as a supporting factor for lower inflation (and the real economy cycle) in Poland. It is also another element of the negative impact on GDP.

Global fiscal policy: Fiscal tightening, but not in 2022

Figure 1.4. Global Effect of Three Large Recovery Packages on Macroeconomic Variables and Prices
(Percent change relative to baseline)

Global GDP and gross exports would see a sizable increase, the rise in prices would be transitory and moderate, and the increase in global interest rates would be long-lasting.



Sources: IMF World Economic Outlook database; and IMF staff calculations.
Note: The figure focuses on three large recovery packages announced since April 2021 by the European Union (NextGenerationEU) and the United States (American Families Plan and American Jobs Plan). Simulations use the G20 module of the Flexible System of Global Models. CPI = consumer price index.

Source: IMF Fiscal Monitor October 2021 (link)

- When looking at the forecasts of fiscal deficits (also the structural ones) one can come to a (correct) conclusion that fiscal policy will be less expansionary in 2022+. In the US and the Eurozone there are two different approaches: restrictive fiscal policy in the US (failure of the next Biden package) and expansionary policy in the Eurozone. Proposed measures against high energy prices will ease the balance for Europe (we do not see it in estimates yet, we will probably not see it at all in the US).
- But considering also the scale of previous stimulation in the US (which is partly accumulated in economic agents' assets) and expected stimulation in the Eurozone, correct analysis of the fiscal effects should cover more than a year. IMF estimates (presented above) suggest that we will see cumulation of positive effects of fiscal stimulation in 2022-25. But, in dynamical terms, the greatest effect will be seen in 2022. Later, the additional support for growth will be much lower and finally decline.
- Our working assumption is that fiscal policy (measured by both current and delayed effects) will continue to positively contribute to GDP growth. Later, the situation becomes worse, because of the dynamic effects. Debt costs will also be more and more important (although this will filter into budgets for a long time).

Polish economy:

No more external nor internal balance

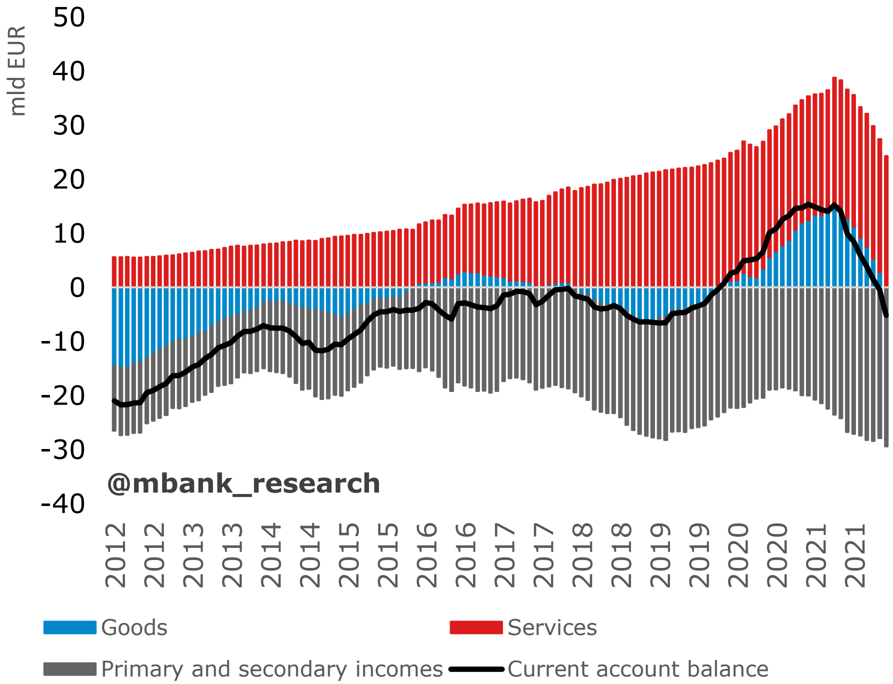
Fiscal policy contrary to the monetary one

Inflation slowdown possible mostly because of global factors, AT NBP TARGET only when looking at the antinflationary shields through special lens

There is a chance for zloty's appreciation: interest rate disparities are already working, now it is time for better relations with the EU

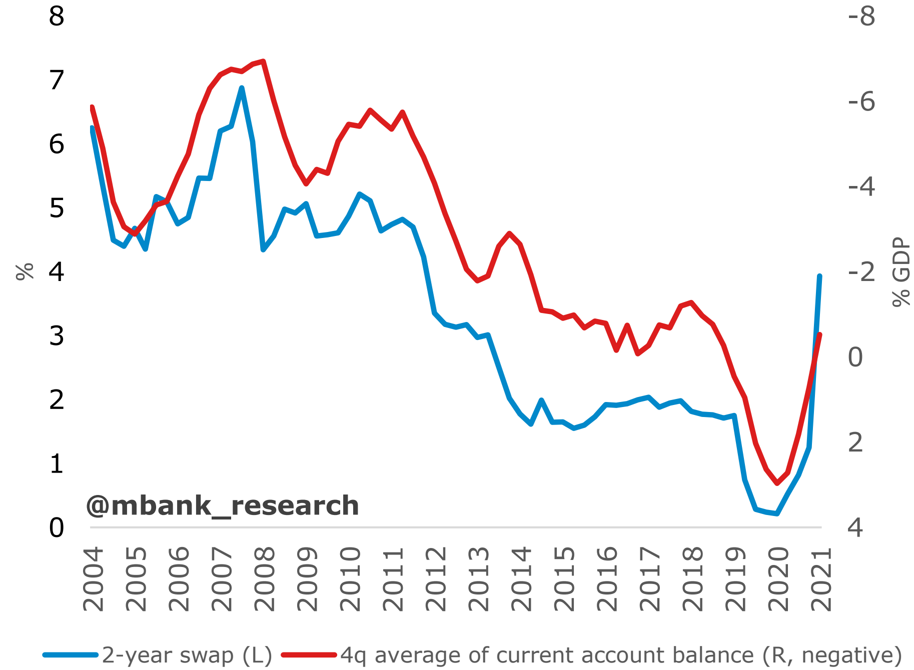
Say goodbye to external balance? Not forever, but it will be more difficult

Decompostiion of C/A (12-month sums)



Source: own elaboration based on NBP data

C/A and interest rates?

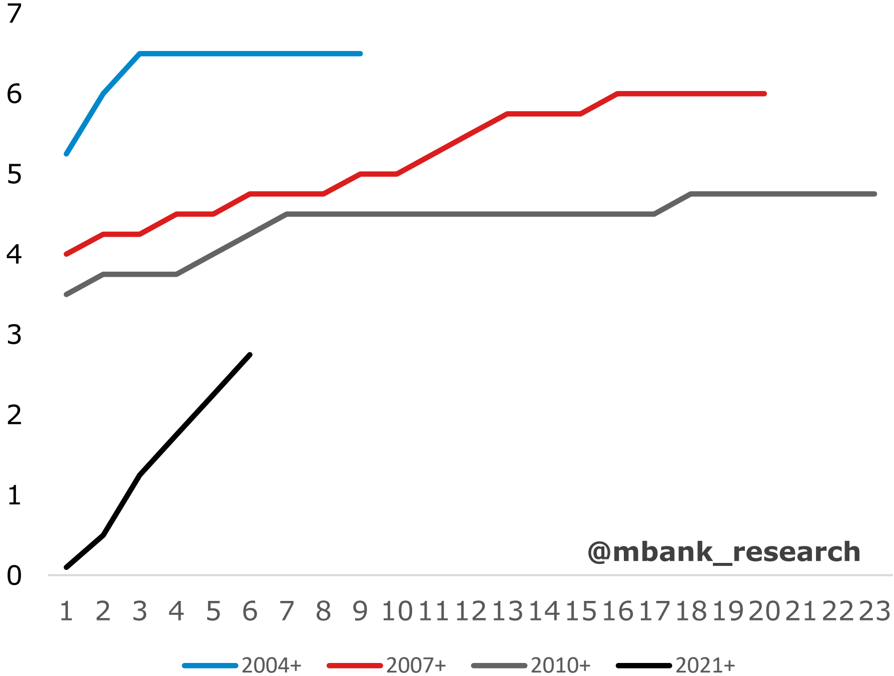


Source: own elaboration based on NBP and Bloomberg data

- External balance worsened in 2021 and it worsened in every aspect (graph above). Situation will be better, but in general it will be more difficult to see surpluses. In services, we see a comeback to the trend, and last 2 years were, in our opinion, overly optimistic. But the trend is positive and will be positive. Change in trade balance is a result of cyclical acceleration of the economy combined with unprecedented increase of raw material prices and exporters' problems (difficulties with exports production because of broken supply chains). Those effects will gradually reverse in the coming quarters.
- We are less optimistic regarding balances on primary and secondary incomes. Higher interest rates, higher expected rate of returns of domestic investments, higher wages (for external workers) will keep this element of the current account in a large deficit. EU transfers will be put into capital account more and more. It does not matter for the whole internal position, though.
- We have already seen some adjustment on the nominal side (interest rates, graph on the right), which on the one hand compensate the current account deficit to its financing entities, and, on the other, trigger real processes that will cool down demand, which will result in more balance in the medium-term.

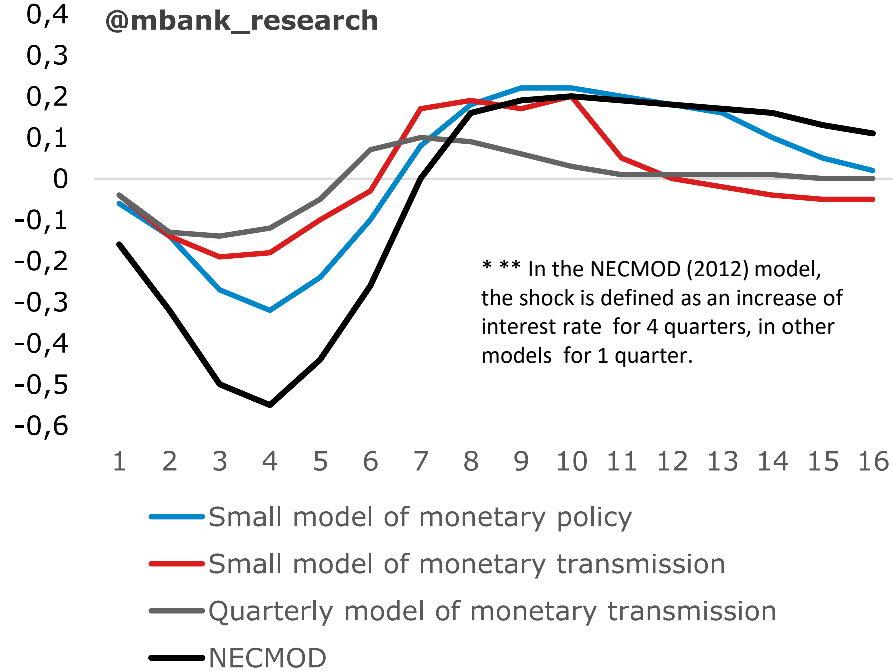
Say goodbye to low interest rates

Interest rate hikes are quick and significant. And it is not the end



Source: own elaboration

Hikes will have negative impact on the economy (here responses on 100bp reference rate hike on GDP, in pp).

