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SIGNIFICANCE OF MONETARY INSTRUMENTS IN REGULATING THE ACTIVITIES OF BANKS

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ABOUT ARTICLE

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Abstract: In this article, the impact of monetary policy instruments on the activity of commercial banks, in particular on bank liquidity, loan percentage and loan portfolio, is analyzed on the basis of econometric models. He used two different models in the econometric analysis assessing the impact of monetary policy instruments on commercial banks. The first model is a least square model, while the second is a structural vector autoregression model. In studying the impact of the monetary policy of the Central Bank on the activity of commercial banks, it analyzed two different types of banks.

INTRODUCTION

The central bank's monetary policy is spread throughout the economy through commercial banks. It is the health of commercial banks, their liquidity and high crediting potential that opens wide opportunities for the Central Bank. Through Central Bank instruments, it affects the liquidity of commercial banks and subsequently the lending capacity and interest policies of banks.

With the emergence of interest rate policy by central banks, it was not possible to influence economic growth through interest rate policy. namely, D. M. Keynes was one of the first to analyze the impact of interest policy of central banks on economic events. In his opinion, Makrazy Bank encourages legal entities to increase their investment costs by lowering the interest rate. An increase in investment costs will lead to an increase in the gross domestic product. J. Taylor is one of the scientists who made a great contribution to the study of the impact of shocks on the economy from the central bank's refinancing policy. Until then, economists studied the interest rate by dividing it into nominal and real interest rates

when analyzing the impact of interest policy on economic growth. According to J. Taylor, real interest rates cannot always explain the impact on economic processes.

The main parameters of the monetary policy, including the volumes, limits and regulations of the Central Bank's operations on providing and withdrawing liquidity, the interest rates of the Central Bank's monetary operations, including the refinancing rate and (or) the base rate, the amounts of mandatory reserve requirements (regulations of mandatory reserves, coefficient of averaging of mandatory reserves) and the list of types of security for loans are within the competence of the Central Bank.

We have left out the place of open market policy in the analysis. The reason for this is that if our analysis was taken from January 2017, the current state of the open market policy started from December 2018. So the analysis times will not coincide. Secondly, we took the analysis in the cross-section of months, but the fact that the sale of government securities by the Central Bank through the open market policy was not carried out every month makes the impact of this indicator on the result unreliable. therefore, in the analysis, we will analyze the combined effect of Central Bank refinancing and mandatory reserve instruments on the liquidity and lending capacity of commercial banks.

LITERATURE REVIEW

Refinancing policy is one of the main instruments in the arsenal of central banks. Central banks are widely used to influence the financial market, the volume of foreign trade operations, and the expected changes in the gross domestic product. Based on this goal, scientists and scientific schools of developed and developing countries have conducted extensive research on the application of the refinancing instrument and measuring its effectiveness. In particular, the scientific and practical aspects of the impact of the monetary policy refinancing instrument of the Central Bank on the economy are discussed by foreign economists J. M. Keynes, Irving Fisher, Wicksell Knut, M. Friedman, J. Tobin, R. Dornbusch, J. E. Stiglitz, B. Bernanke, M. Gertler, A.S. Blinder, Frederic S. Mishkin, V. Ramey, A.K. Kashyap, J.C. Stein, J.B. Taylor, Peter N. Ireland, including Russian economists S.R. Moiseev, E.A. Leonteva, S.M. Drobyshevsky, P .V.Trunin, D.I.Kondratov, S.A.Andryushin, I.S.Ivanchenko, I.L.Kavitskaya and others have been thoroughly studied and analyzed in scientific works. Uzbek economists T. Koraliev, Sh. Abdullaeva, O. Namozov, T. Bobokulov, N. Jumaev, F. Dodiev, A. Absalamov and others Central Bank carried out scientific research on the impact of currency policy and central bank monetary policy instruments on the economy.

According to Frederic Mishkin, the influence of central bank refinancing on economic growth has not escaped the attention of scientists in the last 50 years. He believes that by reducing the money supply, the central bank will increase the real interest rate, making it more expensive for businesses to expand production and reduce their investment costs. A decrease in investment spending leads to a decrease in aggregate demand and, as a result, a decrease in aggregate output. According to him, the central bank reduces the real interest rate by reducing the money supply or by slowing down the growth of the money supply, and this reduces not only the investment costs of enterprises, but also the credit consumption of the population. Also, an increase in the real interest rate through the central bank's tight monetary policy will further exacerbate the expected decline in aggregate demand not only through the interest rate policy, but also through the credit channel.

