

VAR MODEL OF INFLUENCE OF CURRENCY POLICY ON FOREIGN TRADE BALANCE

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Abstract: In the scientific article, the impact of the currency policy on the trade balance and the reverse impact of the trade balance on the exchange rate were analyzed with the help of the VAR model on the example of Uzbekistan. According to the results of the model, the influence of the national currency exchange rate on the change in the volume of imports was determined, but the influence of the national currency exchange rate on the volume of exports was not statistically significant. It was also found that there is a strong autocorrelation of the selected indicators. The results of the model are interpreted in a scientific article.

INTRODUCTION

The main goal of currency policy is to mitigate the impact of changes in the international economy on the domestic economy. Adverse effects on trade balance are prevented by eliminating unexpected changes in the exchange rate through currency policy. Along with influencing trade balance through currency policy, changes in trade balance also affect exchange rates.

It is important to determine the currency exchange rate regime for each country. Because, by establishing the exchange rate regime, Central Banks give a signal to commodity and financial markets, domestic and foreign economy about how the country's currency policy is conducted, and accordingly, various processes are observed in the economy.

The correction of the exchange rate by central banks and thereby influencing various processes in the economy is called currency policy. It is through currency policy that countries influence domestic and international economic situations.

Currency policy is considered as a term often used in developing countries. This is because, in contrast to developed countries, the international movement of national currency of developing countries is not ensured. That is, international debts are not received and paid in national currencies of these countries. Therefore, when reading literature in economics, it is difficult to find literature that deals with a separate currency policy. Currency policy is a part of monetary policy and is often referred to as monetary and currency policy.

When the exchange rate is in a free-floating exchange rate regime, the value of national currency against foreign currency is formed based on supply and demand in the currency exchange. But this does not mean that Central Banks do not intervene in the formation of the exchange rate at all. When various fluctuations in the economy, various "shocks" in the international economy lead to sharp fluctuations in the national currency exchange rate, central banks can correct the exchange rate in order to mitigate this effect, and this can often be seen in practice.

LITERATURE REVIEW

It is one of the important issues for the states to conduct currency policy correctly and ensure economic stability through it. In this way, economists in many countries have conducted a lot of research aimed at determining the effectiveness of monetary and currency policy, its impact on economic growth, and determining the optimal exchange rate regime.

E. Kohlscheen analyzed the impact of monetary policy shocks on the exchange rates of Brazil, Mexico and Chile. According to him, it is wrong to assume that there is a traditional relationship between one-day exchange rate changes after monetary policy decisions and unexpected increases in interest rate due to exchange rates. He argues that whether to use the US dollar or effective exchange rates, whether interest rate changes are expected or not, despite changes in interest rate resulting from exchange rate intervention, there is lack of an empirical basis for predicting standard open economy models. According to his conclusions, it is difficult to attribute strong fluctuations in the exchange rate to fiscal expansion, since the unexpected increase in the exchange rate is not associated with an increase in the risk premium, and similar results were obtained on the example of Chile. This is because Chile's international short-term credit rating has been at a high level since 1997, and the government debt-to-GDP ratio is below 10 percent.¹ We can see the weak relationship between the interest rate and the exchange rate received by them as an important result for making decisions in the monetary policy of developing countries.

Economists such as A. Inoue and B. Rossi studied the impact of Central Bank monetary policy on exchange rates and analyzed how unconventional monetary policy changes the way monetary policy is transmitted to international financial markets. According to them, according to the principles of traditional monetary policy, expansionary monetary policy shocks lead to the depreciation of that country's currency. They revised the traditional principles in the traditional and unconventional periods of monetary policy in the United States, and used a new identification procedure that defines monetary policy shocks as shifts in the entire revenue curve as a result of unexpected changes in monetary policy and allows for differentiation by the nature of monetary policy shocks. These new identification procedures are assumed to affect economic agents' forecasts of future interest rate movements, as well as risks and uncertainties in the economy. The results of the analysis showed that, firstly, the easing of monetary policy has led to a decrease in the nominal exchange rate in the country's spot market in both traditional and unconventional periods, and secondly, monetary policy shocks have different fluctuations over time, and the effect of these interest rates depends on how they affect the expectations of economic agents. Thirdly, Dornbusch (1976) found positive evidence for the excess hypothesis and, fourth, concluded that changes in expected real interest rates play an important role in the transmission of monetary policy shocks.²

