

The Return of the World Economy to a High Inflation Regime¹

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Abstract

Global inflation is one of the most significant challenges for the post-pandemic world economy. After several decades of low inflation and even elements of deflationary processes in developed countries, the danger of falling into a new period of great inflation had seemed insignificant. Dovish monetary policy during the 2009–19 period did not provoke a spike in inflation, and the slowdown of the economy during the lockdown period put the vigilance to rest. However, the COVID-19 pandemic and anti-crisis measures it triggered, the Russia-Ukraine conflict, and sanctions and anti-sanctions solidified inflationary processes around the world, both in developed and developing countries. In this article, we show the inertial nature of inflation in both the U.S. and the European Union (EU) and argue that there has been a transition to a high inflation regime, despite the decline in developed country inflation in the first quarter of 2023 mentioned in the International Monetary Fund's (IMF) January report. Getting out of this high inflation regime will require much more serious and time-consuming measures than those used to manage inflation in the low inflation regime.

Keywords: inflation, inflation inertia, high inflation regime

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We can now say that the era of low inflation is over—the COVID-19 pandemic, anti-crisis support measures, the Russian-Ukrainian conflict, and the ensuing sanctions and anti-sanctions have brought the global economy to the threshold of a period of high inflation, or even stagflation, given the potential global recession and stagnation in the European Union [World Bank, 2022].

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Inflation in Modern Theory

The issue of the relationship between inflation and indicators of the economic cycle was widely debated in the second half of the 20th century. The original Phillips curve, published in 1958 [Phillips, 1958], assumed that there was an inverse relationship between inflation and unemployment, corresponding to the behaviour of inflation in the economic cycle—the higher inflation, the lower unemployment and vice versa. Attempts to exploit this relationship led to the period known as the Great Inflation (although, of course, they were not the only factor) and to a reassessment of views on the formation of inflation. In the late 1960s, Edmund Phelps [1968] and Milton Friedman proposed a concept of the Phillips curve in which inflation depends not only on the deviation of unemployment from the natural rate but also on inflation expectations, which in their understanding are adaptive, that is, dependent on previous values of inflation. Thus, the basic Phillips curve model describes inflation as an inertial process—the rate of price growth depends on its previous values. In the early 1970s, Robert Lucas [1972; 1973], as well as Thomas Sargent and Neil Wallace [1975] criticized the use of adaptive expectations and insisted on the use of models with microeconomic foundations, in particular, rational expectations.

Gradually, a neo-Keynesian approach to general equilibrium modelling is emerging in science, incorporating traditional Keynesian assumptions (such as price rigidity based on Taylor's step contracts [1980], Calvo's pricing model [1983], and Rotemberg's price adjustment costs [1982]) into a real business cycle model. The neo-Keynesian Phillips curve (NKPC) formulated by John Roberts [1995] describes inflation as a function of expected inflation in the next period and marginal costs in the economy—it is assumed that firms will charge prices as a fixed premium over marginal costs, which in turn are proportional to the output of the economy. In Russian economic science, the NKPC is considered in the paper "The Greatness and Fall of the Phillips Curve" [Entov, 1983].

At the same time, the NKPC assumes rational expectations, that is, unlike the basic version, it does not contain the inertia of inflation.

Empirical tests of the NKPC demonstrate that in the absence of previous lags of inflation rates in the equation, the dependence describes the ongoing processes rather poorly—inflation by its nature is an inertial or persistent process, it depends on its previous values [Fuhrer, 2010]. To better fit the model to the data, taking into account the preservation of microfoundations in the model, a new class of so-called hybrid Phillips curve models was created. Hybrid models add past lags of inflation to the NKPC; for example, it is assumed that only a part of economic agents has rational expectations, while the other part is guided by adaptive expectations built on the basis of previous values of inflation [Galí, Gertler, 1999].

Hybrid models, on the one hand, use microfoundations to describe economic processes, and, on the other hand, better describe historical data, seeming to represent a compromise between the two approaches, but for the same reason they are criticized [Rudd, Whelan, 2007]. The academic debate on the correct approach to modelling inflation continues.

The nature of persistence of inflation is also discussed in academic papers. Researchers ask whether inflation is inertial in itself or if inertia is inherited from the inertia of real business activity variables (output or unemployment). It is proposed to distinguish between structural, that is, internal, and reduced-form, that is, inherited, persistence [Fuhrer, 2010].

Another stratum of academic literature is related to the study of different types of steady states of the general equilibrium model—equilibrium inflation may turn out to be low or high, depending on other macroeconomic parameters, while equilibrium with high inflation and equilibrium with low inflation may have different properties [Ball, 1992; Barro, Gordon, 1983; Bruno, Fischer, 1990].

Also, persistence of inflation is analyzed using the indicator of trend inflation—inflation cleared from short-term fluctuations [Ascari, Ropele, 2009; Ascari, Sbordone, 2014; Cogley, Sbordone, 2008]. The concept of trend inflation is close to the concept of core inflation; in particular, J. H. Stock and M. W. Watson [2016] talked about core inflation as one way of estimating trend inflation. There are estimates of trend inflation for the Russian economy as well [Drobyshevsky et al., 2023].

Low Inflation Period and Inflation Triggers in 2021–22

In recent decades, since what has been referred to as the Great Moderation, and especially in the period following the global financial crisis in 2010–19, inflation rates in advanced economies have remained extremely low, averaging 2–3% (Figure 1).