Arlene Wong studied the gerogenous effects of refinancing policies on consumer consumption, which is a large part of US GDP, and mainly on the structure of the mortgage market. According to the results of the analysis, changes in the refinancing rate have a high impact on re-borrowers, as well as on the decisions of young families to take out mortgage loans for the first time. At the same time, it was found that the effect of refinancing policy on floating rate mortgages is lower than on fixed rate mortgages. But it is also proven that the overall effect of the refinancing rate on the population consumption in floating rates is high.

A. Auclert studied the distribution of central banks' monetary policy decisions to gross consumption in the Italian and US economies. The scientist analyzed the influence of three channels of monetary policy, namely, the income heterogeneity channel from income inequality, the Fisher channel from unexpected inflation, and the interest rate channels on aggregate expenditure. According to the results of the analysis, all three channels can increase the impact of monetary policy on economic growth. If the assets have long durations but provide a counterfactual rate of inflation indexation, the standard and imperfect market model can provide empirical quantities. Economists such as J. Cloyne, C. Ferreira, M. Froemel, and P. Surico have determined the impact of changes in the main interest rate policy in the monetary policy of the US and UK economies on the investment costs of enterprises. They divided the firms into two categories: young firms with low dividend payouts and long-established firms with high dividend payouts. According to the results of the analysis, young firms and firms that pay low dividends did not reduce their investment costs in order to expand production in the face of reductions in monetary policy. On the other hand, firms that have been operating for many years and pay large dividends are considered to be very sensitive to a contraction in monetary policy. That is, as a result of reductions in monetary policy, the increase in interest rates makes the source of external financing

more expensive for the firms of the second category, on the contrary, the sources of external financing become cheaper for the firms of the first category.

Ş. Kalemli-Özcan analyzed the impact of changes in the monetary policy of developed countries, especially the USA, on the economy of developing countries. He also analyzed the role of interest policy in order to mitigate the negative impact of changes in the monetary policy of large countries on the economy of developing countries. Changes in US monetary policy change domestic credit patterns in other countries through global investors' risk perceptions. Capital inflows and outflows in developing countries have a high impact on fluctuations in global investors' risk perception, and this has a direct impact on domestic credit expansion. According to the results of the analysis, the interest policy of central banks is ineffective in order to mitigate such external negative impact in developing countries. Because in developing countries, the transmission of the interest rate of the central banks to the short-term market interest rates is imperfect. The disconnect between the central bank interest rate and short-term market interest rates is explained by changes in risk perception. According to this economist, currency policy aimed at mitigating the external negative impact, that is, the policy aimed at changing the exchange rate, may not give its result. Economists such as J. Cloyne, C. Ferreira, M. Froemel, and P. Surico have determined the impact of changes in the main interest rate policy in the monetary policy of the US and UK economies on the investment costs of enterprises. They divided the firms into two categories: young firms with low dividend payouts and long-established firms with high dividend payouts. According to the results of the analysis, young firms and firms that pay low dividends did not reduce their investment costs in order to expand production in the face of reductions in monetary policy. On the other hand, firms that have been operating for many years and pay large dividends are considered to be very sensitive to a contraction in monetary policy. That is, as a result of reductions in monetary policy, the increase in interest rates makes the source of external financing more expensive for the firms of the second category, on the contrary, the sources of external financing become cheaper for the firms of the first category.

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central banks is ineffective in order to mitigate such external negative impact in developing countries. Because in developing countries, the transmission of the interest rate of the central banks to the short-term market interest rates is imperfect. The disconnect between the central bank interest rate and short-term market interest rates is explained by changes in risk perception. According to this economist, currency policy aimed at mitigating the external negative impact, that is, the policy aimed at changing the exchange rate, may not give its result.

METHODOLOGY

We use two different models in the econometric analysis that evaluates the impact of monetary policy instruments on the liquidity and lending capacity of commercial banks. The first model is a least square model, while the second is a structural vector autoregression model. In studying the impact of the monetary policy of the Central Bank on the activity of commercial banks, we analyzed two different categories of banks. Large banks, namely "Uzmilliybank" JSC and "Uzsanoatkurilishbank" ADB, were taken as banks of the first category, while banks of the second category were small banks, in which "Turonbank" ADB was taken.