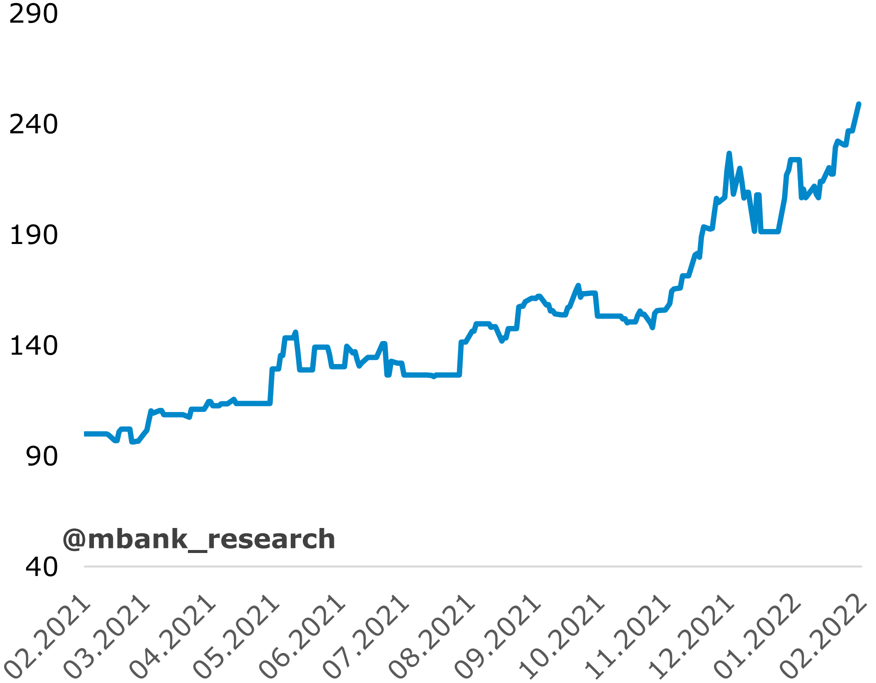


Source: own elaboration based on NBP materials

- Even though MPC does not want to call it „cycle", the monetary tightening cycle has started in October 2021 and since then, every month, MPC decided to increase interest rates. The reference rate has reached 2.75% at the end of February. We believe that MPC will end the cycle maximally at 4%. March meeting will be a turning point, after which MPC will prefer smaller steps (25bp.). Personal changes in MPC will have no significant impact on the monetary policy.
- Now MPC focuses on reaching the target in second half of 2023. In our opinion, effect of hikes already done, slowing economy, and global conditions will let inflation get close to the permissible fluctuation band around 2.5%. If anti-inflationary shields' ending dates will cumulate in 2023, and result in higher inflation, then MPC will de facto target the CPI without effect of indirect tax changes (like CNB does). It makes economical sense, as end of shields should be considered as fiscal tightening (see here and here)
- Monetary tightening cycle in the US and the Eurozone will not disturb the Polish path. Investors are unlikely to treat Poland as a part of the EM basket. More tightening abroad implies less need for many hikes in Poland.

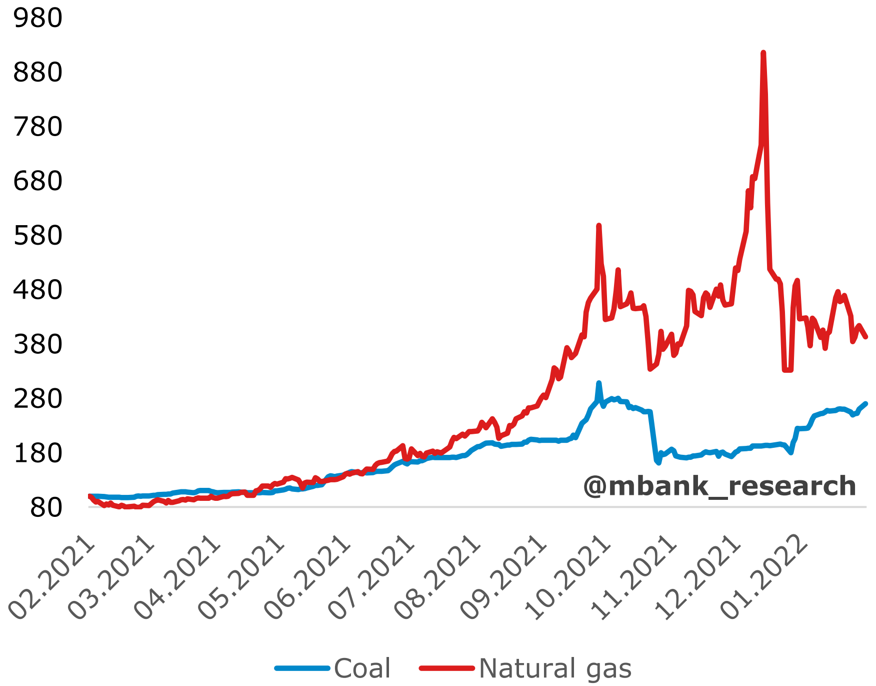
Say goodbye to low electricity prices. Higher natural gas prices are temporary.

Prices of CO2 emmision allowances (spot), 02.2021 = 100



Źródło: Bloomberg

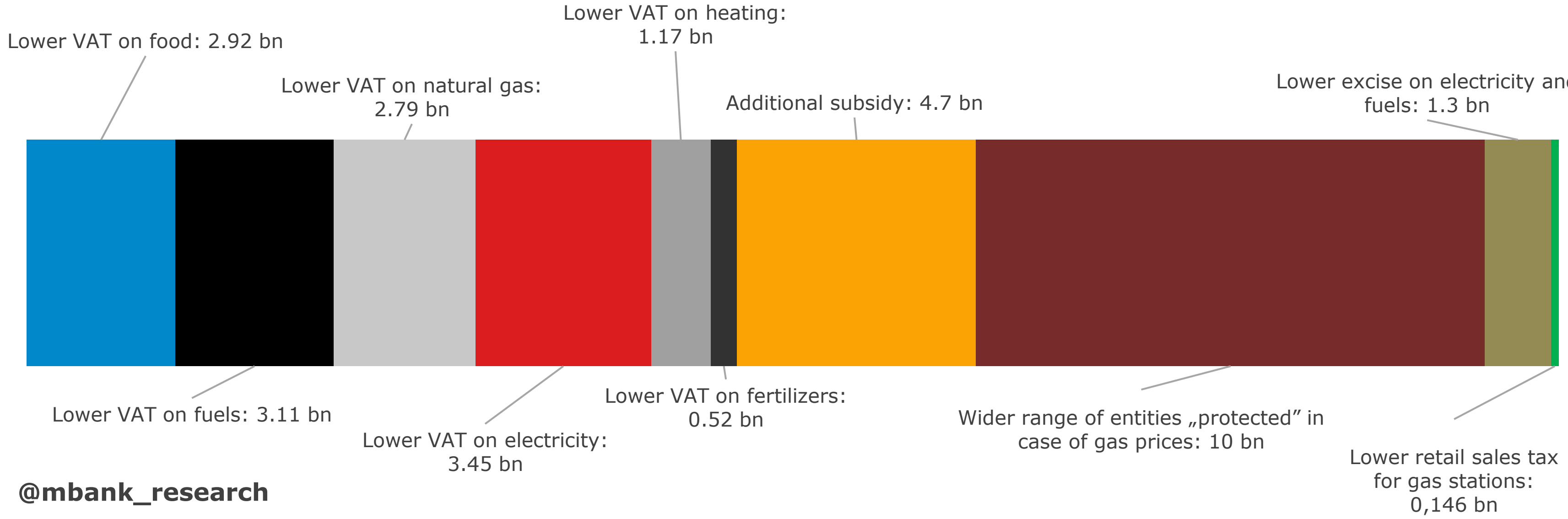
Prices of coal and natural gas (spot), 02.2021 = 100



Źródło: Bloomberg

- Gas prices are stabilizing. However, a real surprise for Polish consumers (and a wider group of agents) lies in the changed law on spreading price changes over time. Back in December, we expected that the difference between the cost of purchasing the raw material and the price approved by the regulator would be compensated in the next tariff. The method of calculating the compensation has changed in the meantime. Currently, the gas seller will receive a possible cost compensation in the settlement for 2022 (in other words, a transfer from the budget), but the tariff for 2023 will be set without any additional starting conditions.
- Higher electricity prices in next years are sure.

Fiscal policy: Total cost of anti-inflation shields is about PLN 30 billion (if it ends in July)

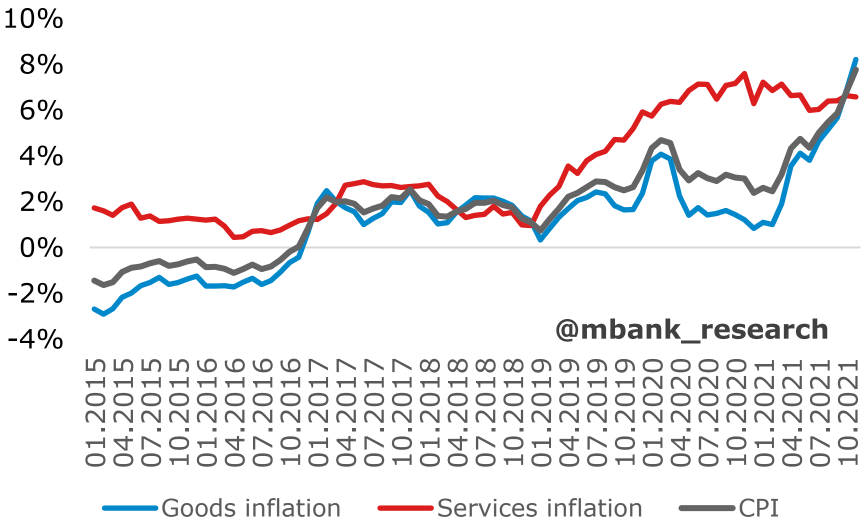


Source: own elaboration based on policy impact assesments and Ministry of Finance website

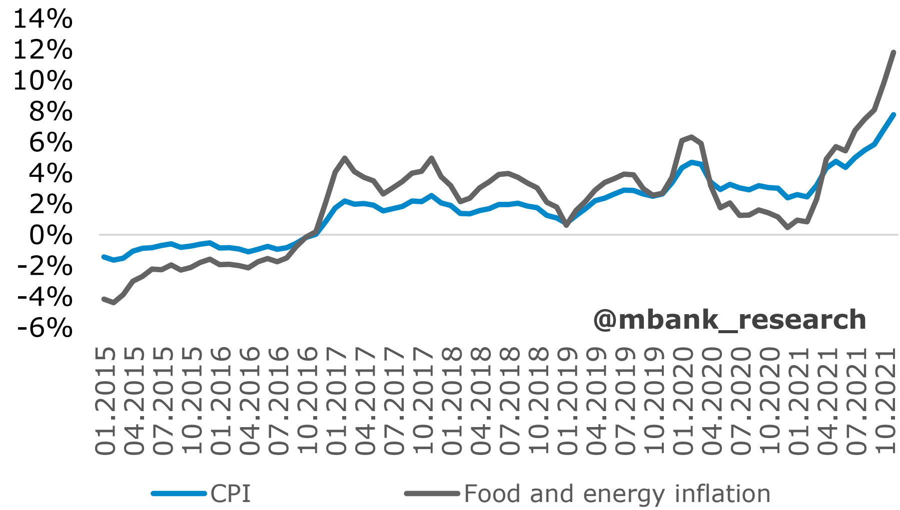
- We present costs for the period from January to July 2022. What next? In our opinion, the shield may be extended until the end of the year, at least in selected areas. The most eye-catching elements (VAT reduction on food and beverages) are a relatively low cost for the budget. Ending of shields will depend on the trajectory of inflation.
- State budget assumes PLN 30 bn. deficit in 2022. But it is already out of date, both in case of the revenues and expenditures. It was created with very conservative inflation assumptions. The government assumed CPI at 3.3% y/y in 2022 (GDP growth of 4.6% y/y, slightly above our forecast). Revenues will be much higher. There is also much more expenditures, which were not included in the budget: anti-inflationary shield (at least PLN 30 bn, we think there will be more), 14. pension, and higher valorization of pensions. 2022 will again be another year with fiscal expansion.
- High nominal GDP also implies lower relations of debt to GDP. There is no risk of approaching EU limit (60%), it is also distant from domestic ones (here, other forms of financing via special funds can be a safety buffer). Reaching debt limits seems to be unreal – we would need to see analogous scale of new debt as in 2020. In our opinion, debt to GDP ratio will be close to 53%.

