

The impact of the Federal Reserve rate hike on global markets

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Abstract. The objective of this study is to determine the degree of influence exerted by the Federal Reserve System (FRS) interest rate hike in the United States on global markets, including the Russian market. To achieve the research objective, both quantitative methods (statistical regression analysis) and qualitative methods (document analysis and expert interviews) were utilized. The findings of the study revealed a significant level of influence from changes in the banking and financial system of the United States on global markets. To mitigate the negative consequences, the creation of an alternative global reserve currency fund is proposed, with the yuan being the most suitable currency for this purpose. The scientific novelty of the research is justified by the fact that economic interdependencies between countries are becoming increasingly interconnected and interdependent. The increase in the FRS interest rate can have a substantial impact on the economic situation in various countries worldwide, including both developing and developed economies. Previous studies on the impact of FRS interest rate hikes on global markets were conducted during different time periods and under various economic conditions. However, in light of recent events such as the COVID-19 pandemic and global trade disputes, changes in market reactions to FRS interest rate hikes are possible.

Keywords: financial market, crisis, interest rates, dollar, federal funds rate.

1 Introduction

The subject area under investigation in the article is macroeconomics and financial markets. The article examines the impact of the Federal Reserve's decision to raise interest rates on global financial markets and the economy as a whole. Within the scope of the research, it is necessary to determine the degree of influence of the Federal Reserve's rate hike and changes in American monetary policy on global markets.

The Federal Reserve or the federal funds rate is the average interest rate that banks pay for short-term loans (overnight) in the federal funds market [1]. The Federal Reserve

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System employs specific tools to adjust this rate as it affects other interest rates, such as credit card rates, mortgage rates, and bank loans. It also affects the cost of the U.S. dollar and other household and business assets, making it the most important interest rate in the world. Therefore, it is particularly relevant to describe and analyze the possible consequences of the recent increase in the key rate of the Federal Reserve (following the May 2-3 meeting, the Federal Reserve of the United States raised the rate by 25 basis points to 5-5.25% per annum [2]. Federal Reserve Chair Jerome Powell stated that the regulator does not plan to reduce the interest rate in the near future [3].

There are various foreign scientific sources that describe the impact of the increase in the federal funds rate in the United States. James Garrett Baldwin, in his research, points out that as interest rates rise, the cost of borrowing money becomes more expensive. This makes the purchase of certain American goods and services, such as homes and cars, more costly, which, in turn, compels consumers to spend less, reducing demand for goods and services. If the demand for goods and services decreases, companies reduce production by laying off workers, thereby increasing the unemployment rate [4].

Greg Brown, in his work, defines the impact of the Federal Reserve's rate hike on the stock market and states that the relationship between interest rates and the stock market is quite indirect; they tend to move in opposite directions. Usually, when the Federal Reserve lowers interest rates, it leads to an increase in the stock market, while when the Federal Reserve raises interest rates, it results in a decline in the overall stock market. However, there is no guarantee of how the market will react to any changes in the interest rate that the Federal Reserve decides to make [5].

According to the Federal Reserve, an increase in interest rates leads to a decrease in inflation. The American regulator claims that as interest rates rise, the cost of goods and services increases because borrowing money becomes more expensive. In this context, the Federal Reserve System of the United States stated that when demand decreases, prices also decrease, which in turn reduces inflation [6].

Furthermore, the Federal Reserve's rate also affects the volatility of currencies in other countries, including the Russian ruble. This is due to the fact that an increase in the US federal funds rate results in an increase in the value of the dollar [7].

In the Russian scientific community, the question of the impact of the Federal Reserve's key rate hike on the economy has not been fully explored. However, referring to news and analytical online sources, it should be noted that RBK recently published a review study dedicated to the Federal Reserve's rate hike in the United States. In the review study, the authors pointed out that the problems of the US banking sector can only indirectly affect the Russian economy due to its isolation from the American financial system. However, the Russian stock market, although relatively protected from external influences, may still face pressure due to the worsening situation in the United States. The study suggests that during periods of increased risks, it is better to hold shares of companies with stable businesses, oriented towards domestic demand, and prospects for dividend payments [2].

Since Russian sources and publications of scientists do not fully describe the possible consequences of the Federal Reserve's rate hike on global markets (including the Russian market), it is considered particularly relevant to analyze this measure taken by the American regulator.

Given that currently the share of the dollar in Russia's export settlements is about 48% [8], the Russian economy may be subjected to various negative consequences due to changes in US monetary policy. A significant increase in the share of the yuan in Russia's export settlements will help mitigate the potential negative impact of the Federal Reserve's rate hike. Currently, the yuan accounts for 16% of Russia's export settlements [9].