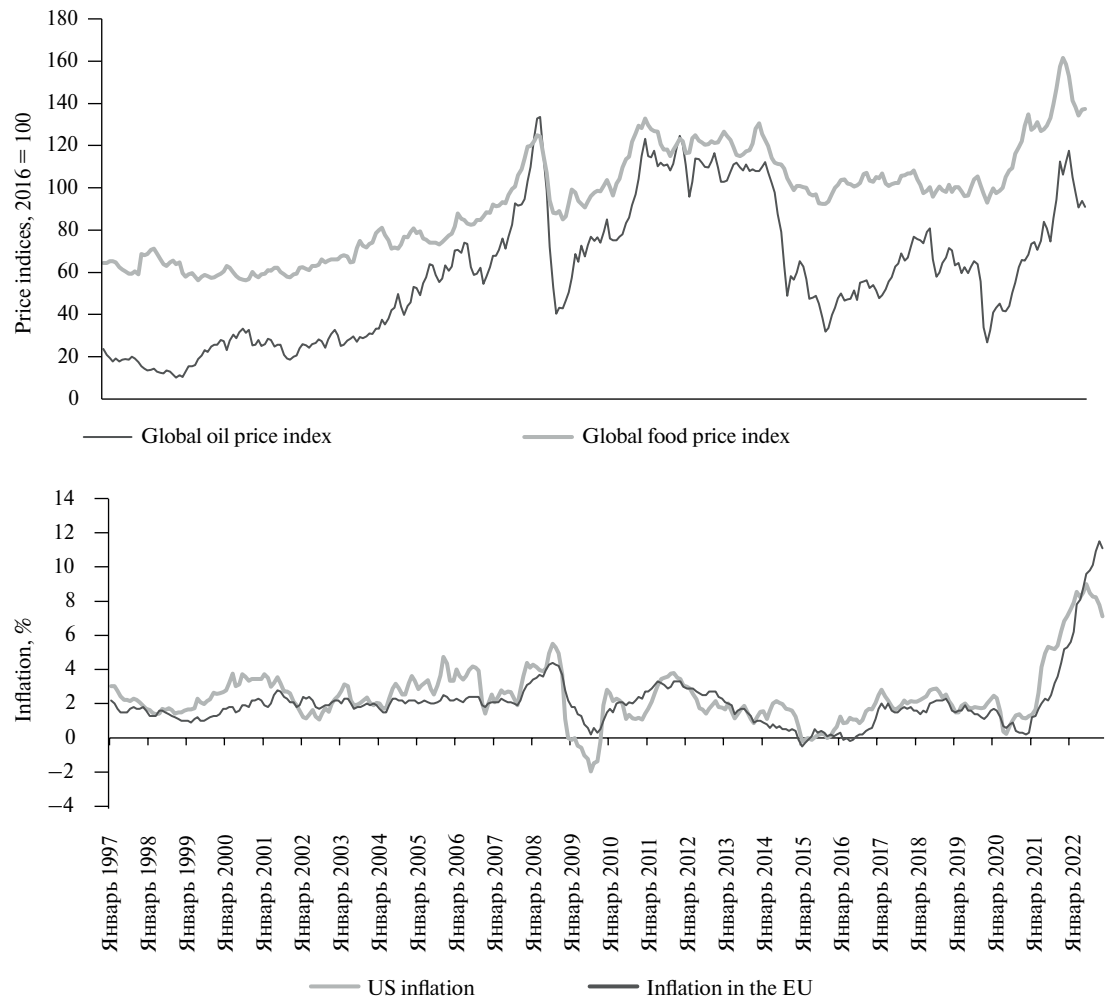


Fig. 1. U.S. and EU Inflation, Global Oil Price Index, Global Food Price Index

Source: Compiled by the authors based on data from FRED, Eurostat, IMF.

In addition, the relationship between inflation and unemployment, which is traditionally described by the Phillips curve, has also changed significantly. According to the traditional relationship, during the Great Recession of 2008–10, inflation should have fallen much lower—to negative levels, given the high unemployment rate [Ball, Mazumder, 2011]. However, since the 1980s, the negative slope of the curve began to decline and the curve gradually became flat [Stock, Watson, 2020]. Also, empirical studies show that the inertia of inflation decreased, and stable monetary policy is assumed to be the main reason [Benati, 1983].

For economic policy, this means that even fairly significant changes in the unemployment rate do not lead to significant changes in the inflation rate—such as the quantitative easing undertaken in the U.S. after the Great Recession of 2008–10.

The causes of low inflation and a flat Phillips curve have been analyzed in the last decades in a large number of sources, but there is no consensus in the form of one or two factors that led to a long period of low inflation. Among the reasons for low inflation and a flat Phillips curve are the following:

- transition of major central banks to inflation targeting policy and anchored inflation expectations [Ball, Mazumder, 2011; Bernanke et al., 2018];
- accelerating technological development and globalization [Rogoff et al., 2003];
- demographic changes in developed economies—in particular, population aging [Bobei-ca et al., 2006];
- structural changes in the labour market (including the entry of Asian labour into the global labour market) and the loss of bargaining power by workers [Ratner, Sim, 2022];
- low growth rates of advanced economies in the period after the global financial crisis from 2009 to 2019.

The COVID-19 pandemic interrupted the economic cycle on a late, but upswing and created very unusual conditions for the subsequent recovery from the crisis [Grigoryev, Pavlyushina, Muzychenko, 2020]. In the first months, it forced countries to impose severe lockdowns, which led to a decrease in the inflation rate due to a decrease in economic activity. However, since mid-2020, inflation rates have been rising rapidly, partly due to the base effect but also due to supply shocks (Figure 2).

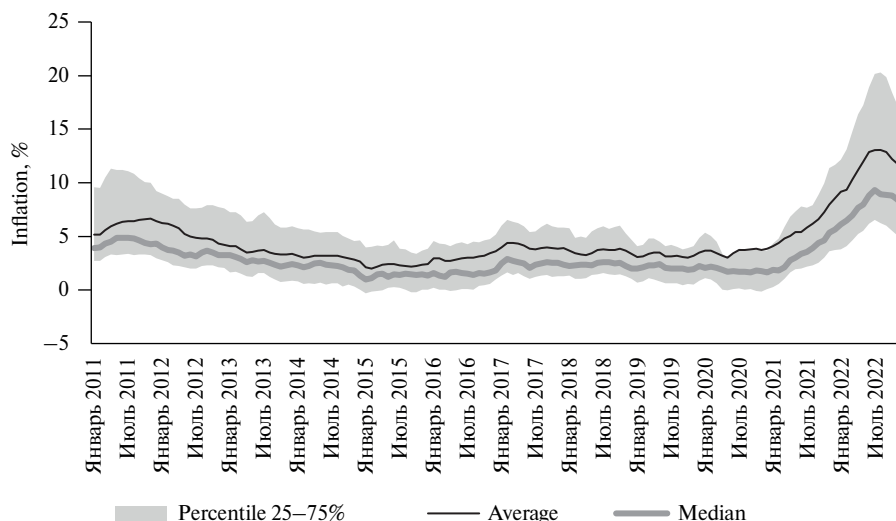


Fig. 2. Dynamics of Inflation by Country

Source: Compiled by the authors based on IMF data.