Economists such as B. Hofmann, I. Shim and H. Shin studied the change of currency policy in developing countries during the pandemic and its impact on the local stock market. According to the analysis, borrowing from the national stock market in emerging market

¹Kohlscheen, E. (2014). The impact of monetary policy on the exchange rate: A high frequency exchange rate puzzle in emerging economies. *Journal of International Money and Finance*, 44, 69-96.

²Inoue, A., & Rossi, B. (2019). The effects of conventional and unconventional monetary policy on exchange rates. *Journal of International Economics*, 118, 419-447.

economies also did not protect against the financial shocks caused by the Covid-19 pandemic. Also, in developing countries, the frequency of fluctuations in the local stock market was high due to the sharp devaluation of the national currency and capital outflow. Portfolio investors faced increased losses from domestic stock market volatility and currency swings, and their revised portfolio allocations in turn exacerbated this correlation. According to scientists, developing countries with sufficient monetary policy instrument effectiveness to address the reduction of the correlation between exchange rate depreciation and capital outflows will have a better chance of overcoming the financial consequences of the pandemic. They also concluded that central banks in developing countries should expand their toolkits to take on the role of "dealer of last resort" in order to counter large equity swings in domestic bond markets.³

A.F. Chaudhry and others made an empirical analysis of the influence of informal, that is, parallel market exchange rates on the economy on the example of Pakistan. In particular, the informal foreign exchange market of Pakistan Rupee against Japanese Yen (JPY/PKR), Swiss Franc (CHF/PKR), British Pound Sterling (GBP/PKR) and US Dollar (USD/PKR) is empirically analyzed in the domestic economy of Pakistan. For this, they used Ljung Box Q-test, Augmented Dickey-Fuller tests, Phillips and Perron tests, Durbin-Watson test, Runs-test, and Variance ratio tests based on statistical data between 1994M07 and 2001M06. According to the results of empirical analysis, the influence of Pakistan's informal foreign exchange market on economic processes has been found to be weak.⁴

In our opinion, these analyses are important in developing the official monetary policy of the Central Bank, as well as in developing currency positions of commercial banks and investors. At the same time, mitigating the impact of parallel market rates is considered possible through foreign exchange interventions by the Central Bank.

This situation can be concluded from the fact that parallel market rates existed in our country until 2017 and its influence on economic processes was strong. From 2017 to today, the influence of parallel market exchange rates on economic processes has been greatly reduced, but no matter how much our state tries to eliminate the parallel market of currency, it remains until today, which leads to

E. Albagli and others analyzed the impact of changes in US monetary policy on international bond markets. Using panel regression, they modeled the impact of US monetary policy shocks on the international bond market as a result of changes in short-term government bond revenue based on Open Market Committee decisions. By modifying this relationship, they obtained three main results. First, the impact of US monetary policy on long-term government bond revenue has increased significantly since the global financial crisis. Second, the impact of monetary policy shocks on government bond revenue was greater during the pandemic than during the 2008 economic crisis. Third, the impact of monetary policy shocks on government bond revenue spread through various channels. In particular, in developing countries, the main channel is through risk-neutral rates (the forecast of future monetary policy interest rates), while in developed countries, it is spread through term

³Hofmann, B., Shim, I., & Shin, H. S. (2021). Emerging market economy exchange rates and local currency bond markets amid the Covid-19 pandemic. Available at SSRN 3761875.