2 Materials and Methods

"The research design of this article includes the following elements:

1) The purpose and objectives of the study:

The purpose of the study is to determine the degree of influence of the increase in the US Federal Reserve System rate on world markets. To achieve this goal, the following tasks were set:

- Study the theoretical aspects of the impact of changes in the Federal Reserve System rates on world markets;
- Analyze changes in various markets during the period of increase in the Federal Reserve System rate;
- Evaluate the impact of the increase in the Federal Reserve System rate on the global money market, stock market, currency market and commodity market.

2) Methodological apparatus:

To achieve the goal of the study and solve the tasks set, both quantitative and qualitative methods of analysis were used. Quantitative methods include statistical data analysis, regression analysis. Qualitative methods include document analysis, expert interview analysis and content analysis.

3) Methods and techniques for collecting and analyzing original data:

To analyze the impact of the increase in the Federal Reserve System rate on world markets, data obtained from various sources were used, including reports from central banks, trading platform data and news feeds.

4) Possible methodological limitations and their impact on the integrity and validity of the results obtained:

One possible limitation of this study is limited access to some data due to confidentiality. In addition, some economic processes may be complex and multifaceted and may therefore require additional research.

Overall, the methodological approaches and methods used for data analysis allow for a fairly accurate assessment of the impact of an increase in Federal Reserve System rates on world markets."

3 Results

An increase in the Fed rate is necessary to achieve the main goal - reducing consumer inflation in the US from the current 5% to the target value of 2% [10].

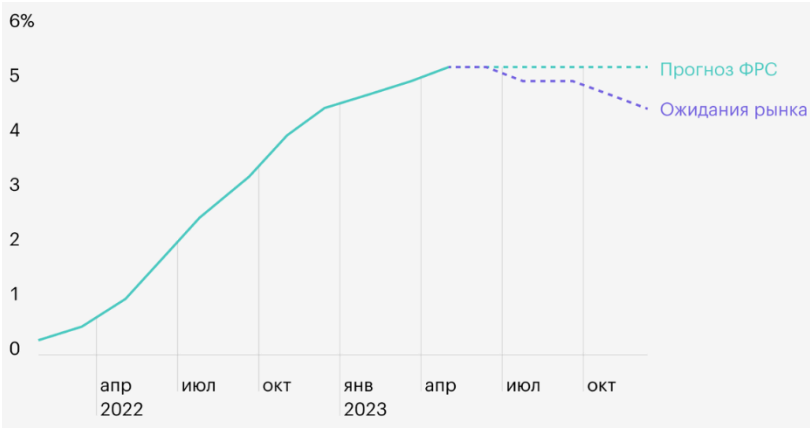


Fig. 1. Change in the Federal Reserve rate. Sources: [11], [12], [3].

The rate hike began in the United States 15 months ago, and over the past 9 months there has been a steady decline in the country's inflation rate. In this regard, the regulator has emphasized a possible pause in the cycle of rate hikes [3]. The official forecast regarding the federal funds rate will be presented in June 2023. In accordance with the latest statement by the Federal Reserve System (FRS), the regulator's plans have not changed, and it intends to maintain the interest rate at 5.25% until the end of 2023, as shown in the figure above.

It should be noted that US FRS policy has been changing since previous meetings. If previously there was an opinion on the expediency of further raising interest rates, now the American regulator calls for an assessment of the economic effect of such measures and maintaining interest rates at their current level [3].

The current increase in the Federal Reserve rate marks the tenth consecutive increase in this indicator. This step by FRS is a response to accelerating inflation, which reached its peak in June 2022 - more than 9%, the highest level in four decades [13].

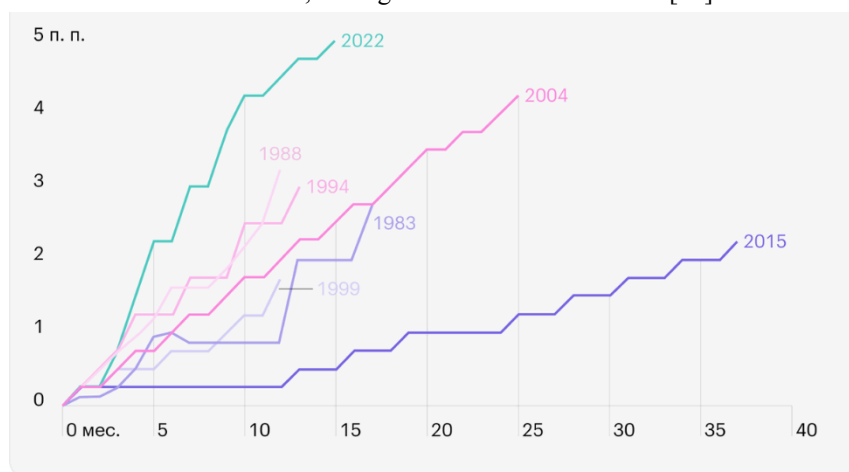


Fig. 2. Cycles of Fed rate increases compared to the beginning of the cycle. Sources: [11], [12]

In just over a year, the interest rate was raised by 5 percentage points, which became the fastest increase in the last 40 years [14], [12].

