Causes and effects of inflation in Poland

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Abstract
In the paper it is discussed the causes and effects of inflation in Poland. The paper analyzes inflation in recent years, including changes caused by the outbreak of the COVID-19 pandemic. Undoubtedly, the spread of the coronavirus has contributed to the changes in the economy. Inflation is one of the main macroeconomic indicators that reflect the economic situation of a certain country. It occurs when the prices of goods and services in the market increase, so each subsequent year you can buy less for the same amount. Inflation occurs when the price increase is constant and persists over a specific period of time, then the purchasing power decreases (M. Gamrot, 2014). It is not a rule that the overall price index is influenced most by the products that have the greatest price appreciation. The pass-through to the inflation rate also depends on the share of a product's "weight" in conventional household consumption expenditures. CPI inflation in 2021 in Poland is influenced, to the greatest extent, by energy prices causing food prices increase and core economic inflation. The factors forming inflation, are the so-called, inflation expectations significantly influencing consumption or investment decisions. Measures taken in the economic policy, such as a significant loosening of monetary or fiscal policy contributed to the mitigation of the effects of COVID-19.

Keywords: inflation, interest rates, consumption, Gross Domestic Product.

Introduction
Inflation, that is a widespread increase in prices in the economy leading to a decline in the purchasing power of money.

The basic factors influencing inflation include (M. Gamrot, 2014):
- monetary policy,
- the state of the economy,
- imbalance in the budget

The entities that can control the level of inflation are the government or the central bank, but it doesn’t mean that they have an impact on consumer demand itself, but rather affect the money supply. Each of these entities determines the level of inflation they intend to obtain and adjusts their actions on this basis.

The government and the central bank use the monetary policy for these actions, which should be understood as controlling the interest rate in order to maintain the desired level of inflation. There are many reasons for inflation, the most common are the following ones:
- excessive money issuance,
- imbalance in the state budget,
- flawed economic structure,
- intervention by the state in the central bank’s issuance policy, that is controlling the interest rate in such a way as to maintain the desired level of inflation.

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Material and methods

The paper uses statistical data developed by the Central Statistical Office, retail price indices (CPI, HICP), GDP Deflator, Maison & Partners, Goldman Sachs, National Bank of Poland. A typical example of a bank operating in the context of inflation may be lowering interest rates in order to increase the profitability of taking out a loan and investing funds. Then buyers increase demand, prices increase, and the bank leads to inflation increase. In Poland, in 2020 the inflation in the initial months fluctuated and ranged from 4.3% to 3.5%, and in the second half only the downward trend was recorded, which meant that it exceeded the inflation target set by the National Bank of Poland. The NBP Inflation Report is a document, which assesses the Monetary Policy Council with regard to the course of macroeconomic processes that affect inflation. The projection of inflation and Gross Domestic Product is prepared by the Economic Analysis Department of the National Bank of Poland, and the substantive supervision is carried out by the Director of the Economic Analysis Department. The macroeconomic NECMOD model is used in the reports. The projection of inflation and Gross Domestic Product is one of the factors, on the basis of which, decisions are made regarding the interest rates of the National Bank of Poland (M. Gamrot, 2014).

The Inflation Reports published by the National Bank of Poland in 2020 show that the increase in prices was observed as a result of:

- increase in labor costs of enterprises resulting from the COVID-19 pandemic,
- increase in excise duty on alcohol,
- increase in excise duty on tobacco products,
- increase in administered prices,
- a specific supply shock that appeared on the food market.

Inflation data in the territory of the Republic of Poland are also published by the Central Statistical Office. Based on these data, it can also be concluded that in 2020 inflation exceeded the medium-term inflation target of the National Bank of Poland.

In individual months the inflation was as follows:

- January 4.3%,
- February 4.5%,
- March 4.5%,
- April 4.2%,
- May 4%,
- June 3.9%,
- July 3.7%,
- August 3.6%,
- September 3.6%,
- October 3.5%,
- November 3.5%,
- December 3.5%

And in 2021, the inflation was the following:

- January 2.6%,
- February was 2.4%.
- March 3.2%
- April 4.3%
- May 4.7%
- June 4.4%.