The long-awaited inflation is now visible in every category

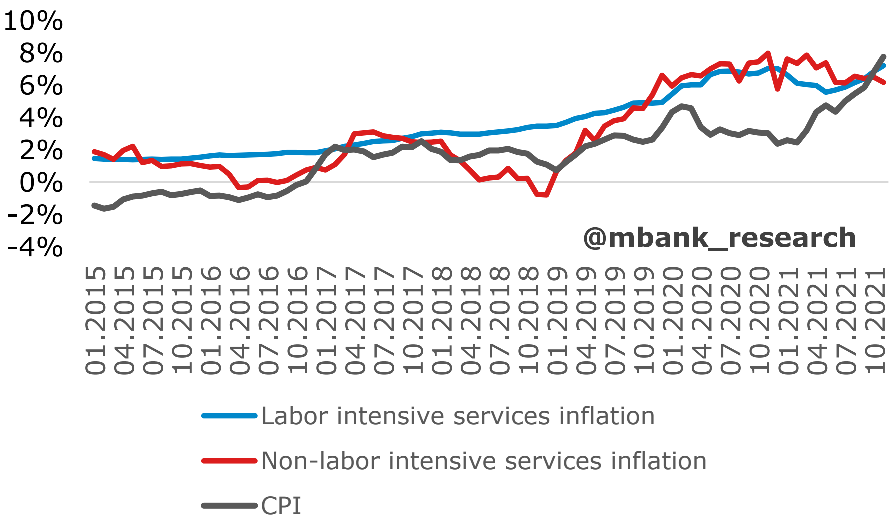
Goods and services



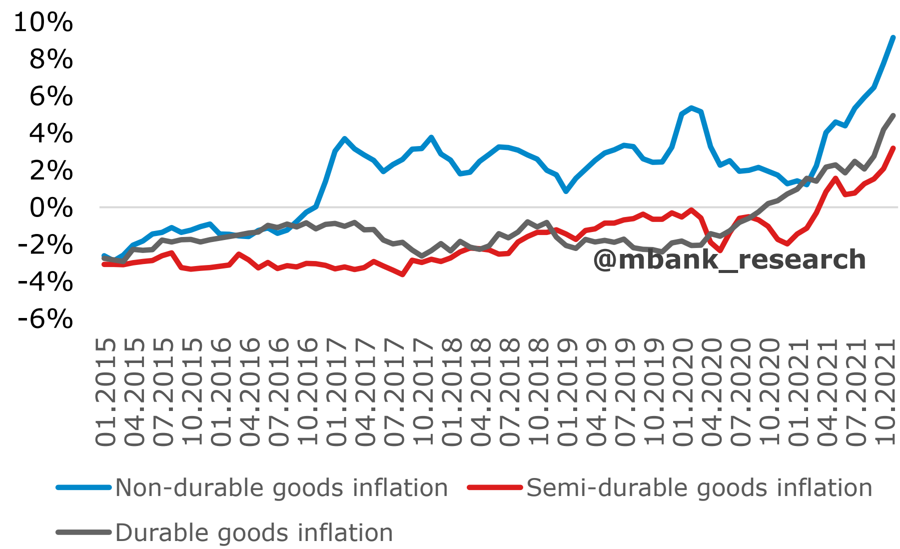
Food and energy



Labor-intensive and non-labor-intensive services

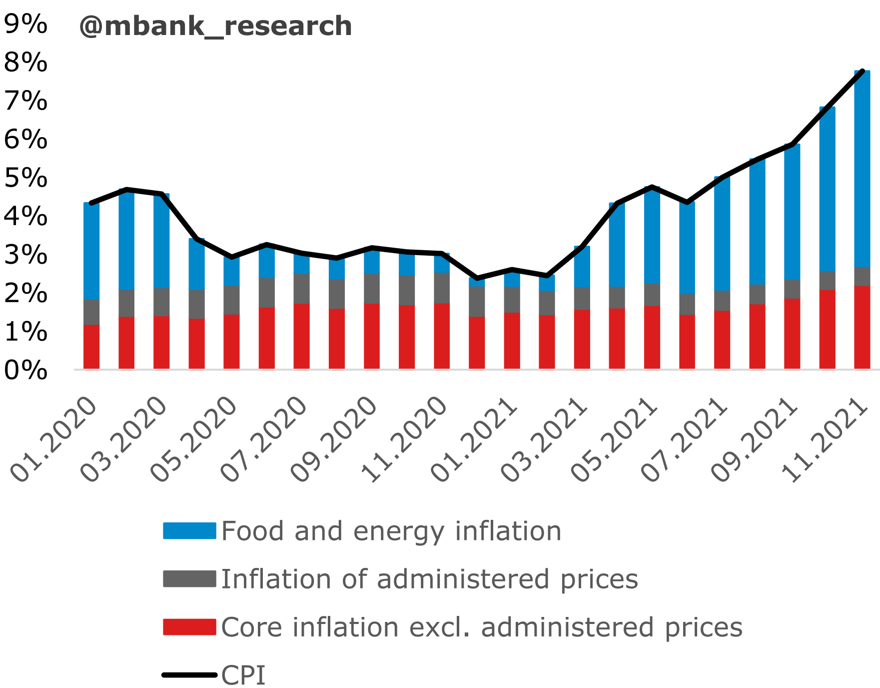


Goods



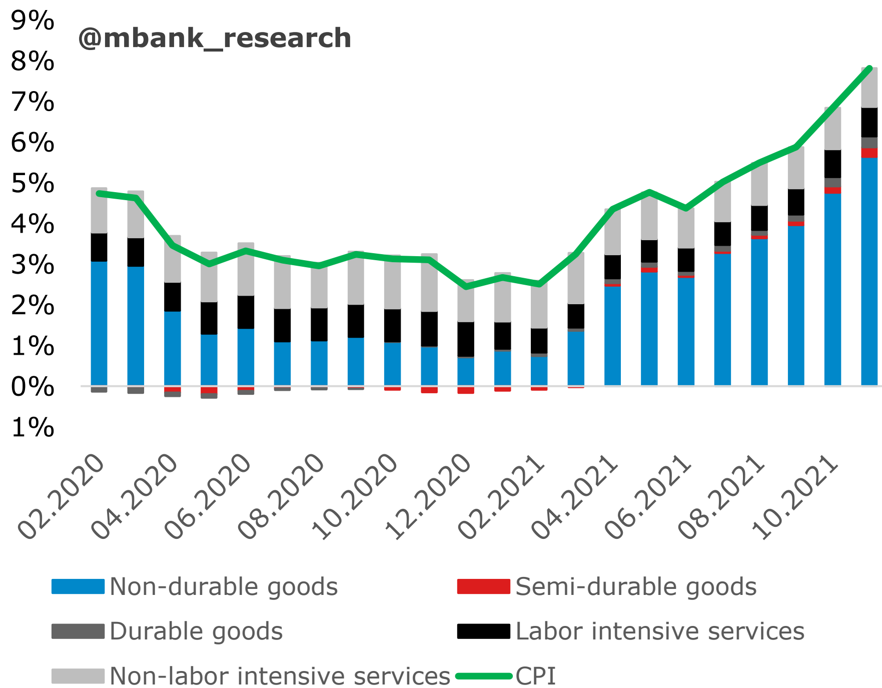
Inflation: Decompositions

Decomposition #1



Source own elaboration based on Statistics Poland data

Decomposition #2

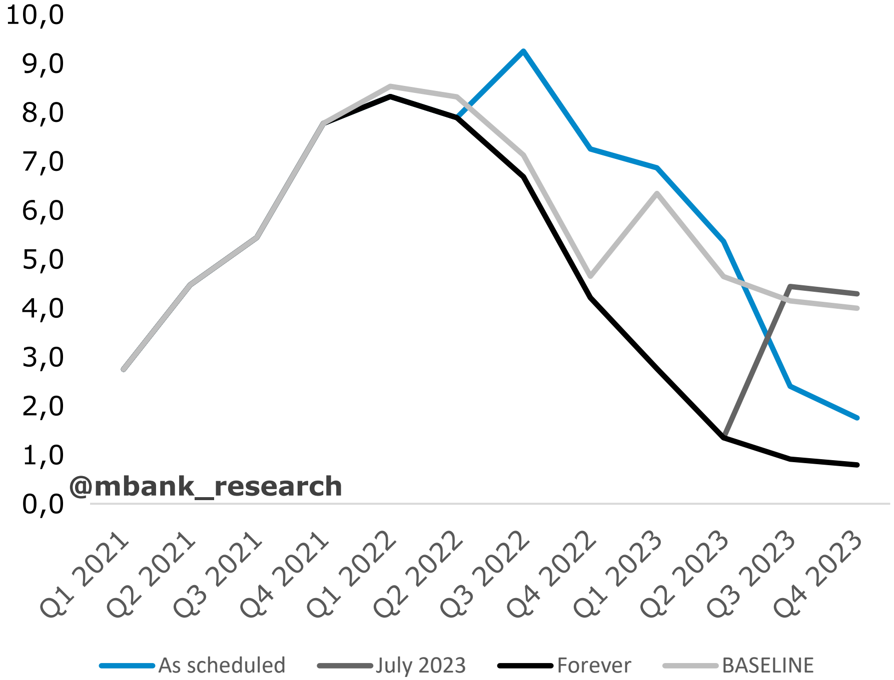


Source: own elaboration based on Statistics Poland data

- We can analyze the decomposition of inflation in a standard way (left graph) or in a slightly less orthodox way, based on the groups of goods and services (right graph). Both show the same conclusion. The acceleration in inflation in 2021 is mainly due to goods prices, where food and energy play the main role. The hypothesis that inflation is imported makes sense. Inflation dependent on domestic factors (core excluding administered prices, services) accelerated less, but also accelerated. However, this measure of inflation was already high before the pandemic (but it became more permanent).
- Which elements of inflation will stay for longer and which ones will disappear? As we wrote earlier (link), food prices are dynamically approaching a peak. Energy prices will be a permanent element of inflation in the coming years (link and link), but the increases from the turn of 2021/2022 will not repeat (and will generate the statistical base at the turn of 2022/2023). The prices of durable and semi-durable goods is also the story of an upcoming cyclical peak: omicron and the return of services will reduce the demand for goods, falling freight prices (link) will lower prices (at least they will reduce their growth), increased competition will lower the prices of goods and final products - especially that economy will grow slower. Increases in the prices of services will persist or even accelerate temporarily (labor market, price increases after investment process).

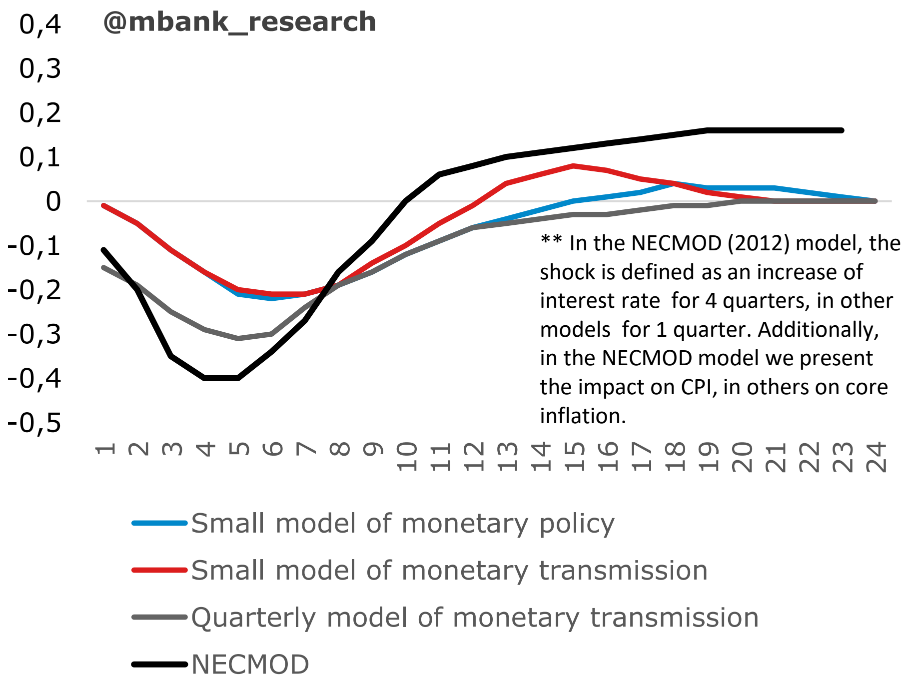
Inflation: (Anti-)inflationary shields: possible scenarios