⁴Chaudhry, A. F., Hanif, M. M., Hassan, S., & Chani, M. I. (2019). Efficiency of the Black Foreign Exchange Market. *International Journal of Economics and Finance*, 11(2), 165.

premiums in markets. In their scientific research, they also analyzed the impact of changes in the US monetary policy on the monetary policy of developing countries. In particular, as a result of changes in the US monetary policy, developing countries are forced to pursue monetary contraction policies or accept the depreciation of their national currencies against the US dollar. In developed countries, monetary policy shocks are counterbalanced by free-floating regimes, partly with risk-neutral rates and partly through currency interventions. Developing countries are forced to undertake large currency intervention, which dampens the response of exchange rates but amplifies capital flows and their impact on bond revenue through movements in term premiums. According to their results, standard cost-benefit analysis should also be taken into account when calculating the endogenous effect of large currency intervention on long-term government bond revenue.⁵

A. Grebenkina and A. Lyamenkov analyzed the impact of economic changes in the last year on currency policy of the Central Bank of Russia. According to them, in recent decades, currency policy in Russia has changed significantly, and this was also reflected in the extent of use of certain monetary policy instruments depending on the exchange rate regime. The results of the quantitative analysis showed that during the inflation targeting regime, compared to the previous period, the relationship of the ruble exchange rate to the main interest rate improved and the dependence of the ruble exchange rate on the world commodity market decreased. However, changes in the global economy at the end of February 2022 had a significant impact on both monetary policy and the sensitivity of the exchange rate to these changes. The ruble exchange rate has become a less interpretable indicator in the context of the chaotic impact of balance of payments items on the ruble exchange rate, the impact of external and internal restrictions on cross-border capital movements, and the suspension of the usual instruments of monetary policy. Nevertheless, the authors believe that the value of the ruble exchange rate, as an important parameter of monetary policy, will remain at the same level as after overcoming the acute stage of the economic crisis.⁶

M. Y. Pechalova studied the changes in the monetary policy of Russia against the background of increasing geopolitical tensions. The relevance of these studies is related to the need to analyze and evaluate the results of the monetary policy conducted by the monetary authorities in 2014-2022 under the pressure of unprecedented sanctions of unfriendly countries on the Russian economy. The goal of this scientist's scientific research is to determine the degree of influence of geopolitical factors and the monetary policy of the Bank of Russia on the exchange rate of the Russian ruble. According to the results of the analysis, the main factors determining the exchange rate of the ruble during a special military operation are export-import flows and geopolitical rewards. Using regression analysis, the dynamics of the geopolitical premium in 2014-2022 was determined and the effectiveness of anti-crisis measures in the Russian national currency and stock markets was evaluated. In 2022, as in the financial crisis of 2014-2015, monetary policy sharply increased the key interest rate, but unlike that period, in 2022, the regulator indicated a relatively rapid

⁵Albagli, E., Ceballos, L., Claro, S., & Romero, D. (2019). Channels of US monetary policy spillovers to international bond markets. *Journal of Financial Economics*, 134(2), 447-473.

⁶Grebenkina, A. M., & Lyamenkov, A. K. (2023). Monetary policy of Russia in modern economic conditions. *Economic development of Russia*, 30(1), 4-13.

transition to the reduction of the key rate. according to the scientist, a change in the monetary policy of Russia took place in the context of the escalation of the geopolitical conflict. In particular, the loss of control over a significant part of international currency reserves forced the monetary authorities to resort to non-market mechanisms of supporting the national currency, which was very successful.⁷

RESEARCH METHODOLOGY

The official statistical data of the Central Bank of Uzbekistan and the Statistics Committee were used in the analysis of the impact of currency policy on the volume of foreign trade operations. We used the VAR (Vector autoregression models) model to determine the econometric analysis, that is, the impact of the currency policy on the trade balance.

