Inflation Crisis under COVID-19 Pandemic and Ukraine Conflict

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Abstract. With the development of economic globalization, the economies of all countries are influencing each other and holding each other in check. Globalization is a double-edged sword, which brings both opportunities for development and serious challenges and risks to all countries in the world. Compared with developed countries, developing countries are more affected by crises and other shocks. This paper focuses on the changes of inflation in three major countries, the U.S., the U.K. and China, under the impact of two major events, the COVID-19 epidemic and the Russia-Ukraine conflict. During the first half year of 2020, the COVID-19 epidemic caused inflation in all three countries. This paper provides an overview of the current economic situation before going on to discuss the economic effects of the COVID-19 pandemic and the conflict in Russia and Ukraine on these three nations in terms of CPI, food prices, and energy costs. It concludes by summarizing how the economies of the United States, the United Kingdom, and China will develop in the future.

Keywords: Inflation crisis; COVID-19 pandemic; Ukraine conflict; CPI.

1. Introduction

It has been 31 years since the end of the Cold War that the current world economy has developed from a single and closed economic model to a diversified and globalized one. During this period, the world's economic and political situation has undergone earth-shaking changes. Figure 1 reflects a change in world average GDP since the end of the Cold War. It can be seen that, except for a decline after 2008 due to the worldwide financial crisis, it has shown a steady rise until 2019. The COVID-19 pandemic has had a significant negative influence on the world economy in 2020. The COVID-19 epidemic has not only seriously endangered people's health but also severely hurt the world economy and exposed significant imbalances. Around the world, the issues of declining growth rates, dropping interest rates, growing inflation and debt, rising asset prices, and widening income inequality as a result of the financial crisis have become even worse.

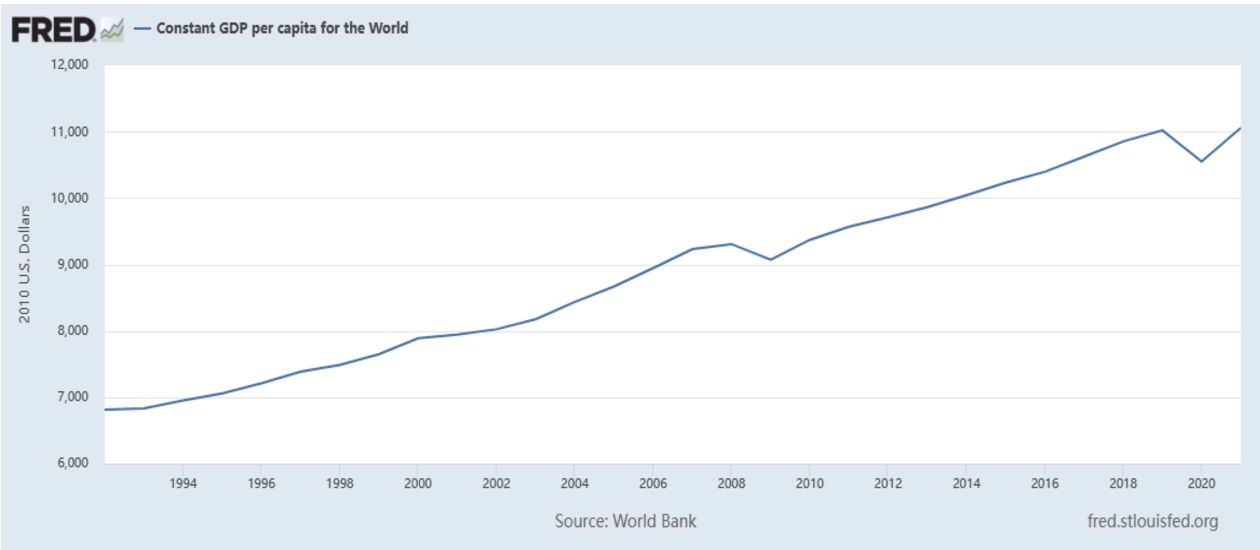

Figure 1. Constant GDP per capita for the World [1]

According to the IMF, global growth in 2020 is projected to be -4.4%, a less severe decline than that indicated in the World Economic Outlook's June 2020 Update. The worldwide GDP in 2021 is marginally 0.6% higher than in 2019 following a decline in 2020 and a rebound in 2021. In both advanced and developing market economies this year and the following year, the growth projections indicate significant negative production gaps and substantial unemployment [1]. In 2021, with the recovery of the economy, the global inflation rate began to increase gradually after a large decline in 2020, and maintained an unstable growth posture until the end of 2021.Since the conflict between Russia and Ukraine broke out at the end of February 2022, it has been a serious blow to both sides of the conflict and to the recovering world economy. Prices for food and fuel have dramatically climbed, particularly harming low-income countries' most vulnerable populations.