One of the reasons for rising prices is the breakdown of global value chains and the emergence of so-called bottlenecks in production chains. Bottlenecks indicate a mismatch between supply and demand for a particular raw material or intermediate commodity, due to which the further global value chain is disrupted—the shortage of an intermediate commodity leads to an increase in the price of both the intermediate commodity and the final commodity of the chain. Bottlenecks can be formed both under the influence of supply shocks and demand shocks. Supply shocks include lockdowns and stoppage of production of goods and blocking of activity in the services sector, changes in the labour market and shortage of labour, and logistical constraints.

Also, inflationary pressure on the global economy was exerted by the increase in energy prices, which began in early 2021. After the growth of energy prices in 2021 almost doubled due to natural factors and demand recovery after the COVID-19 pandemic [Grigoryev, Kheifets, 2022], it was expected that in 2022, after the slowdown in demand and the disappearance of bottlenecks, the growth of energy prices would slow down, although already at the end of 2021 the World Bank noted that otherwise inflation risks will increase significantly [2021].

Anti-crisis measures are another cause of higher inflation rates. To mitigate the consequences of the economic crisis caused by the COVID-19 pandemic, both developed and developing countries have undertaken fiscal and monetary support measures of unprecedented volume. Among the most popular fiscal measures were support for the population and businesses and investments in the health care system [Grigoriev et al., 2021]. Monetary measures aimed at providing liquidity to the market and easing credit conditions included both traditional (mainly in the form of key rate cuts) and non-traditional measures (quantitative easing) (Figures 3 and 4).

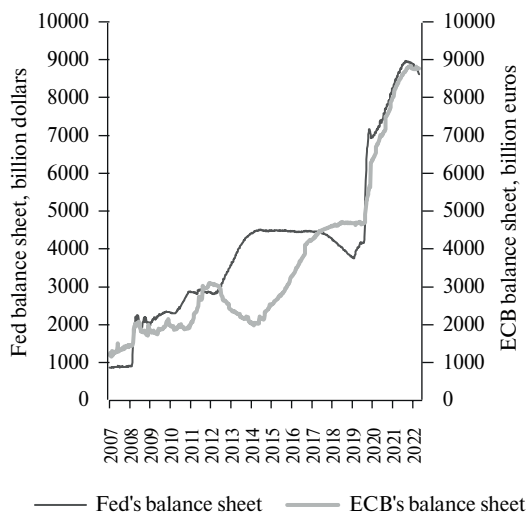


Fig. 3. Balance of the Fed and the ECB and the ECB's Deposit Rate

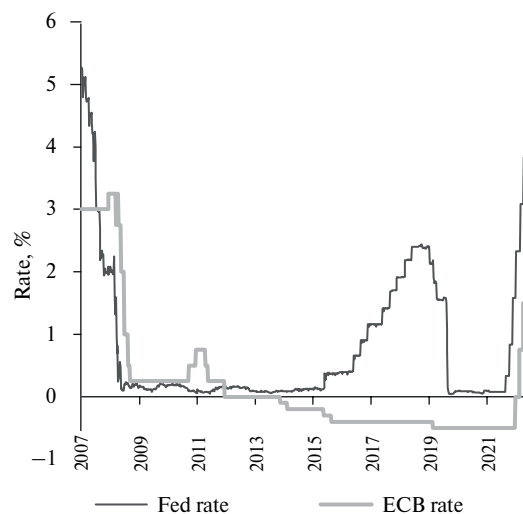


Fig. 4. The Fed's Effective Federal Funds Rate and the ECB rate

Source: Compiled by the authors based on FRED data.

According to an International Monetary Fund (IMF) study, in Europe, the contribution of demand shocks (such as the increase in demand caused by stimulative macroeconomic poli-

cies) to inflationary pressures remained higher than the contribution of supply shocks, although the share of the contribution of supply shocks increased over 2020–21. The U.S. data show a similar dynamic, with the contribution of supply shocks increasing over time [Shapiro, 2022].

Despite the presence of the above-mentioned pro-inflationary factors, in the middle of 2021, both experts and representatives of central banks of developed countries were inclined to believe that the increase in the rate of price growth was temporary, and inflation rates would gradually decline. A significant argument in favour of this opinion was the anchoring of inflation expectations—the values of inflation expected in a year remained virtually unchanged until the end of 2022 in the U.S., and in the EU their increase, although observed, remained not very significant. At the same time, within the framework of the policy of “forward guidance” (policy of statements of intentions), which is followed by both the Fed and the European Central Bank (ECB), the flexibility of monetary policy of central banks was limited—making decisions on a sharp change in the trajectory of interest rates could undermine market confidence and reduce the effectiveness of monetary policy.

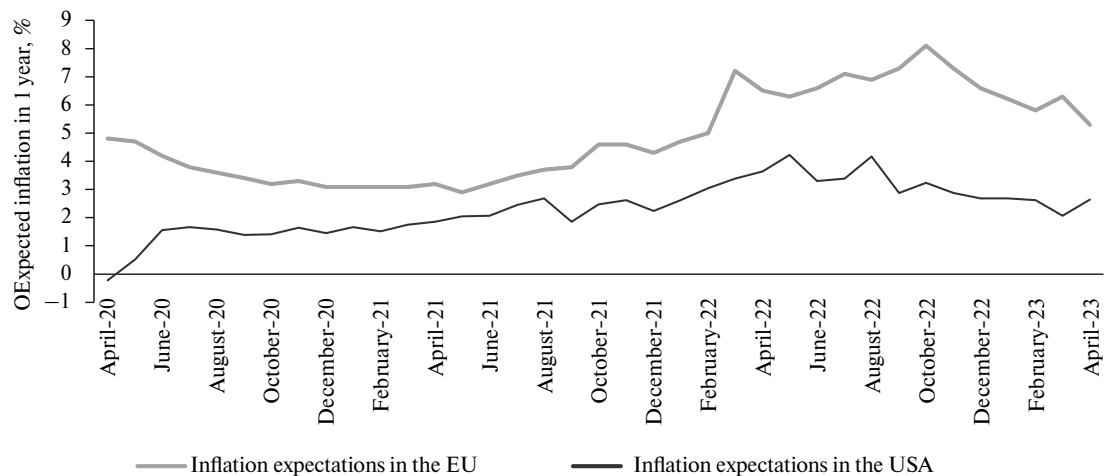


Fig. 5. Inflation Expectations in the EU and the U.S. (One-Year Expected Inflation)

Source: Compiled by the authors based on data from FRED, ECB.