In these empirical analyses, the country's national currency rate change ($ExRate_t$), export volume change ($Export_t$) and import volume change ($Import_t$) were selected. Statistical data of selected indicators for the period 2005q1-2023q2 are presented in a quarterly section and in growth. All data were naturally logarithmized because the statistical data under analysis varied in size. As a result, the data is aligned and comes to the same measurement unit.

We conducted the Augmented Dickey-Fuller Test for econometric analysis. Below we present the model of the Augmented Dickey-Fuller Test:

$$\Delta ExRate_t = \alpha_1 + \beta_1 t + \gamma_1 ExRate_{t-1} + \delta_1 \Delta ExRate_{t-1} + \dots + \delta_{p-1} \Delta ExRate_{t-(p-1)} + \varepsilon_t$$

$$\Delta Export_t = \alpha_2 + \beta_2 t + \gamma_2 Export_{t-1} + \varphi_1 \Delta Export_{t-1} + \dots + \varphi_{p-1} \Delta Export_{t-(p-1)} + \tau_t$$

$$\Delta Import_t = \alpha_4 + \beta_4 t + \gamma_4 Import_{t-1} + \mu_1 \Delta Import_{t-1} + \dots + \mu_{p-1} \Delta Import_{t-(p-1)} + \sigma_t$$

Here, $\alpha_1, \alpha_2, \alpha_3, \alpha_4$ are constant value, $\beta_1, \beta_2, \beta_3, \beta_4$ are coefficients of change due to time trend.

Using statistical data, we created the following model that represents the relationship between the exchange rate, the volume of exports and imports:

$$ExRate_t = \alpha_1 + p_1 e_1 + \sum_{i=1}^2 \delta_i ExRate_{t-i} + \sum_{i=1}^2 \beta_i \Delta Export_{t-i} + \sum_{i=1}^2 \gamma_i \Delta Import_{t-i}$$

$$\Delta Export_t = \alpha_2 + p_2 e_2 + \sum_{i=1}^2 \delta_i ExRate_{t-i} + \sum_{i=1}^2 \beta_i \Delta Export_{t-i} + \sum_{i=1}^2 \gamma_i \Delta Import_{t-i}$$

$$\Delta Import_t = \alpha_3 + p_3 e_3 + \sum_{i=1}^2 \delta_i ExRate_{t-i} + \sum_{i=1}^2 \beta_i \Delta Export_{t-i} + \sum_{i=1}^2 \gamma_i \Delta Import_{t-i}$$

⁷Pechalova, M. Yu. (2023). Transformation of Russian monetary policy against the background of worsening geopolitical tensions. *Economy. Taxes. Law*, 16(1), 48-57.

ANALYSIS AND DISCUSSION OF RESULTS

At the initial stage of the econometric analysis, we performed a number of statistical calculations. These are the descriptive statistics of the selected data, that is, it mainly analyzes such indicators as the average, maximum and minimum indicators of the data, deviation from the average (standard deviation). We also analyzed the normal distribution of selected indicators in our research work.

73 observations were made using selected indicators. Below we analyze descriptive statistics of nine selected indicators.

Table

Descriptive statistics of indicators.

	Exchange Rate	Export	Import
Mean	0.032466	0.018881	0.029638
Median	0.020684	0.058526	0.052818
Maximum	0.163780	0.431119	0.254670
Minimum	-0.024434	-0.506609	-0.304973
Std. Dev.	0.037201	0.208250	0.132803
Jarque-Bera	43.80059	5.052056	4.301899
Probability	0.000000	0.079976	0.116374
Sum	2.370037	1.378346	2.163575
Sum Sq. Dev.	0.099640	3.122512	1.269839
Observations	73	73	73

According to the monitoring results, the change in the exchange rate, which is mainly devalued, has an average indicator in the natural logarithm state of 0.032, with a maximum of 0.164 and a minimum of -0.024 during the observed period. The standard deviation of this indicator was equal to 0.037.