Next, we propose to evaluate the impact of changes in the US Federal Reserve System's rate on the global monetary market, stock market, currency market, and commodity market.

The influence of the Federal Reserve System on the monetary market cannot be underestimated as it is directly linked to the cost of borrowing money. When the Fed rate is lowered, there is an increased demand for loans from the Federal Reserve, which provides banks with additional liquidity and allows them to lower their own interest rates for lending to companies and individuals.

For companies, this is a positive development as it reduces costs for servicing credit obligations, increases profits, and creates opportunities to finance investment projects. The reduction in the cost of loans for individuals stimulates consumer activity, which also increases demand for industrial products and services, contributing to economic development. However, saturating the market with cheap money simultaneously carries the risk of inflation growth and the turning of an inflationary spiral.

Moreover, lowering rates leads to a reduction in the yield of all instruments in the monetary market such as bank deposits, treasury and corporate bonds primarily due to the growth of their exchange prices.

Conversely, raising rates has the opposite effect. An increase in instrument yields leads to an outflow of free funds into deposits, redirection of financial flows from stocks to

bonds, etc. The decrease in consumer activity and profitability of companies leads to a decrease in production activity and freezing of investment projects, as well as putting pressure on consumer activity. Overall, raising rates can help combat inflation, but it can also lead to a slowdown in the economy and, in the most negative scenarios, to its recession.

For the bond market, an increase in interest rates is considered a positive process because it increases the return on assets. However, for the stock market, the rise in rates has a negative effect. After all, to grow and develop companies need loans with low interest rates. This allows them to increase output, revenue and net profit, as well as move forward through investment projects. However, with the rise of interest rates, the cost of loans also increases, which has a negative impact on all these factors. As a result, the increase in the rates of the Fed leads to a fall in the quotations of the shares.

On the global oil market, sales contracts are mainly in dollars. Thus, there is a direct dependence of prices on the commodity market on the rates of the Federal Reserve. According to this logic, the rise in U.S. rates leads to the strengthening of the dollar, which in turn reduces the prices of commodities in dollars.

However, it should be noted that the influence of Fed rates on commodity price indicators is not linear. The price of raw materials is influenced by many other factors such as: the level of demand and supply in the world markets, seasonal fluctuations in demand, as well as geopolitical risks. All these factors can have a big impact on commodity prices, making predicting changes in the oil and other commodities market less predictable and more difficult. The influence of the Fed on the commodity market can be traced in the current Russian situation. Assess the structure of Russian export deductions in percentage.

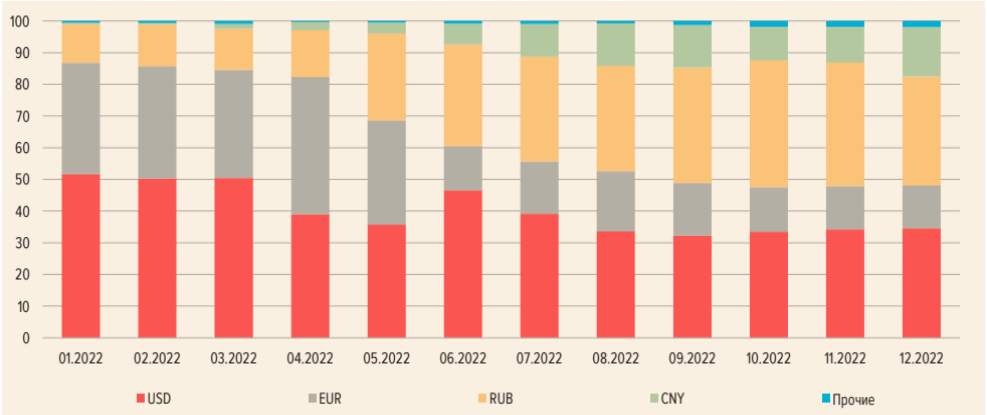


Fig. 3. Structure of all Russian export allocations in 2022 by currency, %. Source: [8].