Underlying the erroneous judgments about the temporary nature of inflation in 2021 was an underestimation of two major factors—pandemic changes in production chains and the labour market.

First, it was assumed that a substantial part of the acceleration in price growth in 2021 was on the demand side—due to economic recovery and anti-crisis support measures. Supply-side bottlenecks were also projected, but their magnitude was larger than expected. A study by the Bank for International Settlements (BIS) in 2021 assumed that bottlenecks would not persist for long, would not have time to affect the level of wages in the extractive and manufacturing industries or inflation expectations, and therefore would cause only changes in relative prices, not sustainable inflation [Rees, Rungcharoenkitkul, 2021].

Second, some trends developed in the labour market during the pandemic that were not taken account of in the inflation forecast. One of these trends was the “great layoff,” which the Federal Reserve Bank (FRB) of Chicago estimated added 1.1 pp to the inflation rate [Faccini, Melosi, Miles, 2022]. One of the mechanisms of a transition to high inflation is the wage-price inflationary spiral [Blanchard, 1986], which is based on the increase in inflation expectations

of workers. Assuming further price growth, workers demand higher wages, wage growth in turn leads to further price growth. This situation can occur when employment is near or above the equilibrium level. At the end of 2021, employment had not yet reached pre-pandemic levels, but wage growth had already begun—due to the decline in labour supply of a part of the population that decided not to return to work (Figures 5 and 6). The largest employment dip was observed for low-skilled and older workers [Duval et al., 2022], so a possible explanation could be crisis support measures that delayed the return to work for some groups of the population.

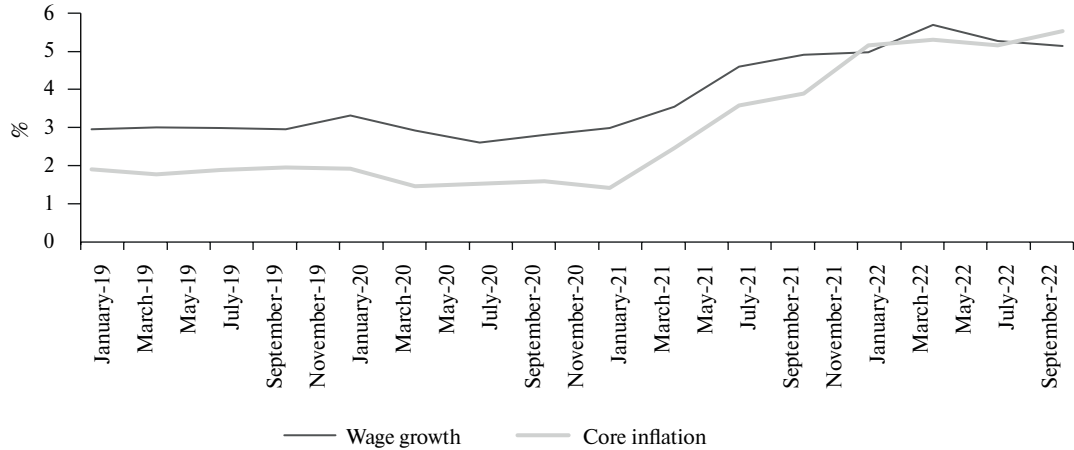


Fig. 6. Wage Growth (Employment Cost Index: Wages and Salaries) and Core Inflation in the U.S.

Source: Compiled by the authors based on FRED data.

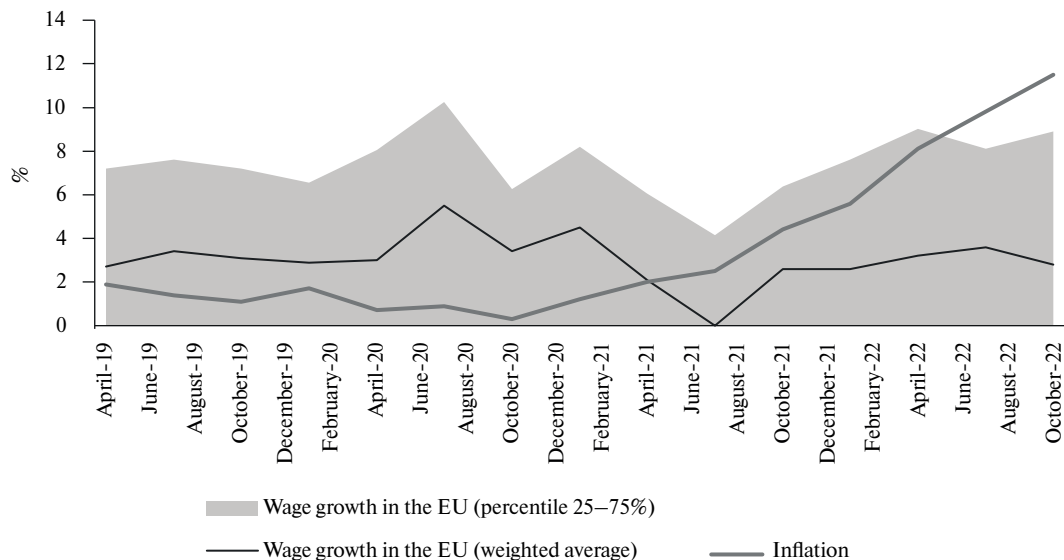


Fig. 7. Wage Growth (Labour Cost Index: Wages and Salaries) and Core Inflation in the EU

Source: Compiled by the authors based on Eurostat data.

At the end of 2021, central banks in advanced economies faced a difficult choice between fighting inflation and thereby slowing the post-pandemic recovery or supporting the recovery by letting inflation go. The choice was complicated by the substantial public and corporate debts accumulated in both developed and developing economies during the pandemic—tightening monetary policy and lowering inflation rates would have a negative impact on the ability to service these debts.

However, by January–February 2022, the major central banks began the transition to a restrained monetary policy—in December, the Bank of England had raised the rate by 0.15 p.p. (to 0.25%), followed by the Fed and the ECB announcing the winding down of asset purchase programmes. The Fed announced its first key rate hike in March 2022, the ECB—only in July 2022; the Fed’s rhetoric throughout 2022 remained tougher than that of the ECB.

The events that began on 24 February 2022—the Russia-Ukraine conflict and the sanctions and anti-sanctions that followed—have increased inflationary pressures on the global economy, primarily through the entrenchment of uncertainty and high energy and, to some extent, grain prices.