Also, the logarithmized average of the change in the volume of exports of our country in the considered period was equal to 0.019, and this indicator was equal to a maximum of 0.431 and a minimum of -0.507 in the considered period. The standard deviation of this indicator was equal to 0.208.

The average indicator of the change in the volume of imports of our country in the natural logarithm state is equal to 0.030, and this indicator was equal to the maximum of 0.255 and the minimum of -0.305 during the observed period. The standard deviation of this indicator was equal to 0.133. From the results of the analysis, it can be seen that among the indicators, the volume of import has a large indicator in terms of the degree of deviation from the average.

Correlation between changes in the national currency exchange rate of the selected country, changes in the volume of exports and changes in the volume of imports is analyzed below.

Table

Correlation matrix between selected indicators

	Exchange Rate	Export	Import
Exchange Rate	1		
Export	-0.1615		
Import	-0.3195	0.4830	1

In developing countries, changes in the balance of trade and its influence on exchange rate can have a wide impact on the domestic economy. According to the above table, the correlation of exchange rate change with export volume change equal to -0.16 indicates that there is a logically wrong relationship between them. Because the devaluation of the exchange rate should increase the price competitiveness of export goods in the foreign market, and this should lead to an increase in the volume of exports.

Also, the correlation of the change in the exchange rate with the change in the import volume is equal to -0.32, which indicates that there is a logical connection between them. Because the devaluation of the exchange rate causes a decrease in the volume of imports by increasing the prices of imported goods in the domestic market.

Definitely, the devaluation of the exchange rate reduces the volume of imported goods in the short term, but the increase in national income due to the increase in exports should also increase the volume of imported goods in the medium term. That is, due to the increase in exports, part of the national income received from abroad will go out in the form of imports, but the trade balance will change in a positive direction compared to before. We can also see this relationship from the correlation between export and import volumes in the table. That is, in the economy of our country, the correlation between the change in the volume of export and the change in the volume of import is equal to 0.48.

Table

The parameters of the factors affecting the change in the volume of imports calculated in the least square modelDependent Variable: **Import**

Method: Least Squares

Sample (adjusted): 2005Q2 2023Q2

Included observations: 73 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Export	0.282482	0.064934	4.350318	0.0000
Exchange Rate	-0.885167	0.363500	-2.435121	0.0174
C	0.053042	0.017919	2.960094	0.0042
R-squared	0.293195	Mean dependent var		0.029638
Adjusted R-squared	0.273000	S.D. dependent var		0.132803
S.E. of regression	0.113234	Akaike info criterion		-1.478501
Sum squared resid	0.897529	Schwarz criterion		-1.384372
Log likelihood	56.96528	Hannan-Quinn criter.		-1.440989
F-statistic	14.51859	Durbin-Watson stat		2.843142
Prob(F-statistic)	0.000005			

According to the results of the analysis, when checking with a probability of 5%, an increase in the volume of exports by one percent increases the volume of imports by 0.28 percent. Also, the devaluation of the national currency by one percent reduces the volume of imports by -0.88 percent. However, the reliability of the results of this effect is low, considering that this effect occurs after a certain period, and the least square method does not show the effect of the selected indicators with a certain lag.

Table

Parameters of the factors influencing the change in export volume calculated in the least square model

Dependent Variable: **Export**

Method: Least Squares

Sample (adjusted): 2005Q2 2023Q2

Included observations: 73 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Exchange Rate	-0.045222	0.618249	-0.073145	0.9419
Import	0.753402	0.173183	4.350318	0.0000
C	-0.001980	0.031041	-0.063777	0.9493
R-squared	0.233379	Mean dependent var		0.018881
Adjusted R-squared	0.211475	S.D. dependent var		0.208250
S.E. of regression	0.184924	Akaike info criterion		-0.497515
Sum squared resid	2.393784	Schwarz criterion		-0.403387
Log likelihood	21.15930	Hannan-Quinn criter.		-0.460003
F-statistic	10.65487	Durbin-Watson stat		2.846011
Prob(F-statistic)	0.000091			

According to the results of the analysis, when checking with a probability of 5%, only the change in the volume of imports has an effect on the change in the volume of exports. In particular, a one percent increase in the volume of imports leads to an increase in the volume of exports by 0.75 percent. This effect can be explained from the two-country Keynesian model. That is, the increase in the national income of our main partner countries as a result of imports to us also increases our exports.