Base effects dependent on dates of shields' ending *



Source: own elaboration

With of without shields, we will see effects of interest rate hikes**



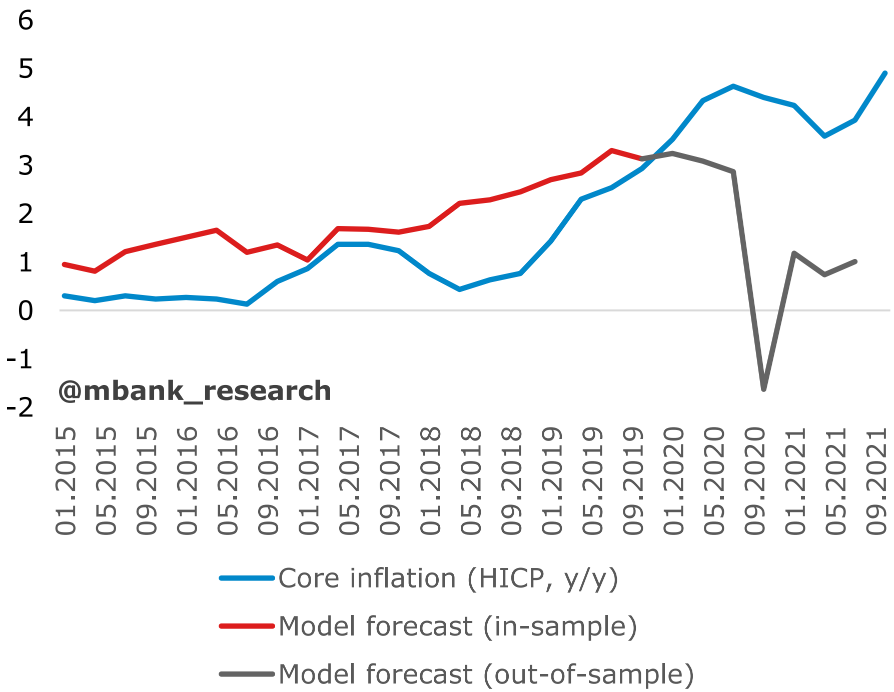
Source: own elaboration on NBP materials

- To the conclusions from the previous slide, we need to add the effects of shields and the effects of the previous and very likely future monetary policy decisions.
- Energy shield. We assume it will end at the beginning of 2023 (it does not have to be only one step).
- Fuels shield. Here also we assume it will end at the beginning of 2023. But it is possible that since the mid-year, we will see fuel prices allowing earlier ending of the shield (but it is not our baseline scenario).
- Food shield. We assume it will end at the beginning of 2023 (also it does not have to be only one step). Because of the heterogeneity of the products, we assume that it will be an element of the shield, which will result in (much) higher final product prices than in alternative world without it (asymmetries + net price increases, also in other elements of the basket not included in the shield).

* We only want to show how large base effects are generated by inflation shields. The base scenario is changed according to the *ceteris paribus* rule (only the shield ending dates change). We are considering an ideal world in which the translation of tax changes into prices is 1:1.

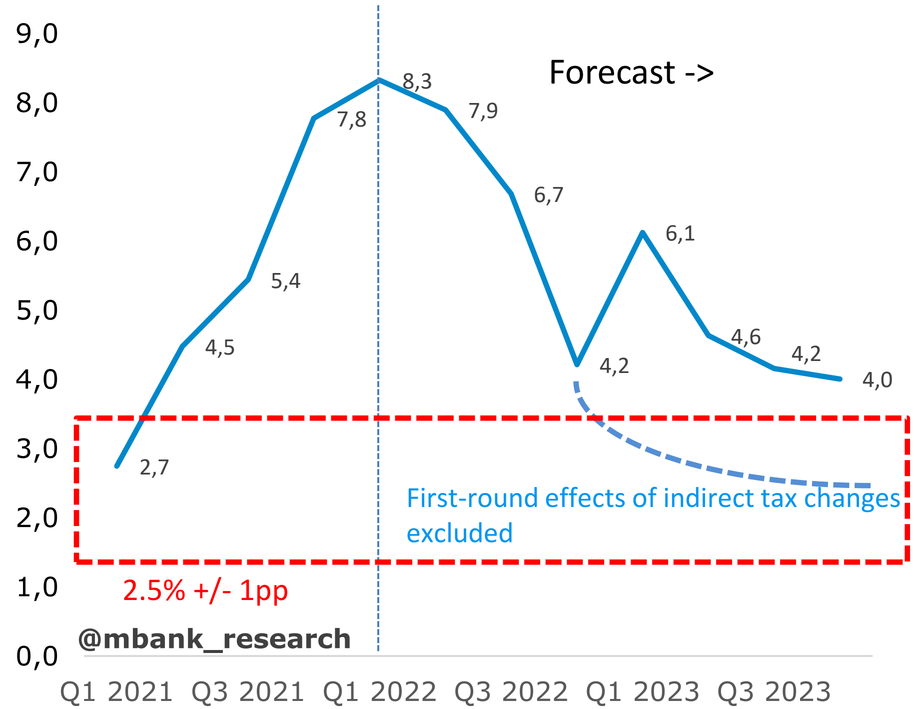
Inflation: Forecast for 2022 is 6.8% y/y (4.7% in 2023). Risks to the upside.

Trivial model on core inflation missed a lot. Why?



Source: own elaboration based on Eurostat data

Inflation forecast: base scenario (% r/r)



Source: own elaboration

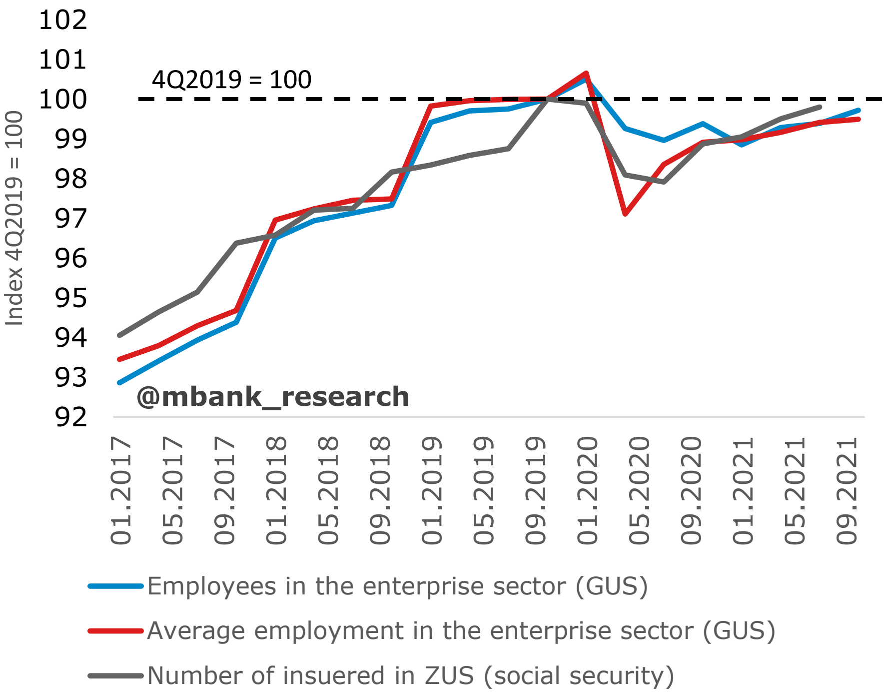
- Inflation shields are a fiscal expansion in an already (over?)heated economy. However, we believe that their effect will not be significant enough to permanently change the trajectory of core inflation. The risks accumulate in the short term. We expect core inflation readings above 6% in 2022, but in 2023 it will be significantly lower (the acceleration at the turn of 2021/2022 has a very large temporary element related to the demand for goods, which will not be repeated in the following years), and it will be overlapped by the effects of slowdown in goods inflation of food, energy and fuels.
- Shields will not end as planned. Rather, we are waiting for their extension till the beginning of 2023. An earlier termination would only be possible in the case of significant downward inflation surprises from February to July 2022. If it happened, the date the end of the shields would not matter, because all market participants (including the central bank) would consider this situation as a process of rapid disinflation.
- Central banks tend to analyze inflation without fiscal effects (they „wear special glasses”). One can look at inflation net of the first-round effects of changes in indirect taxes. Higher indirect taxes is a fiscal tightening, and in this case the increase in inflation is generated arithmetically, artificially.

Inflation: Risks

Short-term (2022 perspective)	Long-term (2023+ perspective)	
Secondary effects of price changes and change of relative prices (everywhere, also fuels and food) Broken supply-chains Food and fuels prices Wage-price spiral (no labor supply) Fiscal stimulation Omicron (China supply) War in the east	(Anti-)inflationary shields Low labor supply resulting in pressure on services prices More energy price increases Structural change of the global economy: China not focusing on exports	UP
(Anti-)inflationary shields (arithmetically) Luck	Supply-chains restored, inventories War in the east - migration End of pandemic Fuels and food prices (supply!) Overinvestments in global economy, too high production capacity, competition providing to lowe prices	DOWN

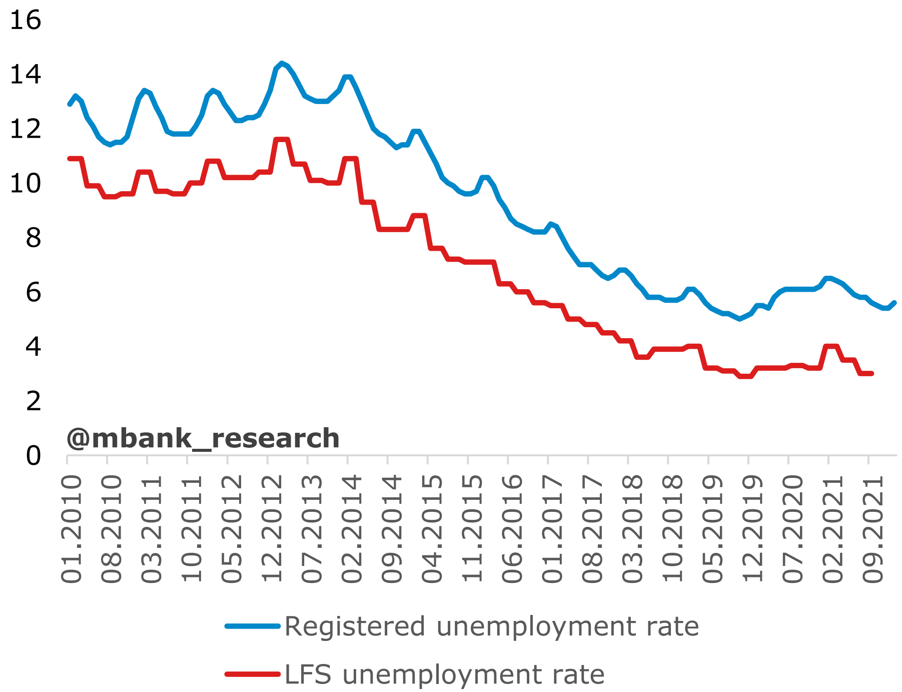
Labor market: High demand, closing the gap

Employment on the rise, regardless of measure



Source: own elaboration based on Statistics Poland and social security data

Unemployment rate just looks good

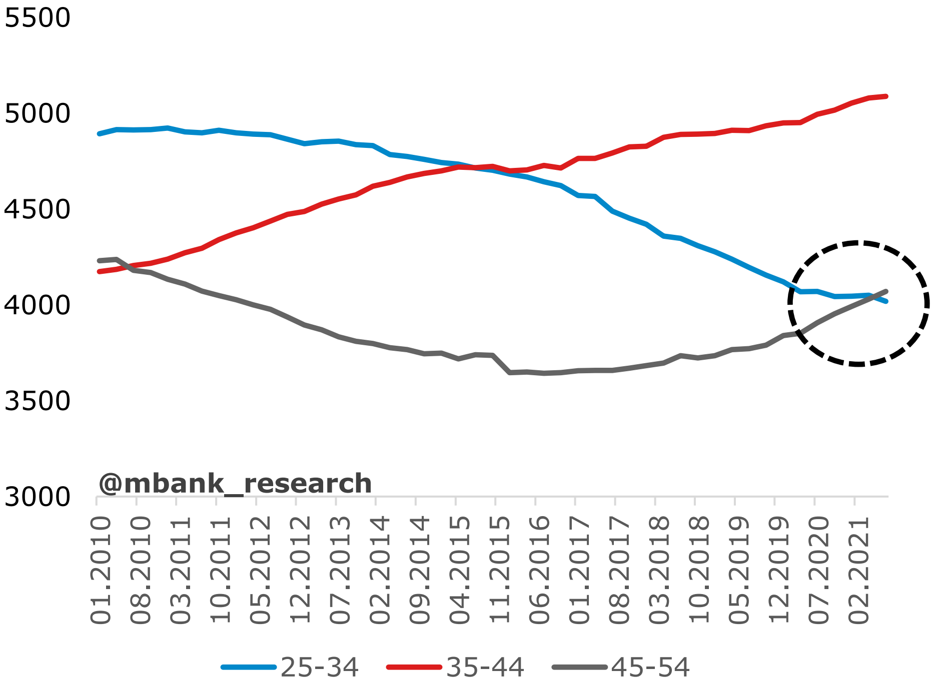


Source: own elaboration based on Statistics Poland

- Employment is at pre-pandemic level. January employment was close to the level to the one from February 2020. Social security data show an even better picture of the labor market (data for Q3 is clearly higher, we do not know data for Q4 yet). Difference between those two data sources may be the result of changes in the employment structure. The number of civil contract employees reached pre-pandemic levels already in Q3. The number of entrepreneurs was unaffected by the pandemic - the trend was still upward here. Low unemployment rate is optimistic too.
- These trends will continue. The relatively high number of vacancies and historically good employment plans (the latest NBP Monitoring) will help the labor market. The high index of planned employment (the difference between the percentage of companies planning to increase employment and those planning reductions) is common especially in the case of transport, manufacturing and construction (also data from NBP). Employment still has some place for catching up (in terms of distance from the trend), and economic growth will not be a problem here (forecast GDP growth is still solid).