Since the beginning of 2022, the intensive dynamics of the decrease in the share of the dollar and the euro and the increase in the share of the ruble and the yuan in Russia's export calculations is noticeable. Thus, the share of "toxic" currencies (note: the term is introduced by the Bank of Russia; meaning dollars/euros) in Russia's export settlements has fallen to 48% by the end of 2022, compared with 87% at the beginning of the year. According to a Bank of Russia survey, the share of the Russian national currency in settlements for exports at the beginning of 2023 is 34%, down from 10.2% at the beginning of 2022. In addition, the Chinese yuan has become an alternative currency for export settlements other than the Russian rubles.

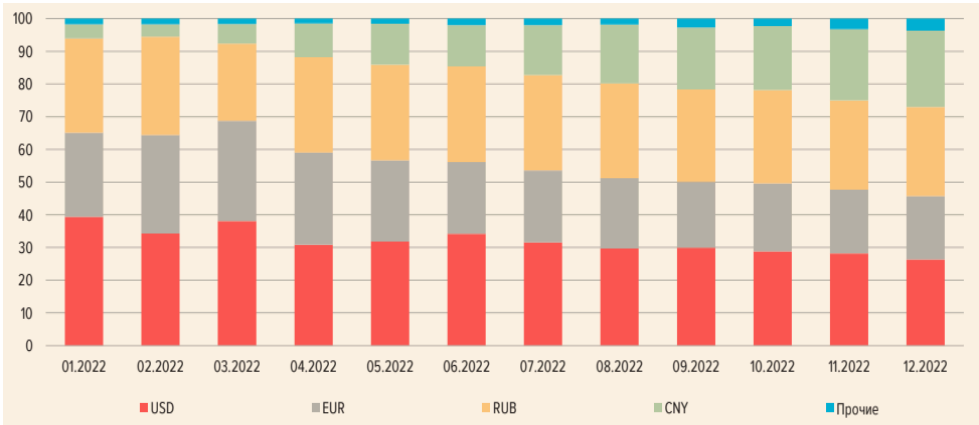


Fig. 4. Structure of Russia's total imports by currency, %. Source: [8].

The share of the U.S. dollar and the European currency in import settlements also fell to 46% from 65%. This is the first time since 2013 that the share of the dollar and euro in Russian foreign settlements has fallen below 50%. In 2013, the share was 88.7% in exports and 70.5% in imports.

4 Discussion

The U.S. Fed has lost control of inflation, and restoring price stability could lead to a recession. Moreover, the Fed may not be able to deal effectively with the next major economic downturn, which could exacerbate the situation.

Such events could seriously affect the Fed's credibility. The public may question the usefulness of a central bank that cannot ensure that inflation is no higher than the 2% target and protect jobs.

The history of the Fed's experience from the 1930s through the 1970s has shown that the U.S. economy suffers greatly when the central bank is not an effective economic management tool. As the dollar strengthened in the world market after World War II, dependence on the U.S. currency began to be seen in virtually all countries. Thus, a possible crisis in the U.S., which will be caused by raising the Fed rate, will provoke a number of negative consequences in many countries and the world markets as a whole. Let us highlight the main ones:

- 1) An increase in the Fed rate could lead to a strengthening of the dollar, which could worsen the export opportunities of other countries whose currencies become less competitive. This could lead to lower exports and higher unemployment in other countries.
- 2) An increase in the Fed's rate could lead to higher borrowing costs for other countries that depend on dollar-denominated lending. This could lead to higher inflation and lower economic growth in other countries.
- 3) A Fed rate hike could lead to less investment in other countries because investors may prefer to invest in the United States, where a rate hike promises higher returns, which would also lead to less investment and economic growth in other countries.

Based on the results of the study and assessment of the effect of the U.S. Federal Reserve's rate hike, it is offered to evaluate the impact of this measure of the American regulator on the Russian market, including the export of petroleum products. The effect will depend on several factors.

First, an increase in the FRS rate may lead to a strengthening of the U.S. dollar, which may make Russian petroleum products more expensive for foreign buyers. This could lead to lower demand for Russian petroleum products and, consequently, lower exports.

Second, an increase in the Fed Funds rate could result in higher interest rates on loans and borrowings. This may affect Russian oil companies, which may face higher borrowing costs and, consequently, lower profits. It may also lead to lower investment in the industry and, possibly, to a reduction in the production of petroleum products.

However, it should be noted that the effect of an increase in the FRS rate on the export of petroleum products in Russia may be offset by other factors such as: changes in demand for petroleum products in the world market, changes in the ruble exchange rate and other factors.