The reason why the influence of the exchange rate change on the export volume is not seen in the parameters of the factors affecting the export volume calculated in the least square model is that there is also a share of state-owned enterprises in the export structure. That is, regardless of the devaluation of the national currency, the export volume of state enterprises has not changed. Also, one of the reasons why the exchange rate does not affect the export volume is the efforts made to increase the income of foreign currency through administrative tools, and another reason is the existence of monopoly situations in our economy.

According to the results of the analysis, when checking with a probability of 5%, only the change in the volume of imports has a significant effect on the exchange rate of the national currency. That is, a one percent increase in the volume of imports increases the exchange rate of the national currency by -0.09 percent. The effect of the change in export volume on the exchange rate of the national currency was not statistically significant.

Table

Parameters of the influence of foreign trade operations on the exchange rate calculated in the least square model

Dependent Variable: **Exchange Rate**

Method: Least Squares

Sample (adjusted): 2005Q2 2023Q2

Included observations: 73 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Export	-0.001690	0.023105	-0.073145	0.9419
Import	-0.088227	0.036231	-2.435121	0.0174
C	0.035113	0.004289	8.186302	0.0000
R-squared	0.102171	Mean dependent var		0.032466
Adjusted R-squared	0.076518	S.D. dependent var		0.037201
S.E. of regression	0.035749	Akaike info criterion		-3.784358
Sum squared resid	0.089460	Schwarz criterion		-3.690230
Log likelihood	141.1291	Hannan-Quinn criter.		-3.746847
F-statistic	3.982913	Durbin-Watson stat		1.199782
Prob(F-statistic)	0.023003			

This model does not use "lag" because we could not determine the effect of the selected indicators on each other through the least significant method. Therefore, it is appropriate to conduct our analysis using other models. In particular, we use the vector autoregression (VAR) model in the next step of our analysis. Because in this model we use a certain "lag" in determining the influence of selected indicators on each other. When using the VAR model, we need to perform the Augmented Dickey-Fuller Test based on the initially selected indicators.

With the help of this Augmented Dickey-Fuller test model, we test the indicators for unit root and it is appropriate to infer whether these indicators are stationary or non-stationary.

Table

The result of Augmented Dickey-Fuller Test

	Indicators	t-Statistic	Probability	Conclusion
1	Exchange Rate	-4.990892	0.0001	I(0)
2	Export	-7.762945	0.0000	I(0)
3	Import	-3.521756	0.0102	I(0)

As can be seen from the table above, all the selected indicators are stationary when tested on the unit root. From this we can conclude that the indicators in the stationary state have a logical relationship with the rest of the indicators and the VAR model can be used.

From the next stage of our analysis, we need to choose the optimal "lag" for the VAR model. For this, we use the Lag Length Criteria method.

Table

**The method of choosing the optimal "lag" (Lag Length Criteria)
for the VAR model, which represents the influence of the selected indicators on
each other**

VAR Lag Order Selection Criteria

Endogenous variables: Exchange Rate, Import, Export

Exogenous variables: C

Sample: 2005Q1 2023Q2

Included observations: 71

Lag	LogL	LR	FPE	AIC	SC	HQ
0	199.0446	NA	8.02e-07	-5.522382	-5.426776	-5.484362
1	223.6196	46.38112*	5.17e-07	-5.961116	-5.578692*	-5.809038*
2	232.8342	16.61226	5.15e-07*	-5.967162*	-5.297919	-5.701025

As can be seen from the analytical data, the optimal number of "lags" for the VAR model evaluating the impact of currency policy on the trade balance is 1 based on the Schwarz information criterion and Hannan-Quinn information criterion, but 2 based on the Final prediction error and Akaike information criterion. Therefore, it will not be logically wrong to set the optimal number of "lags" as 2 for our VAR model, which represents the influence of the selected indicators on each other.