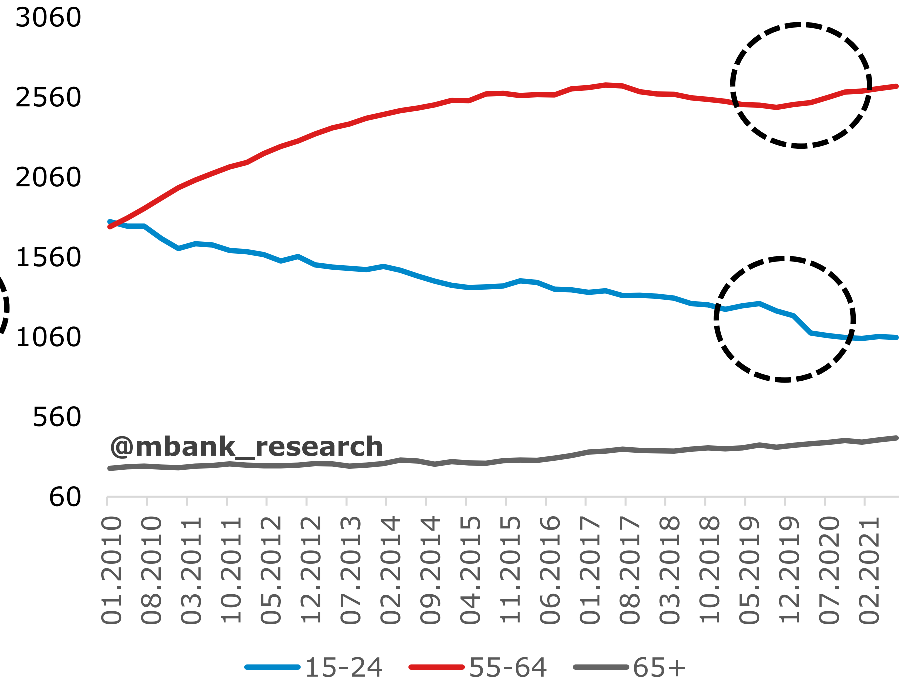
Labor market: Trends in economic activity

Labor active persons (in thousands) #1



Source: own elaboration based on LFS

Labor active persons (in thousands) #2

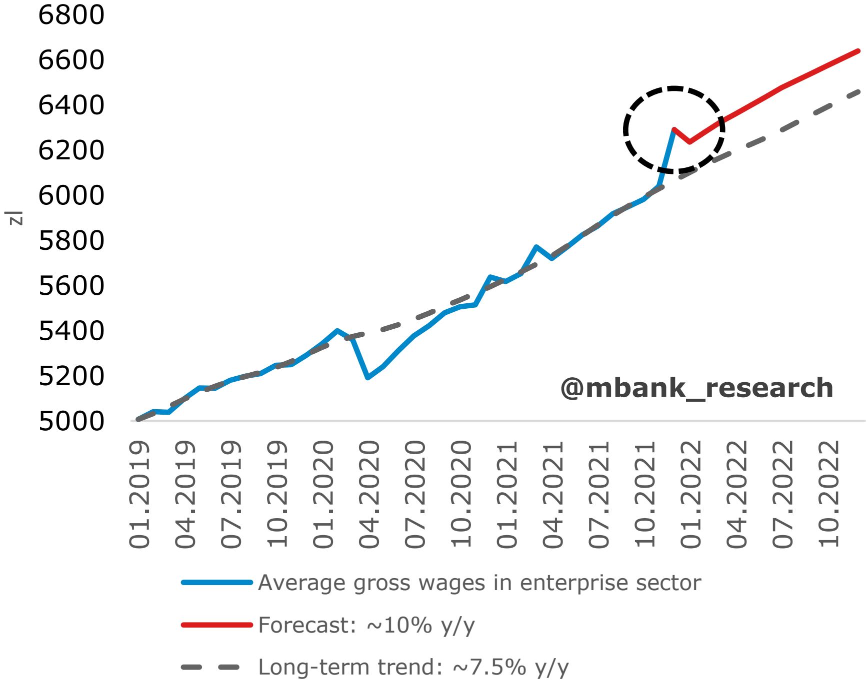


Source: own elaboration based on LFS

- High demand, rising wages and changes in the organization of work did miracles in the labor market activity. Activity trends have been quite stable so far (see graphs above). But since the pandemic that the decline in activity stopped in the 25-34 group (without a pandemic, we would probably be 100-200 thousand lower). The same can be said about the group 55-64 (another 100-200). Perhaps this is not the end of positive adjustments. Unexpectedly, the trend of activity in the group 15-24 has shifted downwards. Here still some pandemic effects can play a role (home office at universities) The re-activation of about 100,000 people in this group seems to be easy.
- We do not consider migrants here. Analyzing the trends, we also need to remember, that without pandemic, there would not probably be a retreat in the labor supply. Theoretically, the starting point for the potential labor supply is set high (positively for the market equilibrium). The problem is that many people probably was not able to work full-time, and the rest worked overtime. The realization of goods production from deferred consumption demand resulted in additional demand for labor. In our opinion, it also inflated the wage statistics.

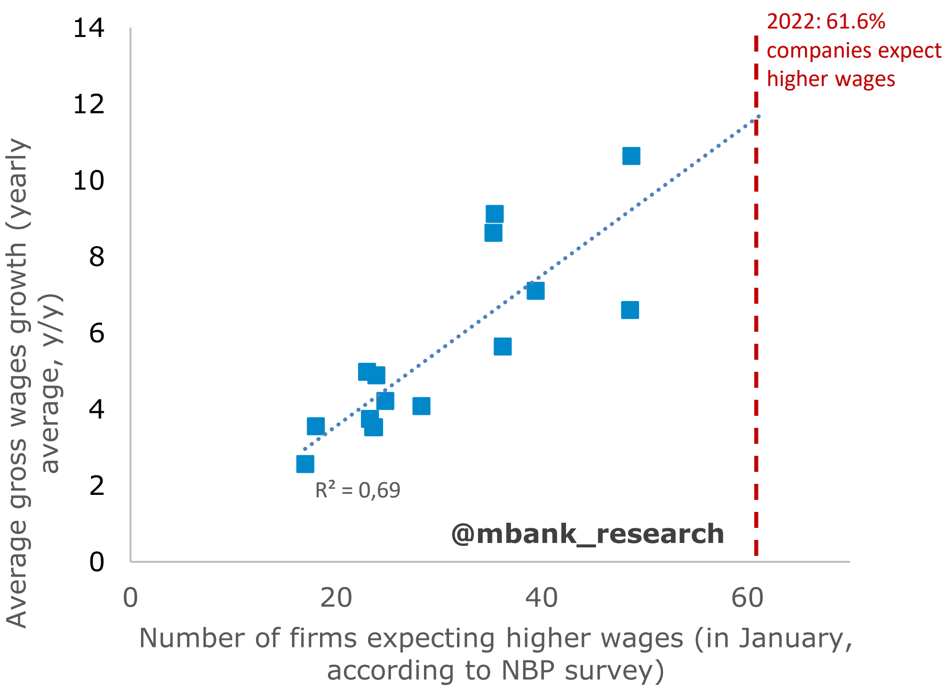
Labor market: Another year with high wage growth

Where is trend on wages?



Source: own elaboration based on Statistics Poland data

Should we be scared by wage expectations?



Source: own elaboration based on Statistics Poland and NBP data. We excluded data points for 2020.

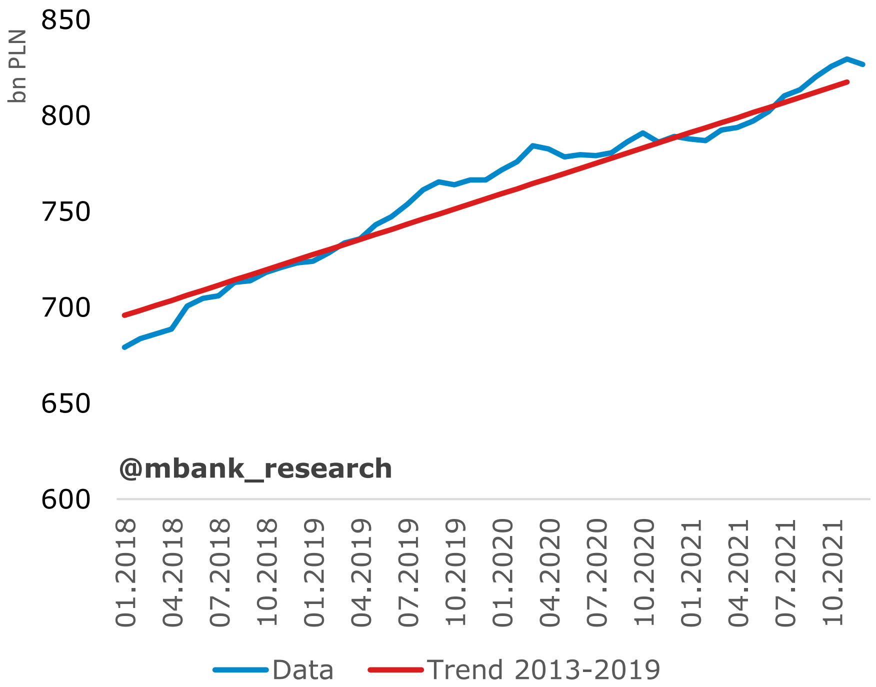
- This year we should see continuation of high wage growth. But high does not mean the average 11% yearly dynamics as in December. In our opinion, December was an anomaly resulting from the shifting some extra payments, not a signal of a permanent change in the trend. But on the other hand, we think that wages will grow faster than the trend from previous years would indicate. High percentage of companies forecasts wage increases. The percentage of companies declaring an increase in wage pressure is the highest in history. Also, the declarations of the forecasted wage increase is higher (data from the NBP). In our opinion, around 10% of wage growth is a real trend for this year.
- High wage dynamics is a result of still solid (but slowing down) GDP growth and the overall condition of the labor market. High demand for labor helps. There is also a pressure on higher wages because of tax changes (PIT). In the longer horizon labor supply and lower demand for goods can ease this pressure.
- We can not forget about inflation. 60% of firms indicate it as a key factor in decisions of increasing wages. Anti-inflationary shields will not change the wage expectations. Workers have already seen higher prices and smoothing the inflation path does not matter now.

Labor market: Risks („up" means higher wages)

	Short-term (2022 perspective)	Long-term (2023+ perspective)
UP	Higher wage growth because of inflation and PIT changes No labor supply (sick leaves, quarantines) Momentum and execution of higher wages previously negotiated	Demography Structural change after pandemic (will we produce the same things and in the same way?) Constraint on number of migrants (no more supply, perhaps Poland is not the final destination coutry)
DWON	Real effects of interest rate hikes (lower employment, higher unemployment) War in the east - migration Real effect of high wages (lower demand for work, automatization) Non-obvious effects of inflationary pressure	Migration (economic reasons, war in the east) Structural change after pandemic (will we produce the same things and in the same way?)