The expected slowdown in global growth is from a projected 6.1% in 2021 to 3.6% in 2022 and 2023. For 2022 and 2023, this is 0.8 and 0.2 percentage points lower than what was anticipated in January. Global growth is anticipated to slow after 2023, leveling off at roughly 3.3%. The expected inflation rates for 2022 are 5.7% in advanced economies and 8.7% in emerging market and developing economies, respectively. These predictions are 1.8 and 2.8% higher than those made in January due to war-related rises in commodity prices and expanding price pressures [2]. In these three years, as three major economies that can almost influence the global economic situation, the impact of the U.S., China and EU can reflect the trend of the global economic situation. It is going to talk about each of these three economies.

2. The U.S. Market

As the world's largest economy, the United States has been hit hard by 2020. Its economic supply and demand have been greatly damaged, and its industrial production has suffered greatly. The most obvious feature is that prices are falling at a visible rate. As Figure 2 shown, the U.S. consumer price index was 2.5% in January 2020, fell to 0.1% in May, and did not recover to 1.2% until November [3]. Unemployment is also rising at a frightening rate. In January 2020, the national unemployment rate was 3.2 percent. Just two months later, it shot up to 14.1 % in March 2020, and then barely dropped back to its late 2019 level until late 2021 [3].

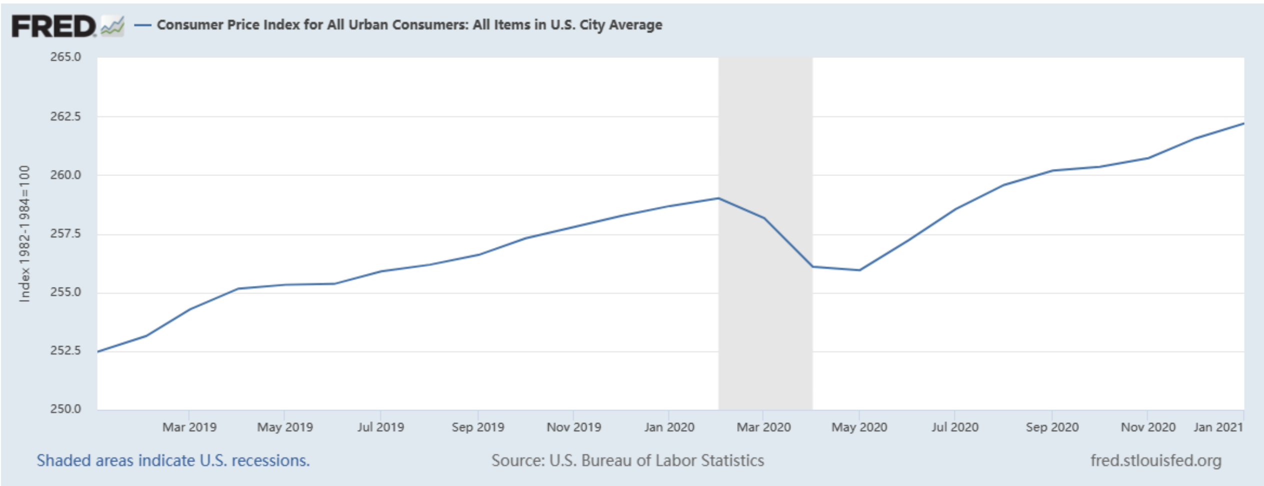

Figure 2. CPI of the U.S. [1]

The rise in unemployment means that the strain on America's social welfare system is also increasing, with adverse economic effects evident in the rise in jobless claims in early December and a sharp fall in retail sales in November (see Figure 3) [4]. The Federal Reserve has also made timely remedies, implementing emergency intervention in the market during the COVID-19 crisis, liberalizing the regulation of financial companies, significantly lowering interest rates, relaxing banking rules and greatly expanding loans, increasing support for American enterprises, a series of programs for large and small enterprises, households and the government. Its stimulus was an unprecedented $2.3 trillion [5].