We can see the results of the VAR model based on the selected "lag" of the impact of the currency policy on the trade balance in the table below.

Table

VAR model representing the influence of selected indicators on each other

Vector Autoregression Estimates

Sample (adjusted): 2005Q1 2023Q2

Included observations: 71 after adjustments

Standard errors in () & t-statistics in []

	Exchange Rate	Import	Export
Exchange Rate (-1)	0.506599 (0.13140) [3.85551]	-1.081295 (0.48238) [-2.24157]	-1.668100 (0.74417) [-2.24157]
Exchange Rate (-2)	0.080688 (0.12702) [0.63526]	0.270821 (0.46630) [0.58078]	0.748830 (0.71936) [1.04097]
Import (-1)	0.019571 (0.04006) [0.48858]	-0.565076 (0.14706) [-3.84253]	0.018668 (0.22686) [0.08229]
Import (-2)	0.059562 (0.03946) [1.50947]	-0.331316 (0.14486) [-2.28713]	0.043589 (0.22348) [0.19505]
Export (-1)	-0.000750	0.049595	-0.503978

	(0.02439) [-0.03075]	(0.08956) [0.55378]	(0.13816) [-3.64782]
Export (-2)	0.014265 (0.02462) [0.57943]	0.093756 (0.09038) [1.03736]	-0.228459 (0.13943) [-1.63856]
C	0.010607 (0.00693) [1.53112]	0.079935 (0.02543) [3.14291]	0.062239 (0.03924) [1.58629]
R-squared	0.272488	0.226456	0.248443
Adj. R-squared	0.204284	0.153937	0.177984
Sum sq. resid	0.072447	0.976425	2.323775
Akaike AIC	-3.852520	-1.251477	-0.384427
Schwarz SC	-3.629439	-1.028396	-0.161346
Mean dependent	0.032613	0.029390	0.021149
S.D. dependent	0.037717	0.134285	0.210168