When analyzing inflation in Poland, one should mention the COVID-19 pandemic, which contributed to strong declines in economic activity in many countries in the first half of 2020, the level of the Gross Domestic Product was reduced by nearly 10% (NBP, 2021).

Measures taken in the economic policy, such as a significant loosening of monetary or fiscal policy contributed to the mitigation of the effects of COVID-19. In this way, the level of unemployment was reduced, and the scale of bankruptcies was lowered. By easing the restrictions, efforts were made to support resumption of economic activity. Unfortunately, the end of 2020 did not show that this activity would return to the level recorded before the pandemic period. It is also worth emphasizing that the scale of the economic recovery differed in individual economic sectors (NBP, 2021).

Before the COVID-19 pandemic, inflation was low. This was due to, inter alia, the stabilization of world oil prices (NBP, 2021).

It can be concluded that after the outbreak of the pandemic, market volatility was significantly lower than in the previous months. With regard to consumption, the NBP indicates in its Report that the household sector in Q2 lowered consumption...
by 10.8% y/y. Such a significant reduction in consumption is related to the SARS-CoV-2 pandemic, epidemic restrictions, persistent uncertainty, a significant decline in consumer sentiment and skepticism about the future. The reduction in the scale of consumption could be caused by the decline in the wage bill and the slower growth in consumer loans. The consumption of services in the sectors which are the most sensitive to the adverse effects of the pandemic also significantly decreased, that is, gastronomy, tourist services, transport and entertainment with recreation and culture. A significant decline was recorded in the sale of goods, mainly cars, clothing and footwear (NBP, 2021).

To illustrate better the above situation, a chart showing the real dynamics of consumption, retail sales and wage bill in the enterprise sector is presented below.

**Chart 1. Real dynamics of consumption, retail sales and wage bill in the enterprise sector**

![Chart showing real dynamics of consumption, retail sales and wage bill in the enterprise sector](https://www.nbp.pl/polityka_pieniezna/dokumenty/raport_o_inflacji/raport_listopad_2020.pdf)


Despite the fact that in connection with the coronavirus pandemic, the strongest restrictions in economic activity were observed only in the second quarter of 2020, the epidemic situation still is significantly influencing the global economic situation. Resistance to the impact of the COVID-19 pandemic was observed mainly in industry and international trade (NBP, 2021). On the other hand, an unfavorable situation was noted in the service sector. Therefore, it was necessary to increase the anti-crisis packages and, at the same time, to continue quantitative easing (Inflation Report 2021). Polish society is aware of the unpredictability caused by the outbreak of the pandemic. According to the research carried out by Maison & Partners, Poles are more concerned about the financial consequences of the coronavirus pandemic than of the infection itself. The survey was carried out with the use of the CAWI (Computer-Assisted Web Interview) method and questionnaire on the internet panel. The representatives of small and medium-sized enterprises were invited to take part in the survey, 597 respondents participated in it. The survey was carried out in 2020, and the sample structure was designed to be as representative to Polish enterprises due to the size of the companies. ([zpp.net.pl/](https://zpp.net.pl/), 2021).

According to the research, about 57% of respondents showed fear of contracting the coronavirus, and nearly 71% of them indicated concerns about their financial situation. ([zpp.net.pl/](https://zpp.net.pl/), 2021).

As many as 41% of Poles declared that they were afraid of inflation increase, and thus a reduction in their savings. Polish citizens were also afraid of losing their jobs. There were also concerns about the inability to take a credit ([zpp.net.pl/](https://zpp.net.pl/), 2021).

There is no doubt that the COVID-19 pandemic contributed to the negative phenomena in the economy. Among them, one can note the induction of a supply and demand shock, which is one of the rarest phenomena observed in the economy (M. Lesik, 2021). One of the features of this economic shock is the lack of predictability referring to major macroeconomic indicators. This is confirmed by the inflation data.