According to a study by Fed experts [Caldara et al., 2022], those events raised global inflation by about 1.3 p.p. due to increased geopolitical risks; according to another study [Liadze et al., 2022], the increase in global inflation amounted to 2 p.p. in 2022 and another 1 p.p. in 2023.

The nature of the impact of events in 2022 differs for the U.S. and European countries. In the U.S., core inflation remains around the January 2022 level of 5.15%. The August–September spike in core inflation was associated with the peak in energy prices in the spring of 2022, but by the end of 2022, inflation had returned to late 2021 levels (Figure 7). The situation in European countries is different—core inflation in 2022 rose relative to January 2022 values (Figure 8).

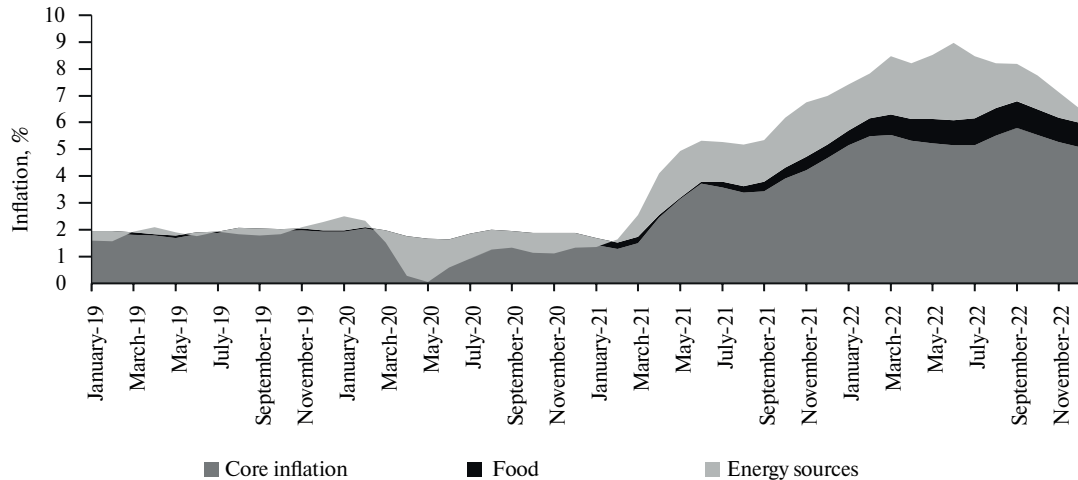


Fig. 8. Components of Inflation in the United States

Source: Compiled by the authors based on OECD data.

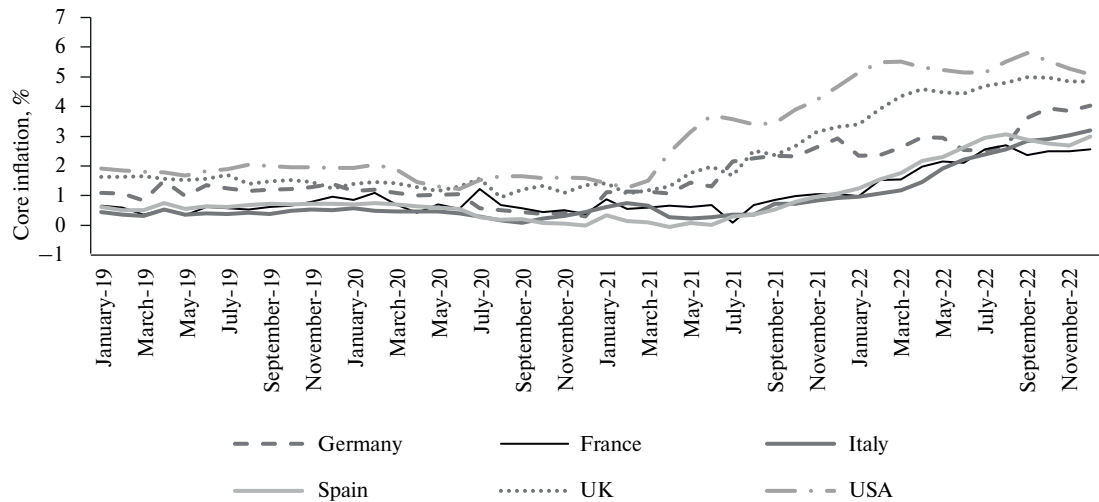


Fig. 9. Core Inflation in Developed Countries

Source: Compiled by the authors based on OECD data.

Thus, the stylized picture of global inflation 2021–22 is as follows:

- the COVID-19 pandemic, in terms of the Phillips curve, was a series of supply shocks—lockdowns that limited economic activity, disruptions in logistics—that were not visible against the background of reduced economic activity in the first half of 2020, but started to put upward pressure on inflation from the second half of 2020;
- in 2021, developed economies began to recover, including against the backdrop of significant fiscal stimulus, while labour supply was depressed by the “great layoff” and energy prices rose—the marginal cost of the economic cycle rose (albeit earlier than predicted by developed central banks), and the wage-price inflationary spiral was triggered;
- gradually, high marginal costs became entrenched in the expectations of economic agents, which to some extent reflected the rise in core inflation;
- the Russian-Ukrainian conflict, from the point of view of the Phillips curve model, is a series of supply shocks, in particular, leading to an increase in energy and food prices. The latter are also anchored in the expectations of economic agents in Europe, but not in the U.S. due to their duration—in particular, due to the greater impact of the shocks on European economies (growth of gas prices, foreign trade relations with the conflict countries), as well as less stringent policy of the ECB compared to the Fed.

High Inflation Regime: Definition and Transition Criteria

Fears that the global economy is moving to high inflation or even stagflation are expressed both by think tanks and international organizations [World Bank, 2022]. The economic equilibrium with high inflation or high inflation regime is understood not as a cyclical increase in the rate of price growth after the crisis, but as a fundamentally different equilibrium of the economy with higher inflation in all phases of the cycle. The high inflation regime differs from the low inflation regime not only by the rate of price growth, but also by other characteristics [BIS, 2022]. Among them, the Bank for International Settlements emphasizes the volatility and inertia of inflation. Moreover, the BIS notes that the low inflation regime that has existed in the world

economy in recent years is characterized by unsynchronized changes in relative prices, reflecting the process of searching for an equilibrium price; such changes remain relatively invisible to households and firms. In the high inflation regime, the growth of prices for different goods turns out to be correlated—as in the case of energy price increases and subsequent cost inflation, it no longer reflects the equilibrium search process but begins to influence the decisions of economic agents [BIS, 2022].