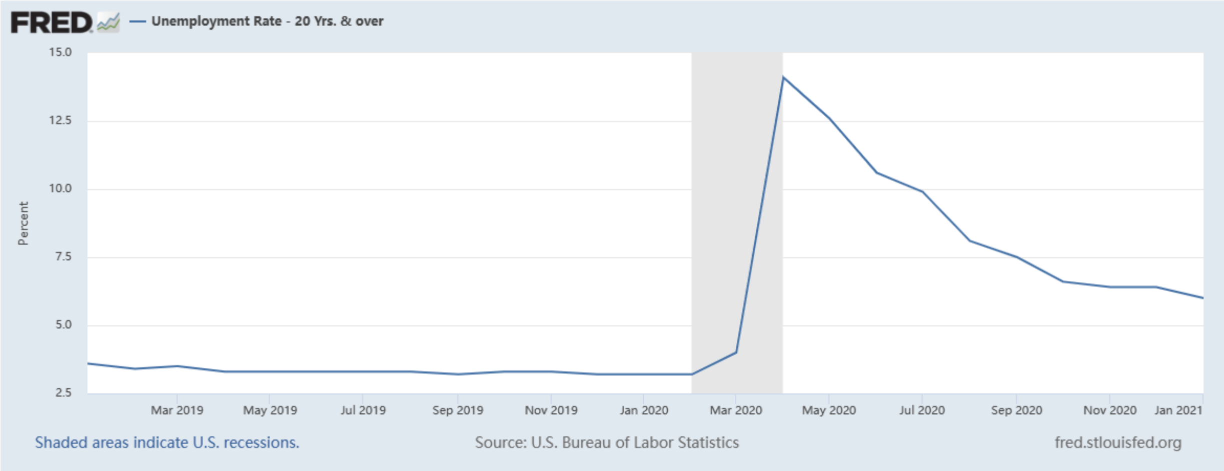

Figure 3. Unemployment rate of the U.S. [1]

The overall economic situation in the United States is in its biggest swing since the global financial crisis, as COVID-19 has hit the nation's markets (see Figure 4). In order to stabilize rapidly changing inflation, the balance sheets of the G10 central banks of advanced countries expanded by US $11 trillion between February 2020 and May 2021. It took eight years to achieve this increase after the 2008 international financial crisis. The Fed was buying $120 billion in bonds a month before tapering. Major central banks are running ultra-loose policies of low or even negative interest rates in order to facilitate cash repatriation [6].

Figure 4. Inflation rate of the U.S. [1]

At the same time, under the influence of the tense economic situation, the United States has adopted a comprehensive contraction of foreign trade since 2020. Affected by the Trump administration's withdrawal from the World Trade Organization, the total foreign trade of the U.S. in 2019 was $4,143.577 billion, down 1.5 percent from a year earlier, as Figure 5 shown. By 2020, the total value of US trade in goods had plummeted to $3,839.18 billion, down 8.8 percent year on year. The COVID-19 pandemic has prompted major trading nations, including the United States, to tighten trade policies across the board, and trade barriers have increased as protectionism has taken hold since 2008.

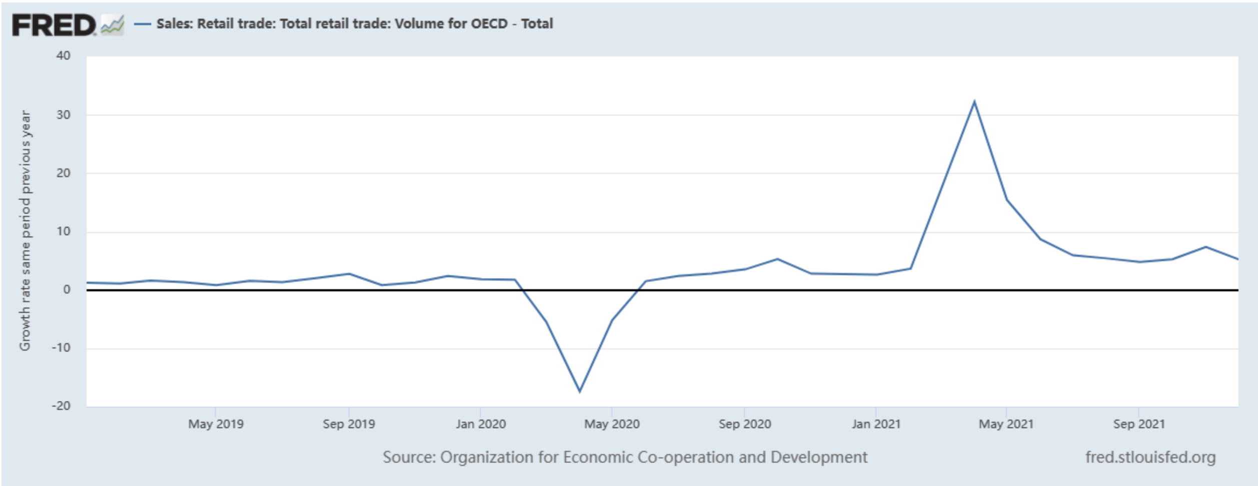

Figure 5. Total foreign trade volume growth rate [1]