The base effects in fuel prices, which despite the m/m decline, were higher than in the previous year, substantially contributed to the inflation increase. The monthly increase in food and energy prices was higher than the seasonal pattern, as shown in Chart 2.
The forecasts for the second half of 2021 provide for a gradual increase in the growth rate of food prices. It is predicted that this will be connected with the lapse of the results of the high base from the previous year and the increased demand for food, especially in the hotel, restaurant and cafe industries in the context of the expected pandemic lapse. In meat industry, it is forecast that higher demand is likely to coincide with lower supply, as a result of low production profitability in the previous months. It is also expected that in 2021, due to the global economic recovery, food prices will soar upward much faster than before. Unfortunately, the forecasts assume that inflation will gain momentum in 2022, when the service prices will plunge again, because of the labor market depletion (M. Kalwasiński, 2020).

In the context of the forecasts mentioned above, the concept of Goldman Sachs analysts sounds quite interesting. Based on their own analysis, they assure that core inflation in 2021 may turn out to be lower than the CPI data describe. In their opinion, inflation in Poland is to decrease, as a result of disappear of the effects of fuel inflation. The analysts also believe that there may be a noticeable increase in viability prices, which will result in headline inflation at 4% y/y (vs. 3.5% consensus). Goldman Sachs analysts are of different opinion stating that in 2022, inflation is to drop to 2.3% (W. Hass, 2021). This is illustrated in Chart 3.
Results and discussion

Currently, there are many unknowns, and one of the main unknowns is the real exchange rate. In case of weakening of the Polish zloty on the world market, there will be also a pro-inflationary impulse. In turn, the weakening of the zloty, translating into an increase in import costs, may support inflation. The growing instability in the monetary markets or fluctuations in Poland’s financial balance in the eyes of investors may result in currency devaluation. The policy of the National Bank of Poland allows the sale of Polish zlotys on the market to make them cheaper. The aim of this action is to support export and to increase the NBP profit, which will contribute to the state budget (M. Kalwasiński, 2020).

On the basis of the incoming data relating to the economic situation, it is indicated that the situation in industry is relatively good, despite the fact that the dynamics of the industrial production index is decreased. On the other hand, production in the construction and assembly industry, as well as in retail sales recorded a clear decrease, which was also accompanied by a decrease in average employment in the enterprise (sip.lex.pl/orzeczenia, 2021).

Soroczyński P., who is the chief economist of the Polish Chamber of Commerce, points out that the structure of purchases may change significantly, even in case of “defrosting” the economy. It is not possible now to fully predict the preferences of customers, who may prefer to return to their consumer habits or begin unconventionally evaluate what to spend their money on. The above situation raises many questions about the future of inflation. It is worth emphasizing and it is of great importance that the inflation did not increase dramatically in March, when the prices, mainly for food products were rising (biznes.interia.pl/, 2021).

According to the information provided during the meeting of the Monetary Policy Council, and taking into account the forecasts, it is indicated that the scale and rate of economic growth is significantly uncertain. In its communiqué, the Monetary Policy Council also maintained its position on interventions in the currency markets. It declared that it would continue to monitor the proper relation of the zloty to other currencies and to the euro, and thus it would strengthen the monetary policy (www.money.pl, 2021).

Unfortunately, the COVID-19 pandemic continues to be the main source of the economic stagnation, and a stronger rebound then before, as well as the prices increase is forecast. (www.money.pl, 2021).

It is worth emphasizing that the dates and any actions taken depend on the market conditions. National Bank of Poland is trying to offer promissory note loans for refinancing loans that are granted to companies by banks. (sip.lex.pl, 2021).

The NBP also announced its participation in the purchase of treasury securities and debt securities, which are guaranteed by Polish State Treasury in order to ensure an appropriate level of financial liquidity (D. Slomski, 2021).