In this regard, the models include changes in the Central Bank refinancing interest rate (〖LnINR〗_t), changes in the Central Bank's required reserve ratio (〖LnRR)〗_t), the change in the rate of inflation in the economy (〖LnCPI〗_t), the change in the interest rate in the money market (〖LnMMR〗_t), the change in the average interest rate of short-term loans of commercial banks (〖LnLoanRate〗_t) were obtained. Statistical data of the selected indicators for the period 2017M1-2022M10 were obtained in the cross-section of months and growth. All data are natural logarithmized because the analyzed statistical data are of different dimensions.

$$\Delta NBULoan_t = \alpha_1 + \sum_{i=1}^{k} \beta_i \Delta NBULoan_{t-i} + \sum_{i=1}^{k} \gamma_i INR_{t-i} + \sum_{i=1}^{k} \delta_i RR_{t-i} + \sum_{i=1}^{k} \theta_i CPI_{t-i} + \sum_{i=1}^{k} \mu_i MMR_{t-i} + \sum_{i=1}^{k} \mu_i \Delta Liquidity_{t-i} + \sum_{i=1}^{k} \mu_i STLR_{t-i} + \varepsilon_t$$

$$\Delta PSBLoan_t = \alpha_1 + \sum_{i=1}^{k} \beta_i \Delta PSBLoan_{t-i} + \sum_{i=1}^{k} \gamma_i INR_{t-i} + \sum_{i=1}^{k} \delta_i RR_{t-i} + \sum_{i=1}^{k} \theta_i CPI_{t-i} + \sum_{i=1}^{k} \mu_i MMR_{t-i} + \sum_{i=1}^{k} \mu_i \Delta Liquidity_{t-i} + \sum_{i=1}^{k} \mu_i STLR_{t-i} + \varepsilon_t$$

$$\Delta TurBLoan_t = \alpha_1 + \sum_{i=1}^{k} \beta_i \Delta TurBoan_{t-i} + \sum_{i=1}^{k} \gamma_i INR_{t-i} + \sum_{i=1}^{k} \delta_i RR_{t-i} + \sum_{i=1}^{k} \theta_i CPI_{t-i} + \sum_{i=1}^{k} \mu_i MMR_{t-i} + \sum_{i=1}^{k} \mu_i \Delta Liquidity_{t-i} + \sum_{i=1}^{k} \mu_i STLR_{t-i} + \varepsilon_t$$

In addition to the structural vector autoregression (SVAR) model, the least square model, induction, deduction, and synthesis methods were used in the scientific research. In the analysis of the impact of monetary and credit policy instruments of the Central Bank of Uzbekistan on market interest rates and the entire economy, the data of the Central Bank of the Republic of Uzbekistan and the State Statistics Committee were used.

ANALYSIS AND RESULTS

We used two different models in the econometric analysis evaluating the impact of monetary policy instruments on the liquidity and lending capacity of commercial banks. The first model is a least square model, while the second is a structural vector autoregression model.

At the same time, the impact of the monetary policy of the Central Bank on the activity of commercial banks is different. In particular, large banks are able to respond to monetary policy decisions, while small banks are more responsive to monetary policy decisions. We can see this situation in both developed and developing countries. We can see the effect of monetary policy on the liquidity, capital adequacy and lending capacity of commercial banks from the scientific and theoretical works of scientists.

Therefore, in studying the impact of the monetary policy of the Central Bank on the activity of commercial banks, we analyzed two different categories of banks. Large banks, namely "Uzmilliybank" JSC and "Uzsanoatkurilishbank" ADB, were taken as banks of the first category, while banks of the second category were small banks, in which "Turonbank" ADB was taken.

In this regard, in the least square model, as endogenous factors affecting commercial banks' liquidity (〖LnLiquidity〗_t) and the volume of loans (〖LnLoan〗_t), changes in the refinancing interest rate of the Central Bank (〖LnINR〗_t), changes in the required reserve ratio of the Central Bank (〖LnRR〗_t), the change in the rate of inflation in the economy (〖LnCPI〗_t), the change in the interest rate in the money market (〖LnMMR〗_t), the change in the average interest rate of short-term loans of commercial banks (〖LnLoanRate〗_t) were obtained. Statistical data of the selected indicators for the period 2017M1-2022M10 were obtained in the cross-section of months and growth. All data were natural logarithmized because the statistical data under analysis varied in size. As a result, the data is aligned and comes to the same measurement unit.

At the initial stage of the econometric analysis, we performed a number of statistical calculations. These are the descriptive statistics of the selected data - here, the average indicators, maximum and minimum indicators, deviation from the average (standard deviation) of the data were analyzed. Similarly, we also analyzed the normal distribution of the indicators selected in the scientific work.