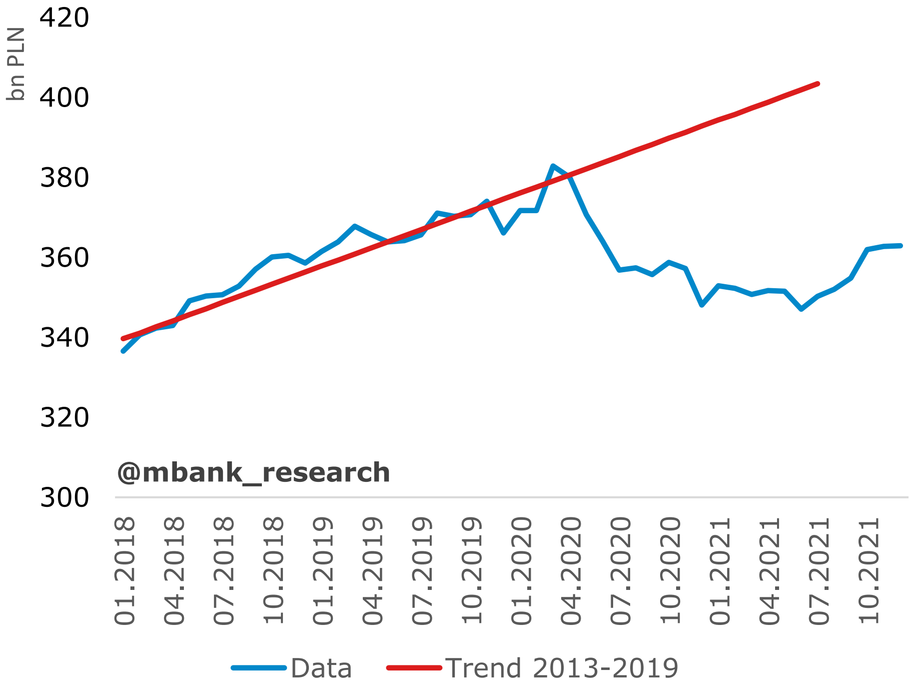
Consumption boom ends, now it is time for firms

Households' loans debt



Source: own elaboration based on NBP data

Corporate loans debt

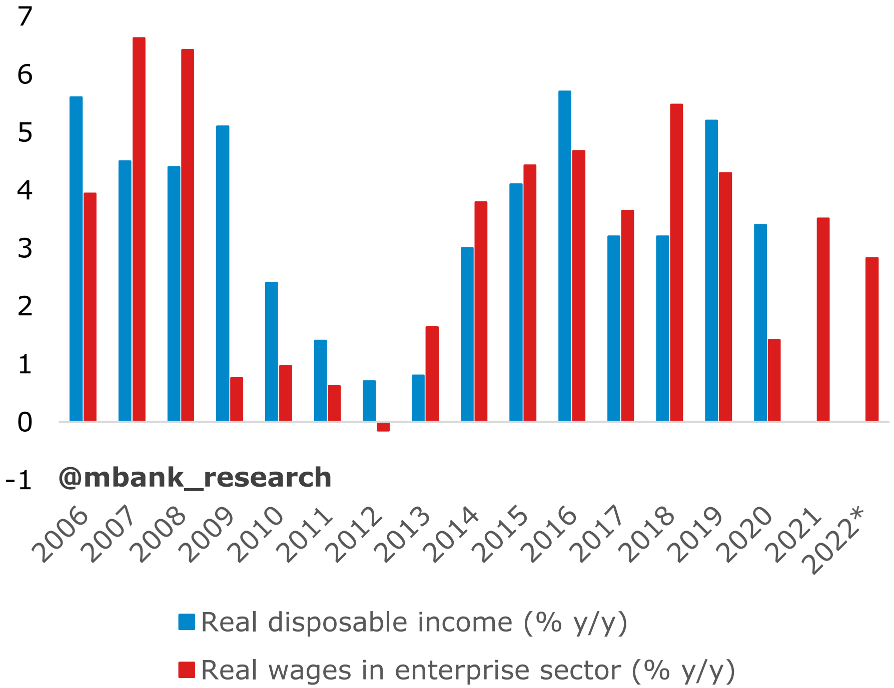


Source: own elaboration based on NBP data

- Throughout 2021, we observed very high dynamics of consumer and mortgage loans. At the end of the year, these processes lost momentum, which is consistent with the higher interest rates and lower consumer optimism (also related to high prices). In 2022, the creation of credit for households will be significantly lower, which automatically indicates less support for the real economy.
- Corporate loans have been far from the trend for over the last 2 years. It was the effect of a reduction in investment needs, additional liquidity and very good financial results. In the case of corporate loans, we only saw a signal of what will happen in the next year or two. Private investments will continue, so the investment loans will start. It is the less inflationary part of the demand in the economy that builds up productive capital in the future.

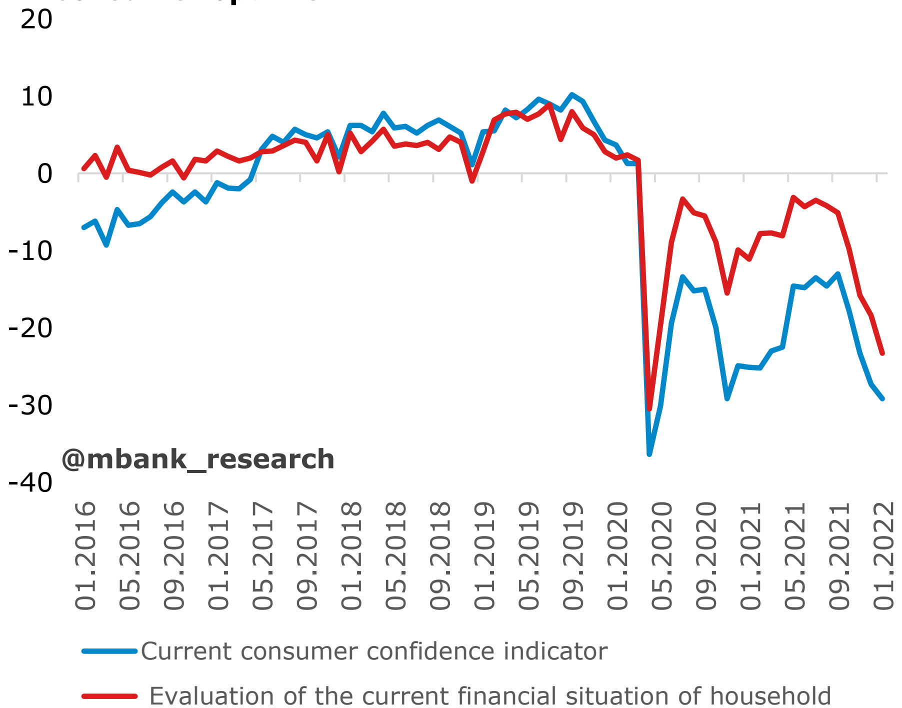
Consumption. Slowdown!

Real disposable income



Source: own elaboration based on Statistics Poland data

Consumer optimism

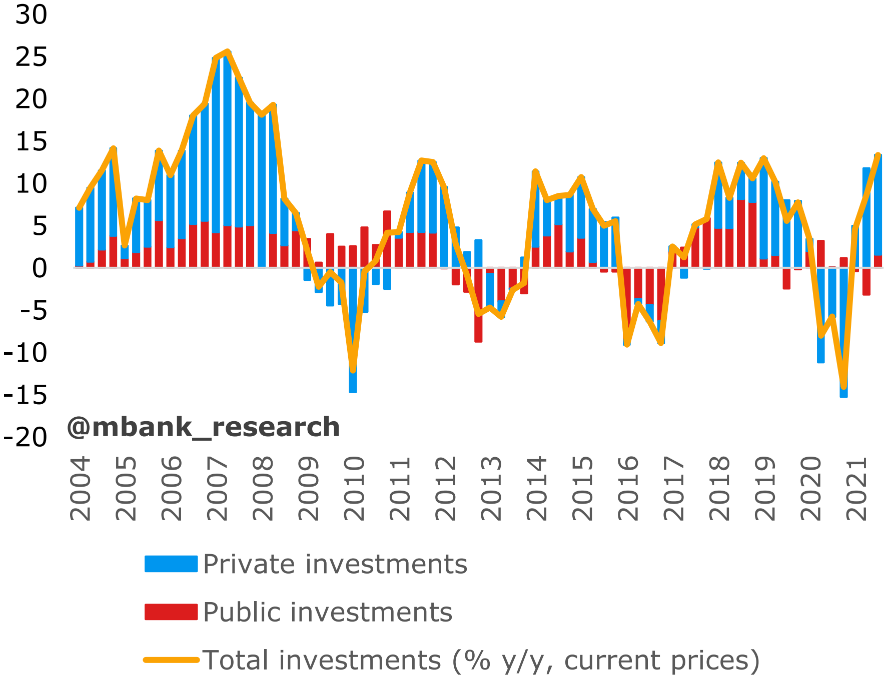


Source: own elaboration based on Statistics Poland data

- High wage growth (see here) and high inflation (see here) mean that, in real terms, disposable income will increase at a slower pace than in 2021. However, it will not be as weak as it did in 2012/2013, when we saw a recession in consumption.
- But consumer sentiment is almost as weak as in 2012-2013. It can be explained by sharp acceleration of inflation and changes in the macroeconomic environment. This is likely to be overlapped by the negative (in terms of the introduction and lower first salaries) effects of the Polish Deal. Hence, we expect a significant slowdown in consumption at the beginning of 2022. The next quarters (in q/q dynamics) will be better. However, the arithmetic itself suggests that in terms of annual dynamics, 2022 will still be quite good (4.8%), and 2023 will be weak (2.1%).
- But income is not everything. Consumers still have a large savings buffer (cash and deposits) to smooth consumption over time. So far, they rather did not want to use it (we have not seen discrepancies between consumption growth and income). An interesting aspect for 2022 is also the demand for cars, which will rebound with the expansion of the sales offer. Perhaps these are the only durable goods for which demand will increase.

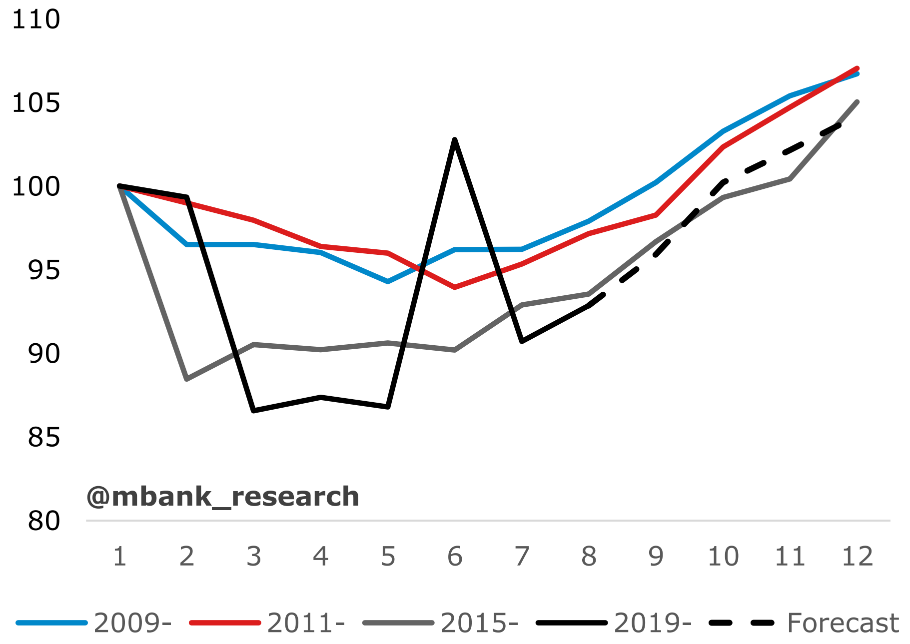
Fixed capital formation. Private cycle is already here, we are still waiting for public investments

Investments dynamics (% y/y)