Only 0.6% of all American trade is conducted directly with Russia, indicating that Russia is not recognized as one of the main trading partners of the United States, so the direct impact of sanctions on U.S. economic activity is weak. The recent increase in commodity prices is the biggest impact on the Russian-Ukrainian economy. This could have a large impact on businesses, but pose less difficulty for the supply of most commodities. As shown in the Figure 6, higher commodity prices and input costs are anticipated to cause the CPI to rise by 8% year over year in the upcoming months and by 4.9% from the current projection of 2% to 4.9% in 2022 [3].

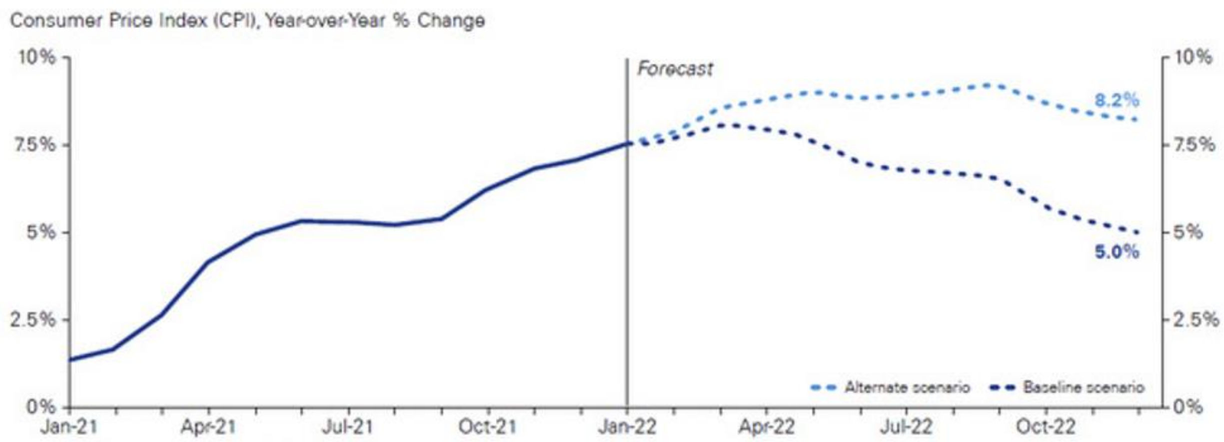

Figure 6. Total foreign trade volume growth rate [3]

As Figure 2 and Figure 4 shown, an upside inflation scenario is more likely as the war continues, based on ongoing geopolitical tensions, high house price growth, and major supply chain disruptions. China, its main trading partner, gradually recovers from the pandemic due to volatility in commodity markets. At the same time, the US government unleashes inflationary pressures by raising interest rates at the Fed rate [3]. The manufacturing industry in the U.S. is highly connected to the global economy, and the commodity prices caused by the Russian-Ukrainian war fluctuate greatly, which has a greater impact on its manufacturing industry. In addition, it also affects agriculture, mining, construction and other specialized services. However, given the indirect economic ties between the United States and Russia and Ukraine, the impact is relatively mild compared with the Far Eastern countries, Europe, Africa, etc.

As can be seen from the Figure 7, energy prices have changed significantly. Energy prices had already begun to rise before the Russian invasion and will remain high in the short term. The spot price of American crude oil surpassed $100 on February 24 for the first time in seven years, and it reached over $125 on March 8. The futures market, however, indicated that US crude oil prices would decline for the remainder of 2022, with the price hovering around $95 in December. This indicates that the war's effect on American energy costs will only be short-term [3]. Russia-Ukraine conflict account for about 29 percent of global wheat exports, and the war has affected the recent sharp rise in wheat and related prices, as well as in the United States, with wheat spot prices soaring to levels not seen since 2008.