In “Inflation Regimes and Hyperinflation: A Post-Keynesian/Structuralist Typology” [Charles, Bastian, Marie, 2021], in addition to the regimes of low and high inflation, a regime of moderate inflation is described. In the low inflation regime, according to the authors, the inflation rate is determined by the adjustment to the equilibrium level of wages depending on the bargaining power of workers and firms.

The main characteristic of the moderate inflation regime is the emergence of institutionalized mechanisms of wage indexation, which are designed to reduce uncertainty for economic agents. Inflationary processes acquire greater inertia, in particular due to indexation.

According to the authors, exogenous shocks, in particular supply shocks, can act as a trigger for the transition from low inflation to moderate inflation and then to high inflation; in the case of transition from moderate inflation, indexation can act as a gas pedal of this process.

As the main features of the high inflation regime, the authors emphasized the extension of indexation mechanisms to other areas of the economy (for example, pegging prices to foreign currency) and reduction of the duration of contracts. It should be noted that the authors did not equate the high inflation regime with hyperinflation, which exists only for a short period of time, while the high inflation regime can exist for a long time.

The reasons for switching inflationary regimes are studied in the academic literature mainly with the help of Markov chains. Among the factors that lead to switching between different inflation regimes are money supply growth [Amisano, Fagan, 2013], low real interest rates, and a fixed exchange rate [Vansteenkiste, 2009].

The most striking historical example of a high inflation regime to compare with today’s situation is the period of the Great Inflation in the 1970s in the United States. The causes of the inflation surge in those years are similar to those of today: soft monetary policy and negative interest rates, growth in government spending, and rising energy prices; among the consequences—debt crisis in emerging markets and transition to stagflation. At the same time, many experts (for example, the World Bank [2022]) note that the current situation is still not as dangerous as in the 1970s: central banks have much more experience and market confidence and the inflationary shock is not as large as in the 1970s; further, the above-mentioned fundamental disinflationary factors continue to operate. Note that there are other differences that do not favour the current situation: in today’s labour market employment is closer to full employment and supply shocks in the form of disrupted supply chains continue to affect the economy in the form of increased inflationary pressure.

The Bank for International Settlements suggests as a criterion for the transition to a high inflation regime the exceeding of the five-year average inflation boundary of 5% [BIS, 2022], but this criterion is intended to highlight the period of high inflation in the historical data rather than determine the exact moment of the change of the inflation regime. At the end of 2022, five-year average inflation had not even exceeded 4% in the major advanced economies. Below, we discuss transition criteria that are more sensitive to inflation regime shifts.

Inflation Volatility

Inflation volatility itself to some extent reflects systemic changes in the behaviour of inflation, but to determine the transition to the high inflation regime it is more important to

consider the co-directionality of price movements in different sectors of the economy—in the low inflation regime the correlation between prices in different sectors remains low, while in the high inflation regime it increases significantly, which provokes further price increases. Figure 6 shows the breakdown of the total variation of inflation into sectoral variation and covariance. The methodology of graphing is similar to that of the Bank for International Settlements [2022].

Let us take a closer look at the relationship between sectoral covariance and variation for the United States. We note a significant increase in both the total variation and the covariance between sectors, which began as early as the end of 2021. This kind of increase in the total variation of inflation and the significant prevalence of the covariance component was observed during the inflation crisis that began in 1973 and ended in the early 1980s and during the subsequent period of gradual decline in inflation. Note that the nature of the surge in inflation volatility after the global financial crisis of 2007–09 is different—the share of covariance between sectors in total inflation is much lower (Figure 9).

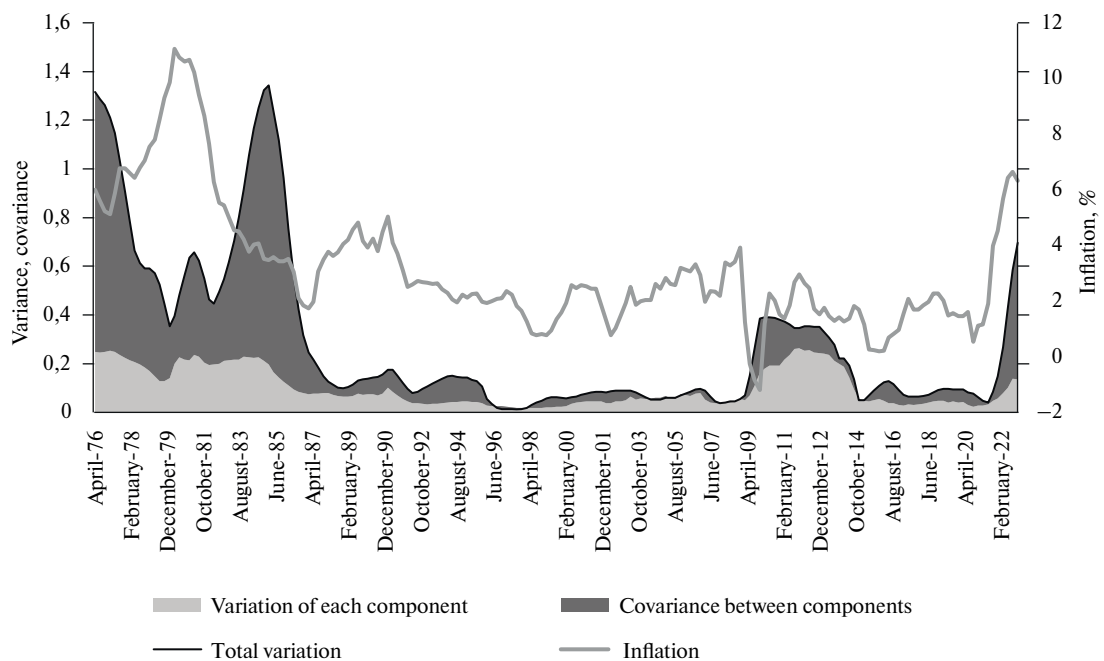


Fig. 10. U.S. Inflation Variation, Sectoral Variation and Covariance

Source: Authors' calculations.