Source: own elaboration based on Statistics Poland and Eurostat data

Investment cycle in previous years, highest reading before declining = 100

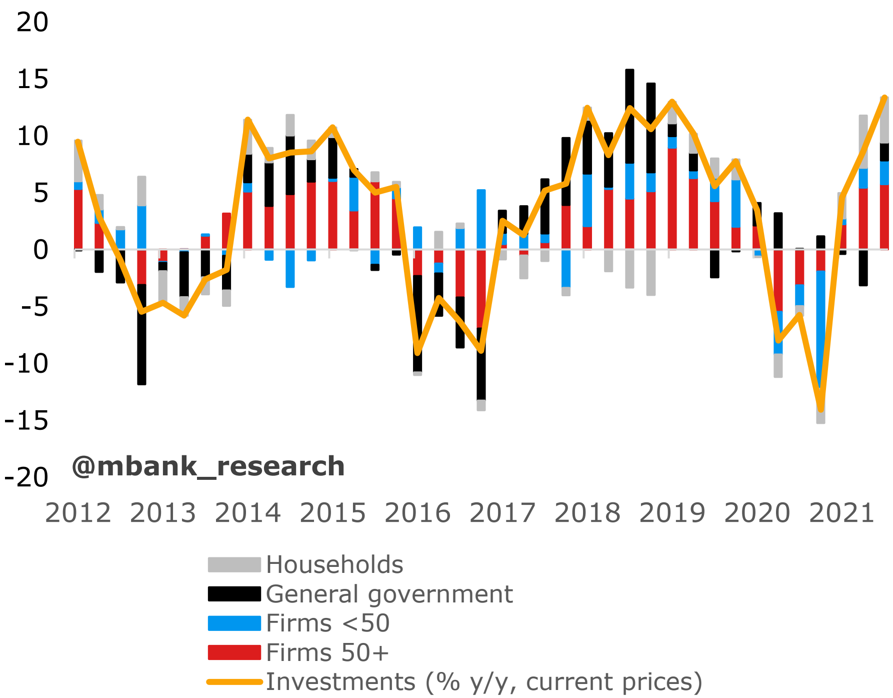


Source: own elaboration based on Statistics Poland data and our forecast

- Rebound in investments was driven mainly by private investments. However, in Q3 (and probably also Q4) we noticed positive contribution from public investments. In the following quarters, further acceleration of public investment can be expected. Its pace, however, depends mostly on the approval of the National Recovery Plan (we assume that an agreement will be reached). Governmental declarations to continue investments, regardless of the inflow of EU funds should be considered as a temporary solution (while awaiting funds), but not as equal to EU funds. In this case, a lot of investments will simply not start (even if they can be financed), because the priorities will change.
- Our forecast of the investments path does not differ much from the ones we observed in previous cycles. (except for a one-off increase in Q1 this year).
- But the growth rate of private investments will be limited because of interest rate hikes. The latest published estimates from the NECMOD model indicate that a rate hike by every 100bp. subtracts more than 1 pp from the y/y investment dynamics.

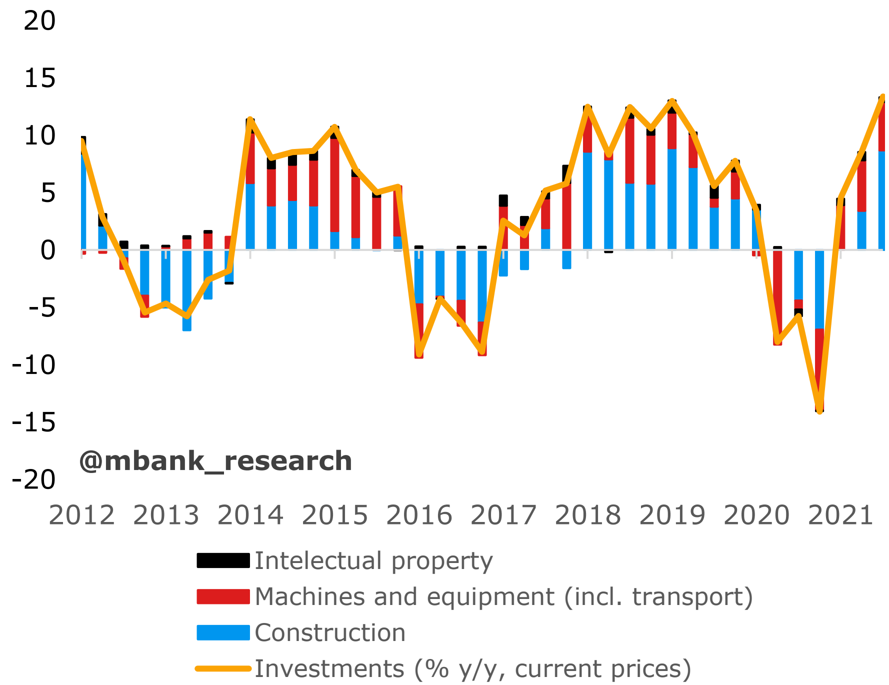
Fixed capital formation: Decompositions and expectations

Who invested?



Source: own elaboration based on Statistics Poland and Eurostat data (for firms 50+ we took data from investmetn outlays)

Where invested?

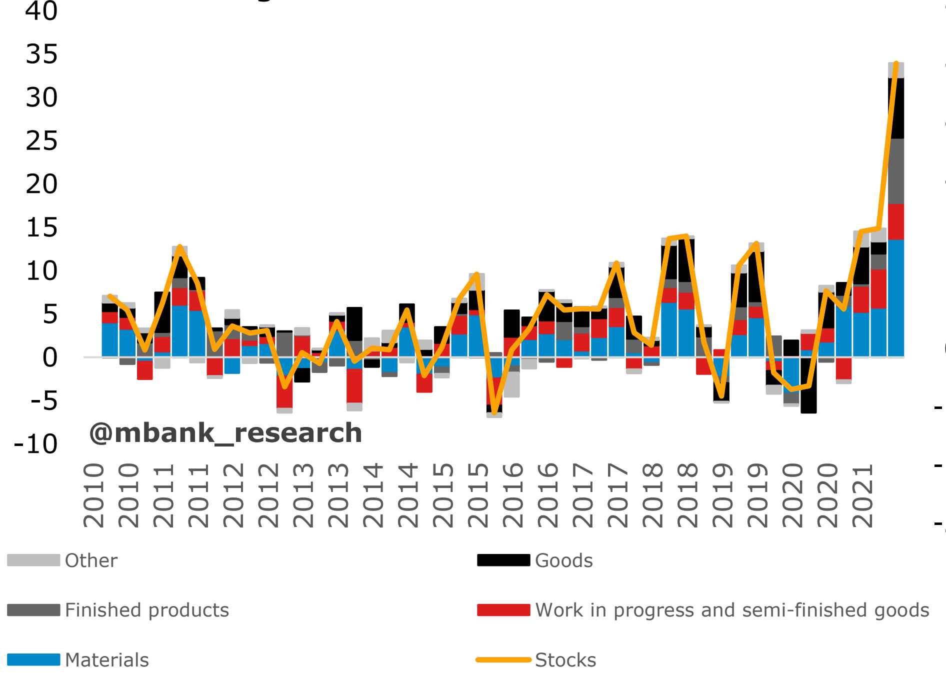


Source: own elaboration based on Statistics Poland and Eurostat data

- The current rebound in investments is mainly due to companies 50+ and here the investments forecast is the hardest task. The high level of capacity utilization supports higher investments. In addition, companies declare high investment plans. Tight labor market will be another incentive for automation. An increase in energy prices may have a similar effect (investments on energy-saving technologies). But the rate hike mentioned in the previous slide is a main downside factor. In addition, there is still high uncertainty. The trajectory is clear for at least 2022. Later it will be harder when private investments will be at the end of the cycle (plus the peak of the effects of interest rate hikes).
- Households' investments was the second group with the highest contribution in recent quarters.. Here we expect a slowdown due to interest rate hikes. The housing sector is heated and increases in prices and rates will choke demand.

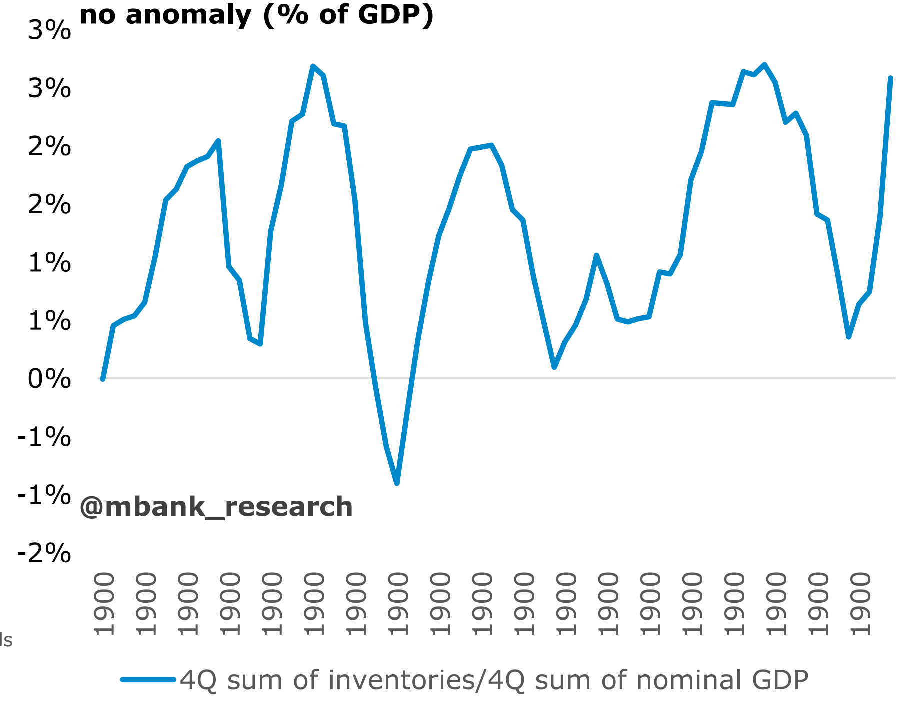
Inventories: It should not slow down the economy, but we keep it as a risk

The increase in fixed current assets (in PLN billion) seems to be large



Source: own elaboration based on Statistics Poland data

But when analyzing the national accounts data there is no anomaly (% of GDP)

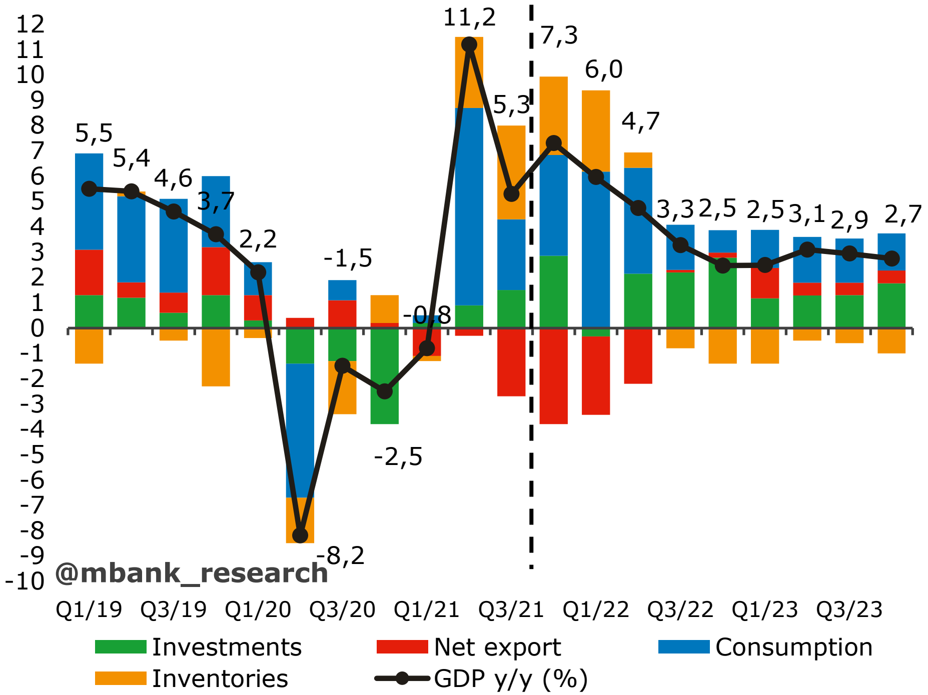


Source: own elaboration based on Statistics Poland data

- The nominal increase of inventories is impressive, but their changes (based on national accounts) are quite normal (it is a standard, cyclical fluctuations). Until the third quarter, there was no excessive inventories here. In fact, companies have reported insufficient inventory levels and are probably still try to stockpile.
- Reasons, for which inventories are still build-up, may be temporary. Thus, if the process intensified at the turn of the year (we do not know the data yet), companies may be left with an excessive amount of inventory. This would mean a risk to GDP growth. However, in our opinion, this risk is not significant, as only a part of inventories may be considered excessive.