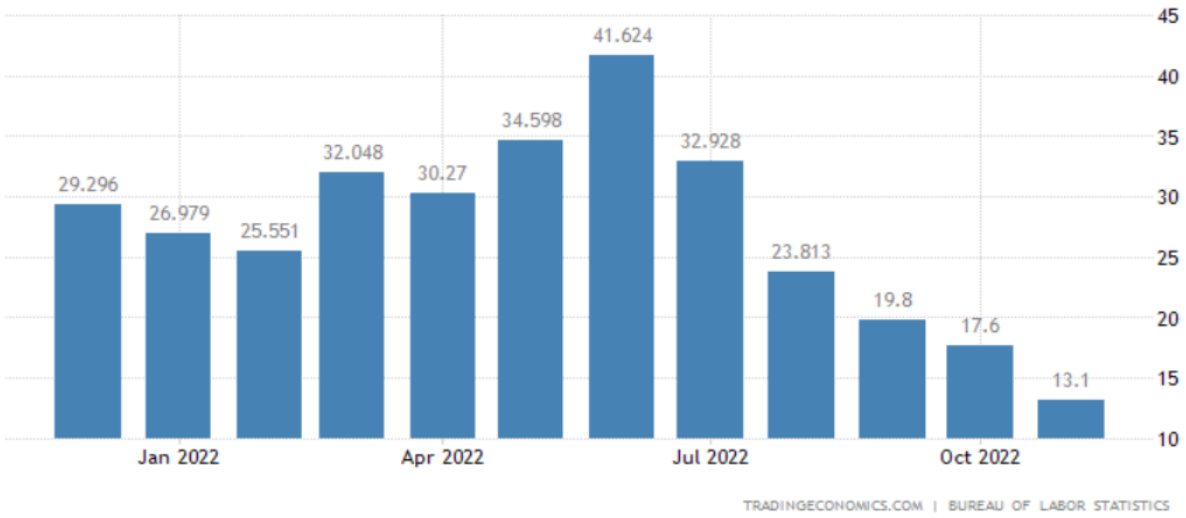

Figure 7. Energy inflation of the U.S. in 2022 [7]

As can be seen in the Figure 8, food inflation in the United States is also affected by it. The war could exacerbate global supply chain disruptions and continue in 2022. Conflicts bring about food embargoes and affect international food supply and demand along international trade chains, triggering higher international energy prices that drive food prices. The cost of food processing and logistics has increased as a result of the sharp rise in the price of oil, natural gas, and other forms of energy worldwide. Driven by multiple factors, global food prices have seen a new round of rapid rise [8].

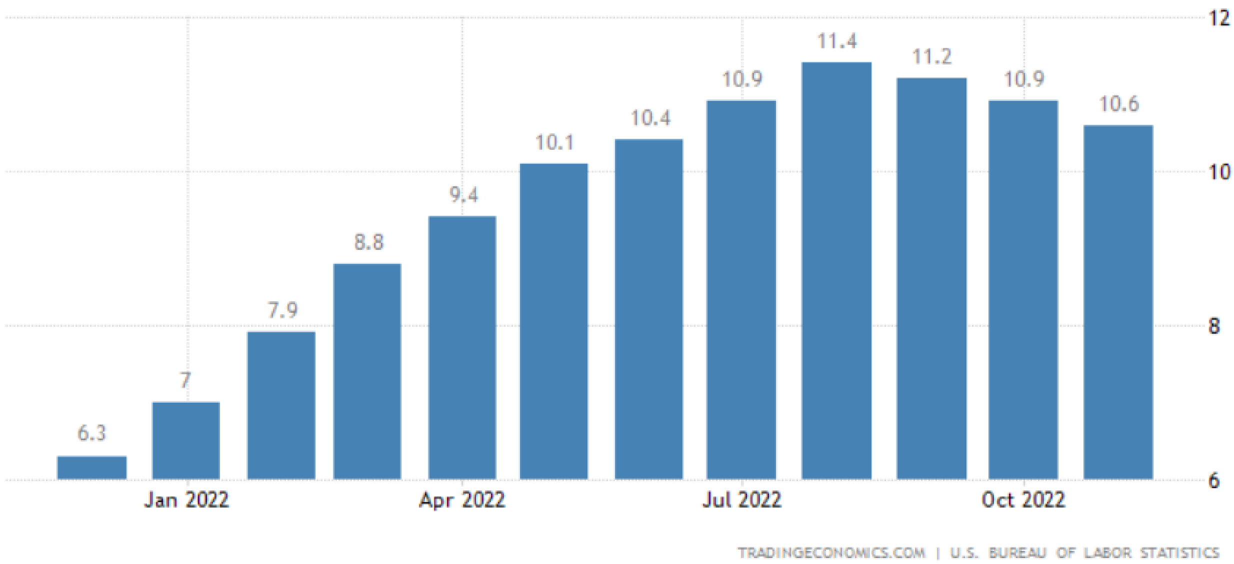

Figure 8. Food inflation of the U.S. in 2022 [7]