According to the statement of the Monetary Policy Council, some measures are used in the monetary policy of the NBP in order to weaken the negative consequences of the pandemic, sustain economic recovery and stabilize inflation. On the other hand, NBP also contributes to building the stability of the monetary system by influencing the capital position of borrowers (D. Slomski, 2021).

The deterioration of the financial situation is most often the result of inflation increase and financial security depletion. Almost 43% of respondents declared that they had experienced the negative financial effects of the pandemic. Taking into account the economic uncertainty, resulting inter alia, from the impossibility of estimating the end of the pandemic, the possibility of increasing the group of people affected by the financial consequences of the pandemic should be taken into consideration (M. Kalwasiński, 2021).

Consumers’ salaries do not allow to meet the demands for any goods or services. The effects of prices increase are also painfully experienced.
by those who get social benefits: pensions, disability pensions, allowances.

Another factor increasing inflation seems to be the decline in the value of savings of an individual client. A hedge against hyperinflation is an attempt to allocate the funds to investments that are potentially worthless (purchase of gold, works of art or real estate) (P. Natorski, 2021).

Analysts expect that from the second quarter of 2021, a noticeable increase in consumer demand will result in GDP increase. It will be influenced by loosening of restrictions or minimizing the public's fear of infection. Consumers, similarly, will be able to spend their home savings accumulated during the lockdown (NBP, 2021).

Synchronization with the circumstances of the above-mentioned CPI inflation in 2021 should also be limited by the increase in the value of energy as a result of the multiplication of fuel price growth in relation to 2020, when the fall in demand for crude oil significantly reduced its prices on the selling markets (NBP, 2021).

The factors forming inflation, are the so-called, inflation expectations significantly influencing consumption or investment decisions. This is an important element, although often underestimated by analysts. They are based on a subjective assessment of reality and the potential development of events. Awareness of inflation expectations is useful not only in communication between citizens and central banks, but also contributes to the stabilization of expectations and strengthens confidence in the monetary strategy. The norms that model inflation expectations are called the heuristics of subjective probability. They are helpful in explaining, for example, the reasons the consumers react faster to inflation increase than to the inflation fall; the reasons for ignorance of slight changes in prices or selective treatment of prices increase (300gospodarka.pl, 2021).

Conclusions

1. The consequences of hyperinflation (conventionally, it is a monthly price increase of more than 50%, some economists accept an increase limit of 100%) are painfully felt by everyone (the impoverishment effect).

2. CPI inflation in 2021 in Poland is influenced, to the greatest extent, by energy prices causing food prices increase and core economic inflation. Inflation will be influenced, to a lesser extent, by the pandemic, which is the resultant of changes in demand and the operating costs of enterprises.

3. Unfortunately, the risk for the central projection scenario is insufficient efficiency in counteracting the pandemic, in comparison to the assumptions, and in particular, the effectiveness of the methods relating to new infections and illnesses prevention. The implementation of the above situation may be mainly influenced by new mutations of the coronavirus with intense transmission, mortality, insensitivity to available vaccines, or too slow vaccination rate. (300gospodarka.pl, 2021).

4. Unfortunate conditions would pave the way for bankruptcies of service industries influenced by the lockdown (hotel industry, recreation, culture, gastronomy).

5. Young people may have difficulties in starting a career, and thus difficulties in entering the labor market.

6. The possibility of further assistance from the state, limited by exhaustion, would delay the recovery of economic activity. These pejorative trends could be amplified by solvency disruptions or the instability in monetary system in economies with sizable debt levels. The unfortunate impact of the pandemic on economic stimulation would also exacerbate economic conflicts between countries, which could cause building barriers to world trade, disappearance of foreign investments or block of technology transfer to less developed or developing countries. Such situation would
entail a global productivity decline in economies, especially in those, based on international trade. If the above scenario were possible, it could lead to an economic collapse in the global economy (300gospodarka.pl, 2021).

References