Various Russian analytical studies do not take into account the aforementioned presumed effects of the Federal Reserve rate hike. In its research, RBK points out that any potential problems in the US banking sector, if they were to affect the Russian market, would only do so indirectly due to its isolation from the Western financial system [RBK, 2023]. However, it is worth considering the fact that, according to the estimates of the Central Bank of Russia, although the share of the dollar in Russia's export and import settlements has decreased, it still accounts for a significant portion. In this context, in order to prevent the potential upcoming crisis from significantly affecting Russia, it is necessary to substantially increase the share of the yuan in export settlements. Reducing the share of the dollar in export settlements and increasing the share of the yuan can be achieved through several methods:

- 1) Developing economic ties with China and other countries willing to conduct settlements in yuan, which can be achieved through the signing of agreements on mutual settlement in national currencies, thus avoiding the need to convert currencies during transactions.

- 2) Developing the necessary financial infrastructure for yuan settlements. This may include the establishment of yuan-denominated markets, expanding the network of banks capable of conducting yuan settlements, and the development of electronic payment systems.

- 3) Increasing the share of the Chinese economy in the global economy. China is Russia's largest trading partner, and an increase in its share in the global economy can contribute to an increase in the share of the yuan in export settlements.

- 4) Enhancing the image of the yuan as an international reserve currency, which can be achieved through the stability of the Chinese economy, an increase in China's credit rating, and improved transparency in financial markets.

- 5) Developing exports to countries willing to conduct settlements in yuan, which can be achieved through active efforts to attract new partners in markets where the yuan is already used as a reserve currency.

However, it should be noted that reducing the share of the dollar in export settlements and increasing the share of the yuan is a long-term process that requires significant efforts. Additionally, several countries are also considering the yuan as a primary alternative to the dollar. This is due to several reasons.

Firstly, China is one of the world's largest economies, and its share in the global economy continues to grow. This means that the Chinese market is becoming increasingly attractive to foreign investors, and the yuan is becoming a more liquid currency.

Secondly, China actively promotes its currency on the global stage. The People's Bank of China (PBOC) consistently works on expanding the international role of the yuan, including increasing its usage in international trade and investments. For example, China has established the Shanghai Stock Exchange, where yuan futures are traded, allowing foreign investors to access Chinese stocks and bonds without converting their dollars into yuan.

Thirdly, some countries view the yuan as an alternative to the dollar due to geopolitical risks associated with the use of the dollar. For instance, countries like Russia and Iran face

restrictions on using the dollar in international transactions due to US-imposed sanctions.

Lastly, the existence of an alternative global reserve currency fund can help diversify the global financial system and reduce global dependence on the dollar.

5 Conclusion

According to the research results, it has been proven that the increase in the interest rate by the US Federal Reserve (Fed) and the possible crisis triggered by this measure in America will affect a large part of the world due to a strong dependence on the dollar and the overall American banking system. An example in this case can be the mortgage crisis of 2007-2008 in the US, the consequences of which spread practically worldwide.

Within the scope of the research, proposals were put forward to reduce Russia's and other countries' dependence on the dollar. In this context, strengthening the position of the yuan in the global markets is seen as a promising direction.

The study on the impact of the Federal Reserve's interest rate hike on global markets holds significant practical significance for investors, economists, politicians, and other stakeholders because this action by the American regulator can lead to a number of negative consequences. For example, the Fed's decision to increase the interest rate will result in changes in prices of stocks, bonds, and other investment instruments. In this context, understanding the consequences of the Fed's interest rate hike will enable investors to make more informed decisions.

The Fed's interest rate hike can influence currency exchange rates and trade balances between countries. Research on this issue can predict these changes and assist businesses and governments in making decisions regarding trading partners and export-import strategies.

The popularization of the issue of the Fed's interest rate hike on global markets in the Russian scientific community is particularly relevant for several reasons. In this regard, it should be noted that Russia is a member of the global community, and its economy is closely connected to global markets. The increase in the US Federal Reserve's interest rate can have a significant impact on the Russian economy as the dollar still holds a substantial share in Russia's export calculations.

The Fed's interest rate hike can affect the exchange rate of the Russian ruble and inflation in Russia. Research on the impact of the Fed's interest rate hike on global markets can assist Russian economists and financiers in forecasting the possible consequences of the Fed's interest rate hike and developing measures to minimize these effects.

Lastly, Russia is one of the largest exporters of oil, and oil prices can fluctuate significantly in response to changes in global financial markets. Studying this issue will help predict changes in oil prices and develop measures to mitigate possible negative consequences for the Russian economy.

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