3. EU Market

Since COVID-19's emergence in 2020, the virus has quickly spread throughout the 27-nation European Union. In a short amount of time, there are now 840,000 confirmed cases. The EU countries have prioritized prevention and control, intensified measures like "lockdown" and "grounding," and generally employed the harshest social control measures in a state of non-war in order to deal with the effects of the epidemic. The Schengen Agreement made the EU's internal borders disappear, but they have already returned, and the EU has shut all European external borders. The influence gradually spreads to other domains other than medical treatment as people and logistics are obstructed, "non-essential" public locations are restricted, social and economic life is decelerated, and the usual order at both home and abroad is broken [9].

Even if not all European nations have ceased production because to the epidemic, supply lines have been interrupted, debt risks of all types have increased significantly, and financial markets have been in disarray. The EU has also started a package rescue plan to save their own economy, unlock resources, and infuse cash. But growth has slowed in tandem across Europe, with full-year forecasts of minus 2-5% [9]. France and Germany are the worst hit. From the social level. Small to medium-sized businesses that require a lot of labor, particularly in the service industry. It requires a large number of workers, have been hit hard, unemployment is rising sharply, conditions for refugees and immigrants are becoming more difficult, social panic and discontent are growing, and ethnic tensions are further exacerbated by ethnic issues, resulting in subsequent serious social problems.

As can be seen from the Figure 9 and Figure 10, although COVID-19 has had a significant detrimental impact on the economies of the EU, its member states, and the livelihood of its citizens, the impact on the EU's external economic and commercial cooperation has not been as severe. In 2019, bilateral trade with China alone exceeded $700 billion, and the EU continued to be China's main trade companion. In the first half of 2020, the EU's total foreign trade amounted to 3646.75 billion euros, an increase of 6.3% compared with last year. Meanwhile, the EU held several online talks with China, the United States and other major economies to ensure the normal development of exchanges with all countries in the face of the epidemic [10].

Figure 9. CPI of EU [7]

Figure 10. Inflation rate of EU [7]

Since March this year, affected by the conflict between Russia and Ukraine, since Russia and Ukraine are both important energy and food producers, as well as major gas and food suppliers to the EU, the EU has been plagued by energy crisis and inflation. In 2022, The 39.2 % rise in energy prices followed a 37.5 per cent rise in April, with unprocessed food prices rising 9.1 % in April and 9.2 per cent in May. In March and April 2022, inflation in the euro zone was 7.4%. In May it climbed further to 8.1%, more than four times the ECB's target. The European Commission has raised its forecast for inflation in the euro zone for the whole of 2022 to 6.1 per cent from 3.5 per cent and cut its forecast for economic growth to 2.7 per cent from 4 per cent previously [10]. Meanwhile, geopolitical conflicts may further hinder the international trade and supply chain of the EU, and the automobile, semiconductor, chemical and other industries will be significantly impacted.

Russia-Ukraine conflict has different impacts on different countries, among which Germany, Finland and the three Baltic countries are affected significantly. Due to different economic structures, dependence on energy imports and scale of economic and trade ties with Russia, EU member states are affected to a certain extent. Among the major EU economies, Germany has the highest dependence on Russian natural gas, and its industrial production and import and export contribute a lot to its economy. The Russia-Ukraine conflict will have a significant impact on its economy, which will keep the economic growth rate of Germany below 3% in 2022, much lower than previously expected [11]. The major industrial nations of the European Union are finding it challenging to maintain the post-Cold War economic expansion model of "importing inexpensive materials and manufacturing high-value products for export." The influence of globalization has made it urgent for the EU to address the problem of how to create a more robust supply chain and attain technological, economic, and strategic independence through innovation and collaboration.