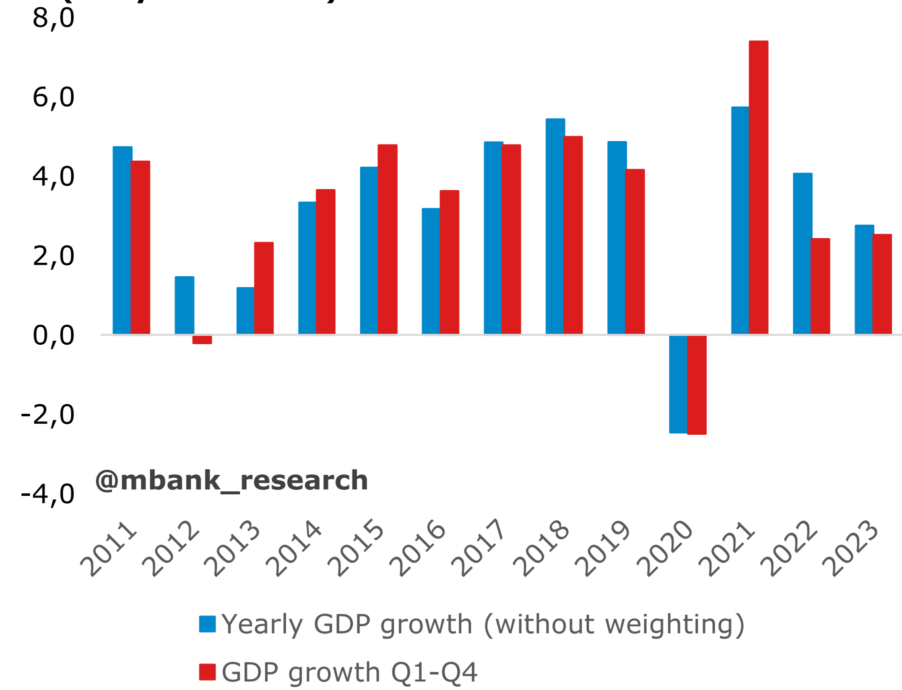
GDP: Slower. Risk in 2022 up, risk in 2023 down

GDP forecast



Source:own elaboration

4Q dynamics has a significant impact on yearly GDP (carry-over effect)



Source:own elaboration

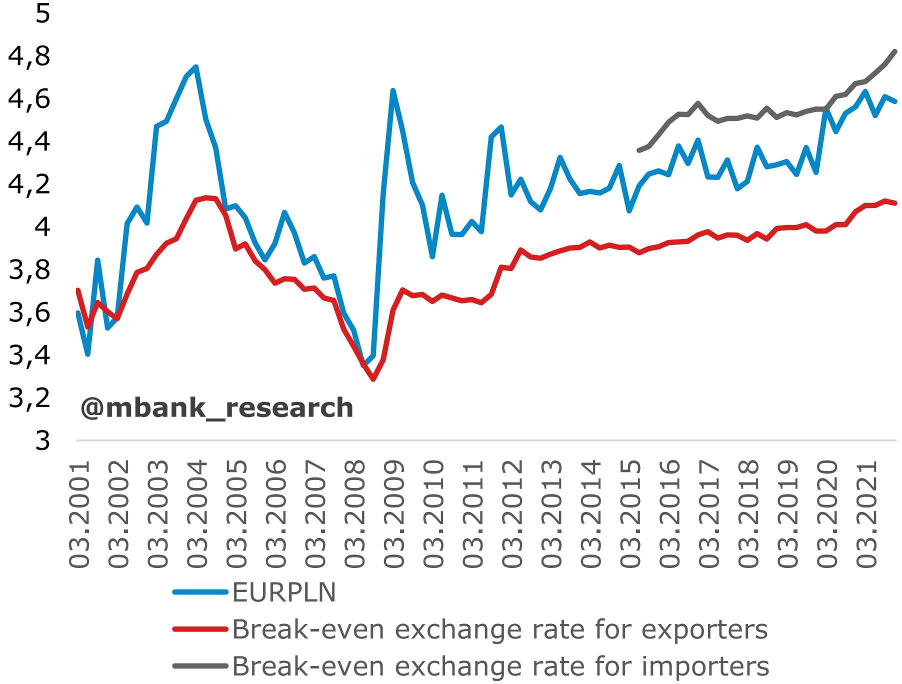
- We forecast 4.1% y/y in 2022 and 2.8% y/y in 2023. The forecast for the 2023 is much lower than the consensus.
- In 2021 the annual GDP growth was lower because of weak 4Q 2020, now the 2022 annual GDP growth is higher because of good 4Q 2021. Such effects appear when GDP growth is unequally distributed among the quarter (with large shocks in quarterly data).
- The investment path we assumed does not differ from the cyclical standard. However, a lot depends on EU funds (link). The economy is slowing down, and global inflation should soon reach a turning point, which will help net exports (link). Inventories will not be a problem for growth in 2022 and 2023, although one mast remember that when the situation in the supply chains begins to improve, companies may conclude that high inventory levels (optimal in a different regime) were a mistake. More about inventories here.
- Finally, a tightening of monetary policy will have an impact on the real economy. The highest negative impact of interest rate hikes will appear at the turn of 2022 and 2023 and will be quite permanent (until further cuts).

GDP: Risks – a whole spectrum

	Short-term (2022 perspective)	Long-term (2023+ perspective)	
	Spirit of Polish economy: 5% growth in 2022 The private investment cycle continues rapidly despite rising interest rates High wage growth + inflation declining in 2022 = continuation of cosumption boom No effects of interest rate hikes Additional valorization of pensions, 14. pension, anti-inflationary shields	Quick adaptation (investmets) to higher energy prices Labor costs rise globally, Poland will not lose its competitive Advantage here Efficient replacement of labor by capital, multiyear investment cycle	UP
	High energy prices (bankruptcies) Non-linear effects of interest rate hikes War in the east Increase of savings rate Comeback of pandemic Laged National Recovery Plan Negative perception of Polish Deal Higher than expected price increases resulting in change in consumers behavior	No National Recovery Plan A clear cooling down of the residential real estate market Difficulty in competing on labor costs in international services High energy prices, unstable energy supplies, and discouragement of foreign investment The return of austerity in global fiscal policy The return of *secular stagnation* Too fast tightening of monetary policy by central banks	DOWN

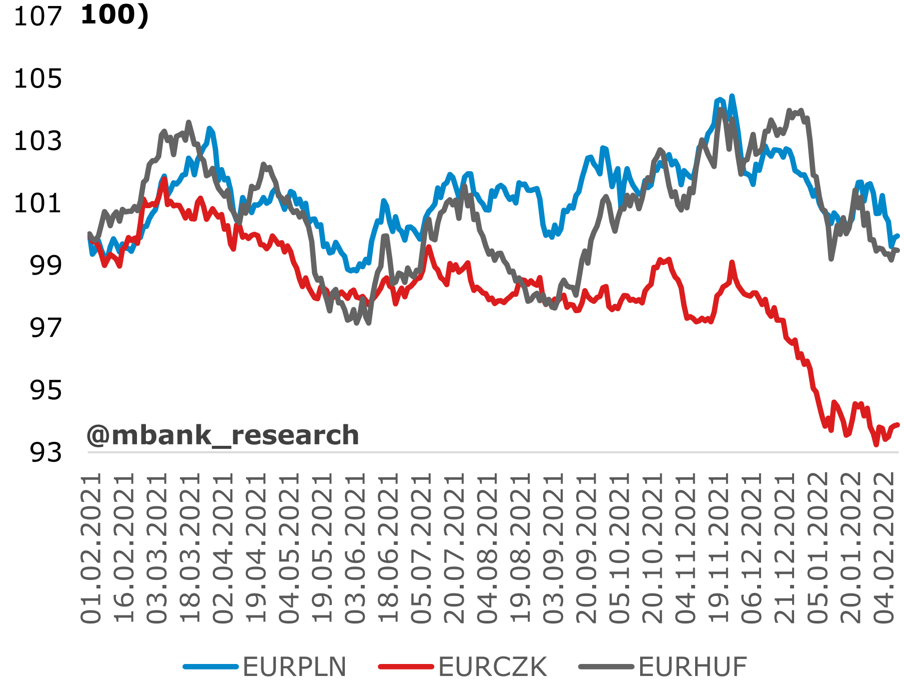
Złoty – stronger, but no too much (4.40)

Break-even rate for exporters creeping higher



Source: own elaboration based on Bloomberg and NBP data

Regionally too close to forint moves to believe that relations with the EU are insignificant (02/01/2021 = 100)



Source: own elaboration based on Bloomberg and NBP data

- The zloty remains at levels favorable to exports. Throughout the most part of 2021, MPC claimed that the weak zloty supported the economy. In recent months, this view has evolved (drastically). The MPC is now doing everything to strengthen the zloty: interest rate hikes, raising the reserve rate, maintaining hawkish rhetoric and pricing high interest rates in the future, discussions about exchanging EU funds on the market (and not at the NBP). The effects of change in rhetoric and actions are visible. The peaks around 4.70 are behind us and currently the EURPLN is at 4.50.
- Further appreciation is possible but not automatic. The zloty will certainly be supported by falling inflation (although investors must see the peak first), higher interest rates (these are already in) and the mobilization of EU funds. Better relations with the EU would also be considered positively. So far, investors are rather pessimistic on this issue. We can see it in high convergence of the zloty exchange rate with the forint (despite divergent economic results of both countries). Among negative factors there is also weaker GDP growth, current account, monetary tightening in the US and Europe. We do not see any automatic negative translation into the PLN in terms of monetary policy (a lot is already in prices and the zloty is still stable).

mBank forecasts

		2015	2016	2017	2018	2019	2020	2021	2022	2023
GDP y/y	%	3.8	3.1	4.8	5.4	4.7	-2.7	5.8	4.1	2.8
Domestic demand	%	3.3	2.3	4.9	5.6	3.5	-3.3	8.2	5.4	2.1
Fixed capital formation	%	6.1	-8.2	4.0	9.4	7.2	-8.4	6.8	8.3	7.7
Private consumption	%	3.0	3.9	4.8	4.3	4.0	-3.0	7.0	4.8	2.1
Inflation CPI (average)	%	-0.9	-0.6	2.0	1.6	2.3	3.4	5.1	6.8	4.7
Inflation CPI (end of period)	%	-0.5	0.8	2.1	1.1	3.4	2.4	8.6	3.5	3.9
USD/PLN (end of period)		3.92	4.19	3.48	3.74	3.79	3.73	4.04	3.86	3.67
USD/PLN (average)		3.82	3.92	3.70	3.65	3.84	3.92	3.94	3.95	3.74
EUR/PLN (end of period)		4.26	4.40	4.18	4.29	4.25	4.56	4.59	4.40	4.40
EUR/PLN (average)		4.19	4.33	4.24	4.29	4.29	4.52	4.59	4.43	4.40
CHF/PLN (end of period)		3.92	4.11	3.57	3.81	3.92	4.22	4.42	4.17	4.13
CHF/PLN (average)		3.94	3.99	3.79	3.73	3.91	4.22	4.25	4.21	4.15
CHF SARON (average)	%							-0.70	-0.68	-0.31
WIBOR 3M (average)	%	1.71	1.71	1.73	1.71	1.72	0.47	0.80	3.95	4.08
WIBOR 6M (average)	%	1.76	1.78	1.81	1.79	1.79	0.50	0.91	4.03	4.16
EURIBOR 3M (average)	%	-0.04	-0.29	-0.33	-0.32	-0.36	-0.46	-0.55	-0.49	0.48
EURIBOR 6M (average)	%	0.03	-0.19	-0.30	-0.32	-0.37	-0.39	-0.54	-0.47	0.49
USD LIBOR 3M (average)	%	0.37	0.78	1.37	2.46	2.23	0.56	0.17	1.13	2.31
USD LIBOR 6M (average)	%	0.56	1.10	1.55	2.61	2.21	0.52	0.22	1.25	2.44
Polish repo rate (end of period)	%	1.50	1.50	1.50	1.50	1.50	0.10	1.75	4.00	3.50
Unemployment rate (end of period)	%	9.8	8.2	6.6	5.9	5.2	6.2	5.4	4.8	4.6

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