In general, a similar trend can be observed in all developed countries—the share of covariance in total variation started to grow from mid- to late 2021, although the ratio of covariance to total variation differs from country to country (Table 1). For European countries, the trend can be illustrated by the examples of France and Germany, and for Asian advanced economies by the example of Korea; the dynamics of the variation structure is similar to the structure in the times after the Asian economic crisis. Japan stands out, where inflationary processes are specific, so the share of covariance in the variation is still low, although it is also growing.

Table 1. Ratio of Covariance to Total Variation in Developed Countries

| Country Name | Share of Covariance in Total Variation (end 2022) | Share of Covariance in Total Variation (average for 2010) | Median Value of the Proportion of Covariance in Total Variation (2000–21) |
|--------------|---|---|---|
| U.S. | 0.8 (average for 2022 Q3) | 0.48 | 0.41 |
| UK | 0.81 (average for July–November 2022) | negative covariance between sectors | 0.35 |
| France | 0.52 (average for July–November 2022) | 0.42 | 0.45 |
| Germany | 0.74 (average for July–November 2022) | 0.36 | 0.36 |
| Japan | 0.38 (average for September–November 2022) | 0.56 | 0.53 |
| Korea | 0.71 (average for July–December 2022) | 0.68 | 0.31 |

Source: Authors' calculations.

A similar trend is observed in developing countries—in Latin America (Chile, Mexico, and Colombia), South Asia (Thailand, Philippines), and Africa (Nigeria). However, the study of inflation behaviour in developing countries by many indicators is different, so it requires a separate study.

Inflation Inertia

As mentioned above, inflation by its nature is an inertial process, but the degree of inertia is higher when the economy is in a high inflation regime [BIS, 2022]. Herein, we understand inertia as the tendency of a time series to maintain a trend over a long period of time. The degree of inertia in this case will mean the speed with which inflation returns to its long-term average value.

There is a wide body of work using different approaches to assess inflation inertia: mean reversion [Dias, Marques, 2010], unit root tests [Ball, Cecchetti, Gordon, 1990; Culver, Papell, 1997], the largest autoregressive root method and estimation of the sum of coefficients of the autoregressive process [Pivetta, Reis, 2007], estimation of the Phillips curve with trend inflation [Cogley, Sbordone, 2008], and within the framework of the VAR model with variable coefficients [Cogley, Primiceri, Sargent, 2010], among others.

To measure the degree of inertia, we used the methodology presented by D. A. Dias and C. R. Marques [2010]. The methodology is based on the idea that an inertial series, having a peculiarity of slow return to equilibrium values, will rarely cross its long-term mean (mean

reversion). In turn, a less inertial series will oscillate around the long-term average and cross it quite often. To assess the degree of inertia, we propose the following measure.

$$\hat{\nu} = 1 - \frac{n}{T}$$

where n is the number of crossings of the mean value of the series for the period containing $T+1$ observations.

Analyzing the dynamics of inflation inertia in the U.S. allows us to distinguish a period of the Great Inflation from the mid-1960s to the mid-1980s with a systematically high coefficient of inflation inertia, and a period from the mid-2000s almost to the end of the 2010s with a systematically lower coefficient of inertia. The decline in the coefficient of inertia in 2020 is explained by the change in the inflation trend due to the COVID-19 pandemic shock and the subsequent fluctuation of inflation around low values.

It is interesting to note that the inflation inertia index in the U.S. starts to rise in 2018, which may indirectly support the hypothesis that the COVID-19 pandemic “caught” the economy on the cusp of the peak of the economic cycle, although the relationship of inflation inertia to the economic cycle and monetary policy deserves a separate study.

In 2022, there was a rather sharp increase in the inertia index, which may also indicate the transition to a high inflation regime (Figure 10).

It should be noted that the inertia index calculated using this approach is a rather “noisy” indicator that takes high values even in periods of low inflation. In addition, the very approach to the assessment of inertia using the intersections of the average value in the academic discussion is gradually replaced by the approach using the so-called inflation gap, the deviation of inflation from its trend values [Ascari, Sbordone, 2014]. Therefore, meaningful interpretation of such a coefficient is possible only in conjunction with other data.

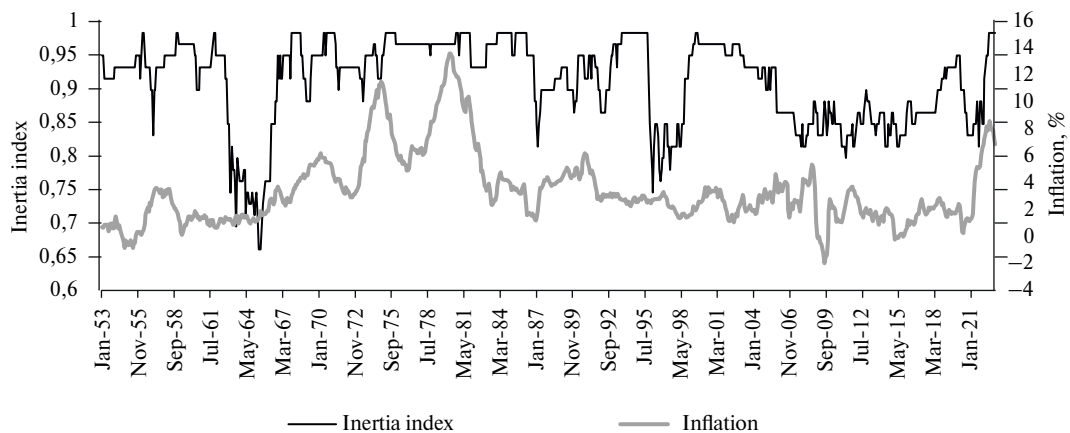


Fig. 11. Inertia Index for the United States

Source: Authors' calculations.

The inertia index for Germany behaves similarly—there is a period of lower inertia before the COVID-19 pandemic, a subsequent drop in the index in the pandemic, and a further rise in 2021–22.

In other European countries, the dynamics of inertia are different—there is no period of low inertia in the 2000s–2010s; in the UK inertia has remained at a high level since 2011 without

significant declines even during the pandemic, and in France inertia declined only during the pandemic.

In Asian advanced economies, the rise in inertia is seen in Korea but not in Japan, where it remains at a relatively low level compared to 2014–19, when the massive quantitative easing programme took place.

From the above figures on the proportion of covariance in the correlation as well as the coefficient of inertia, we can infer a transition to a high inflation regime—or a moderate inflation regime in the sense described by S. Charles, E. Bastian, and J. Marie [2021]—for the U.S. and European countries, but not yet for Japan.