4. China Market

China was the first country to implement lockdown measures to stop the illness's spread after the new coronavirus broke out in late 2019. The massive outbreak of NCCV pneumonia had a significant negative impact on supply and demand, and the Chinese government continued to invest more funds in the public health sector, i.e., the cost of diagnosis and treatment and prevention of the outbreak, while compensating for the economic losses. Through the latest data, it can be seen that China's finances have grown significantly year by year since the outbreak of the epidemic in 2019 [12]. The total macroeconomic demand and supply in China were directly affected by the epidemic fever. Based on the transmission mechanism of aggregate demand, the epidemic caused the three driving forces of consumption, investment and export to suffer different degrees of loss, most notably consumption. Domestic residents, under the influence of the epidemic, cooperated with the government's closure and control measures to reduce going out and cancel gathering as much as possible. This has caused a huge impact on China's economic structure, which is based on domestic demand [12]. According to the latest statistics, China's inflation rate is 1.60; CPI index is 103.30; core inflation is 0.60; core consumer prices are 100.60; GDP deflator is 722.52; producer prices are 111.70; producer price change is -1.30; and food inflation is 3.70.

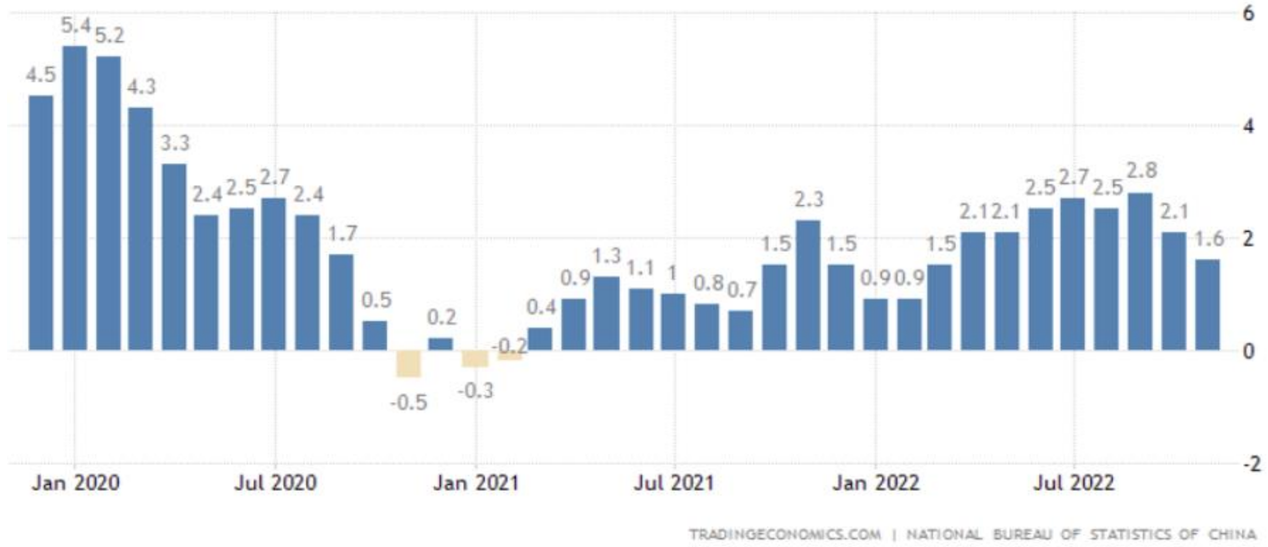

Figure 11. Inflation rate of China [7]

Food and housing are the most important components of China's CPI basket. As can be seen from Figure 11, China's annual inflation rate is rising. Strict COVID-19 measures at the time caused logistics disruptions. For the first time since October 2020, food prices increased, while inflation (1.9%) was at its highest level (see Figure 12). This is mainly due to the 11th consecutive month of higher pork prices due to the African swine fever outbreak, and the increase was even greater (116% compared to 97% in December), and several lockdowns and transport restrictions imposed in the context of the coronavirus outbreak put more pressure on pork costs [7].