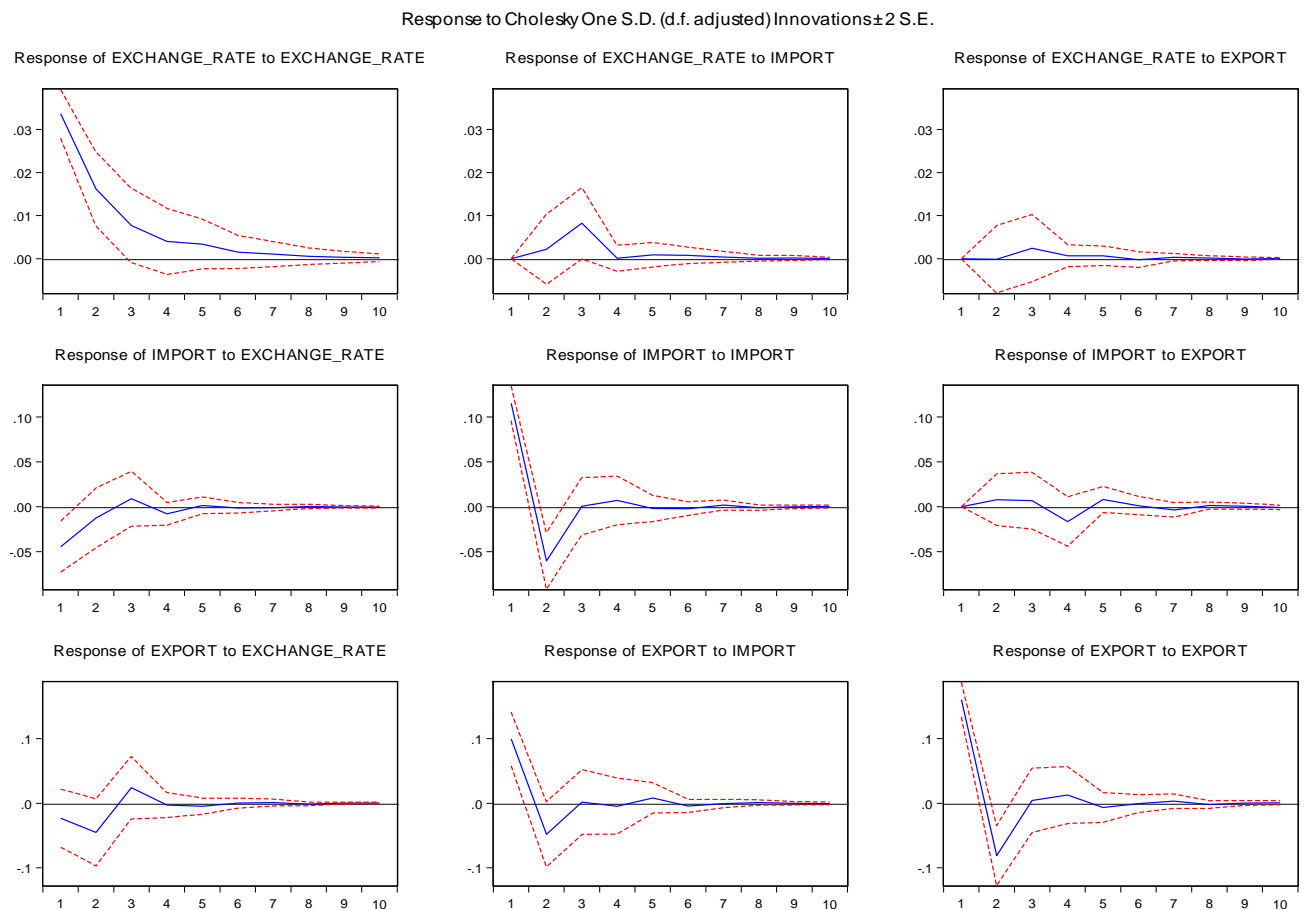


Figure. Dynamics of the influence of monetary policy on foreign trade operations⁸

⁸Formed based on the results of the model.

Based on the results of the model, the influence of the national currency exchange rate on changes in the volume of imports was determined, but the influence of the national currency exchange rate on the volume of exports was statistically significant. It was also found that there is a strong autocorrelation of the selected indicators. The results of the model are interpreted in the scientific article.

CONCLUSIONS AND SUGGESTIONS

We can conclude that the national currency exchange rate affects the change in the volume of imports. According to it, a one percent increase in the national currency exchange rate was determined to reduce the volume of imports by 1.08 percent in the next quarter. But the influence of the national currency exchange rate on the volume of exports was not formed logically. According to it, a one percent increase in the national currency exchange rate a quarter ago reduces the export volume by 1.67 percent. Thus, we can see that the role of foreign exchange policy in increasing the volume of exports is being eliminated for other reasons.

According to the results of the analysis, the effect of the change in the exchange rate two quarters ago on the trade balance was not felt. But according to the result of the VAR model, it was found that there is an autocorrelation of the selected indicators. According to it, it was determined that a one percent increase in the national currency exchange rate will increase this indicator by 0.51 percent in the next quarter. Also, if a one percent increase in the volume of imports reduces this indicator by 0.57 percent in the next quarter, the effect of the change two quarters ago is -0.33 percent. If we look at the autocorrelation of changes in the volume of exports in foreign trade operations, then a one percent increase in the volume of exports reduces this indicator by 0.50 percent in the next quarter.

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