How to Put the Genie Back in the Bottle: The Issue of Getting Out of the High Inflation Regime

Inflation in developed western countries in 2022–23 is in a higher and fundamentally different equilibrium. At the same time, inflationary pressures and the resulting global uncertainty complicate the post-pandemic recovery—rising energy prices slow production and capital moves to safer assets (which puts additional pressure on the recovery of developing countries). Thus, these events act as a secondary trigger and complicate the balancing act of central banks between fighting inflation and supporting economic recovery.

Central banks of developed countries in 2022–23 are actively implementing a restraining monetary policy—raising interest rates and conducting quantitative tightening, as well as using verbal interventions to demonstrate readiness for further tightening of monetary policy to slow inflationary processes (Table 3). At the same time, the position of the key central banks—the Fed and the ECB—is different today.

Inflation in the U.S. started earlier, so the Fed was forced to take response measures earlier than the ECB, and today we can already observe some slowdown of inflation in the United States. Another—and maybe more important for inflationary processes—difference is the nature of inflation formation: in European countries the role of existing and potential supply shocks is higher. The Russian-Ukrainian conflict and subsequent sanctions have negatively affected both trade flows within the European Union and logistics chains in Europe (in addition to the general impact on the European economy through higher energy and food prices); the share of supply shocks in explaining inflation dynamics is likely to increase for European countries in the near future, which means that the ECB's ability to fight inflation is limited—tight monetary policy can limit demand, but cannot eliminate bottlenecks.

Table 2. Nominal and Real Key Rates in 2021 and 2023

| | Key Rate (February 2023) | Key Rate (January 2021) | Inflation Rate (January 2023) | Real Interest Rate (February 2023) |
|-------------|--------------------------|-------------------------|-------------------------------|------------------------------------|
| Australia | 3.35 | 0.1 | 7.8 | -4.45 |
| UK | 4 | 0.1 | 10.1 | -6.1 |
| EU | 3 | 0 | 8.5 | -5.5 |
| Canada | 4.5 | 0.25 | 5.9 | -1.4 |
| U.S. | 4.75 | 0.125 | 6.4 | -1.65 |
| Switzerland | 1 | -0.75 | 3.3 | -2.3 |
| Japan | -0.1 | -0.1 | 4 | -4.1 |

Source: BIS, IMF.

A transition to a high inflation regime does not mean that a return to a low inflation regime is impossible over a long period of time—we believe that a return to a low inflation regime is possible, given the high degree of competence of developed country central banks and the level of market confidence. However, the effort required to return to low inflation would be considerably greater than in a low inflation regime. Under a flat Phillips curve, sufficiently large changes in the unemployment rate do not lead to significant changes in the inflation rate—and this is true both for the interpretation of the weak inflation response to the stimulus measures in 2009–19 and for the tightening measures starting at the end of 2021. This implies that, assuming the small slope of the Phillips curve remains small, a return to a low-inflation regime would require more severe tightening measures, which would make the so-called “soft landing” more difficult.

In its January report, the IMF wrote that the peak of the general inflation rate in developed countries had passed in the third quarter of 2022 due to the actions of central banks, which cooled demand and core inflation, and also said that medium-term inflation expectations remain anchored. Thus, the IMF assumes a further decline in inflation, characteristic of a cyclical process in the face of tighter monetary policy. However, in our view, the report placed insufficient emphasis on the increase in the inertia of inflation—unprecedented for the last decades—and a fundamental increase in its equilibrium level. In the February bulletin of the ECB, the authors wrote about a significant shift in consumer inflation expectations relative to the inflation target of 2% [Georgarakos, Kenny, Meyer, 2023]; according to the Federal Reserve Bank of New York, medium-term inflation expectations in the U.S. also remain above the target and amount to 2.7% on a three-year horizon and 2.6% on a five-year horizon. Both Markus Brunnermeier [2023] and Michael Weber [2023] wrote about signs of expectations unwinding in the IMF’s *Finance & Development* journal. In addition, core inflation in the U.S., as described above, is not declining, while in the EU countries it continues to rise.

It is possible that the IMF forecast was partly created as a verbal intervention as a tool of monetary policy in an attempt to influence the expectations of economic agents and contain inflation. The statement of the Group of 20 leaders regarding inflation containment looks similar: “Central banks remain firmly committed to achieving price stability in line with their mandates. They will ensure that inflation expectations are anchored (...).” While developed country central banks are indeed committed to achieving price stability, in the current environment this does not guarantee anchoring of inflation expectations, especially in the pursuit of a soft landing.

Central banks today operate in a different economic reality of high inflation, high leverage, and low growth. In this reality, tightening monetary policy to fight inflation threatens financial stability—especially given the emerging fears of a banking crisis in the wake of the Silicon Valley Bank collapse. The inertial inflation mechanism that kicked in in advanced economies in 2022, unlike capital investment and stock markets, is less sensitive to fine-tuning tools and will persist over the medium term. A return to a low inflation regime will require more powerful and longer-term measures, which will be the subject of search, risk and research.

Conclusion

The reasons for low inflation in the period after the global financial crisis were related not only to the taming of inflation by experienced central banks, but also to fundamental disinflationary factors—aging of the population, globalization and technological development, entry of cheaper labour into the international labour market, and low rates of economic growth in this period. The COVID-19 pandemic put on pause a substantial part of the economic activity in developed

countries and deflationary trends manifested themselves, which, however, masked very serious pro-inflationary factors in the form of disrupted production chains and new changes in the labour market. In 2021, these supply shocks manifested themselves, creating inflationary pressures that were supported by increased demand fuelled by anti-crisis macroeconomic policies.

The events of 2022 acted as a secondary trigger: rising food and energy prices create additional, rather prolonged, pressure on the price level, and to a greater extent for European countries than for the United States. At the end of 2022, inflation in a number of developed countries was fixed at a higher level, and self-sustaining mechanisms were activated. The persistence of the existing pro-inflationary factors will also be a significant fork in the road for the global economy: bottlenecks and logistical constraints, as well as the state of the Russian-Ukrainian conflict. By the beginning of 2023, the developed western countries were not on the upswing of the economic cycle, which is traditionally accompanied by inflation, but in the so-called high inflation mode, the exit from which is possible, but a soft landing will be much more difficult.

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Appendix 1