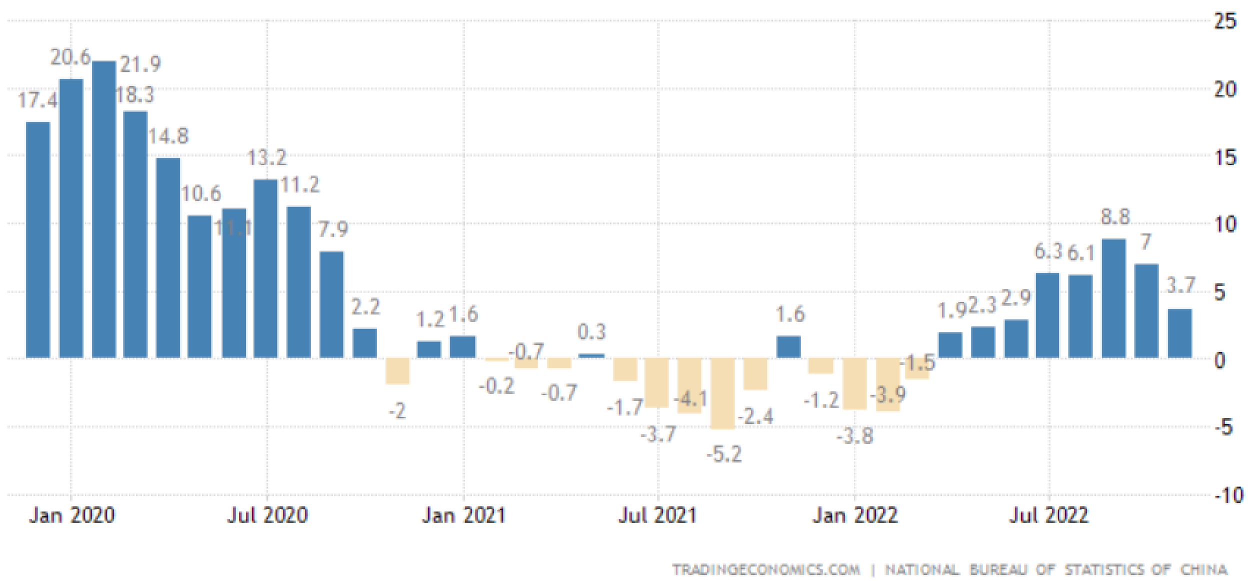

Figure 12. Food inflation of China [7]

In March 2022, affected by the Russia-Ukraine conflict, the global economy was hit hard, supply chains were disrupted, the supply of energy, food, metals and other commodities declined, and inflation increased and had a negative impact on global trade. Russia and Ukraine are not only important sources of food for China, but also external sources of production materials such as fertilizers and energy, and the stability of their supply environment is one of the external factors for China's stable grain production and supply, which is of great significance to China's guarantee of food security. According to pertinent study, China imported 83.57 million tons of oil from Russia in 2020, making up 15.67% of all China's imports, making Russia the country from which China imports the most oil; China's dependence on Russia in terms of natural gas imports is relatively low due to the country's very diversified natural gas import sources. In terms of coal, due to China's informal restrictions on Australian coal imports in 2020, the demand for Russian coal imports has also risen, and once Russia's energy supply has problems, there will also be a certain degree of energy crisis. On the other hand, from the energy price, the conflict between Russia and Ukraine has led to global energy prices all the way up, because China's crude oil and natural gas imports are relatively high. The rise in international crude oil prices will also act on the country, driving the domestic refined oil prices to adjust sharply. A range of oil product prices displayed an upward trend as China's fresh round of refined oil price adjustment window opened. Based on the important position of energy products in social production, insufficient energy supply or rising costs caused by the Russian-Ukrainian conflict will have an important impact on China's production and life [8].

Under the condition that the US dollar continues to release water and overseas inflation continues to import, international commodity prices continue to rise and are transmitted to China, causing agricultural machinery and labor costs to rise. Under the superposition of multiple factors, China's grain production costs have increased significantly, and achieving the policy goal of "ensuring farmers' income growth" will face more challenges.

5. Conclusion

Through data collection and analysis in this paper, the development of globalization has brought countries closer together, especially in economic terms. In 2020, the Newcastle pneumonia epidemic had a large influence on the global economy, with all major economies having negative reactions such as a sharp decrease in economic growth, a rise in unemployment, a fall in trade and cross-border investment, and irregular commodity prices. Countries have implemented monetary and fiscal policies in response to the effects of the epidemic to ease their problems and strengthen their economies. Unconventional monetary policies, however, are likely to produce significant volatility in the capital markets of major economies and serious negative spillover effects, adding uncertainty to long-term global economic growth. This is because conventional monetary policies cannot be implemented in the extremely limited space available and because the world economy is not currently growing at a significant rate. The rapid adjustment of global supply chains has grown in importance at the physical level of the world economy as a result of the epidemic. At the same time, countries are more severely impacted by the energy and food aspects of the Russia-Ukraine conflict in March 2022. That war conflict is both a cause of soaring energy and food prices and an important factor in exacerbating the energy and food crisis. Under the advancement of globalization, each country should respond to the development of trade globalization and economic globalization and seek to maximize benefits, while also seeking effective ways to jointly solve the food crisis and ease energy tensions.

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