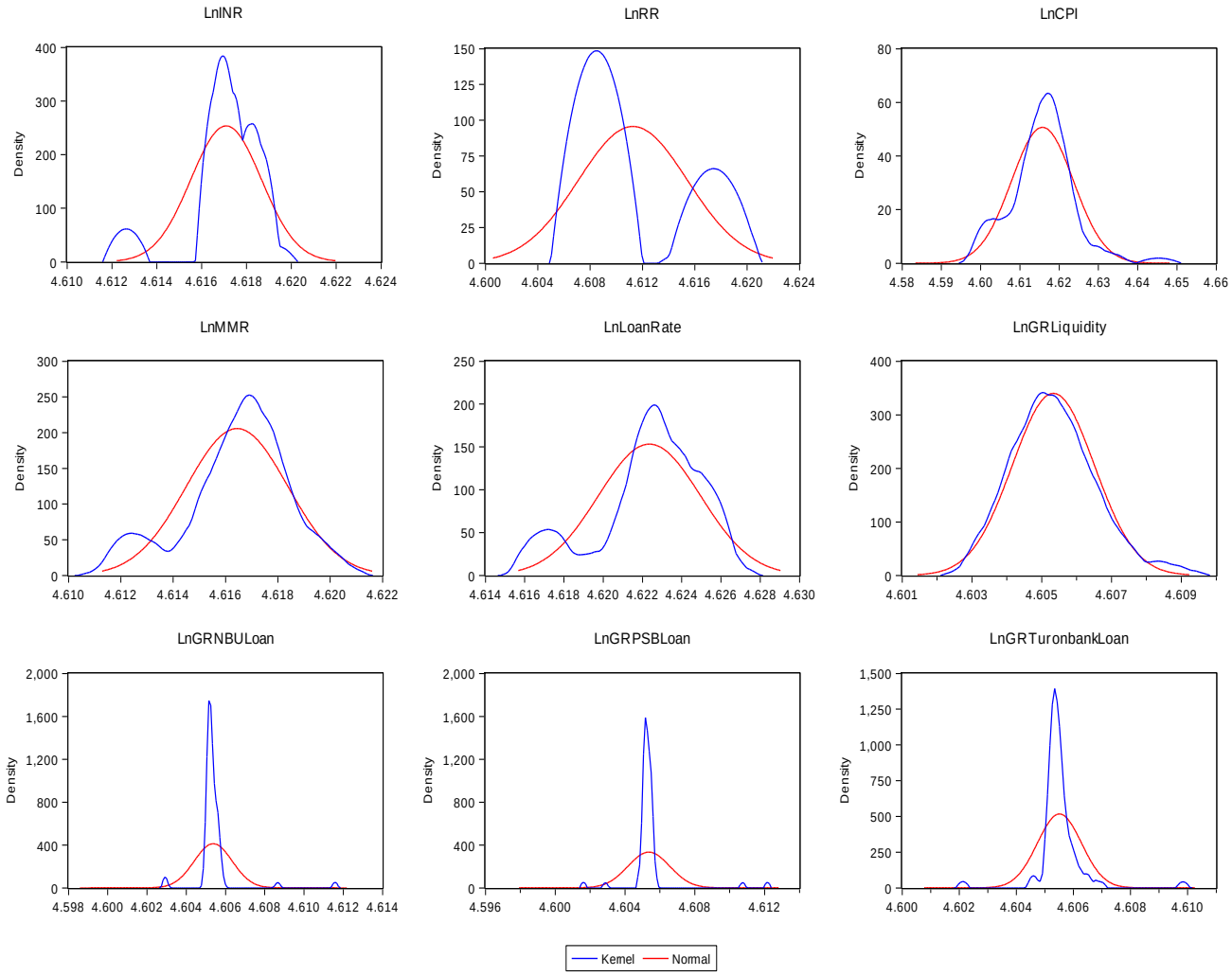

Figure 1. Normal distribution of selected indicators

The Jacques Bera coefficient was used to test the normal distribution of the data. The analysis shows that all the selected indicators have a normal distribution, except the interest rates of short-term loans with the Central Bank compulsory reserve interest rate. Because it was found that the calculated Jacques-Bera coefficient for all the selected indicators is reliable and their probability is less than 0.05. 70 observations were made using selected indicators. Below we analyze descriptive statistics of ten selected indicators.

Table 1.

Descriptive statistics of indicators

	INR	RR	CPI	MMR	NBULOAN	PSBLOAN	TURONB.LOAN
Mean	4.6171	4.6111	4.6156	4.6164	4.6053	4.6053	4.6055
Median	4.6167	4.6084	4.6161	4.6168	4.6052	4.6052	4.6054
Maximum	4.6192	4.6175	4.6453	4.6201	4.6115	4.6121	4.6098
Minimum	4.6126	4.6084	4.6001	4.6117	4.6029	4.6016	4.6021
Std. Dev.	0.0014	0.0041	0.0078	0.0018	0.0009	0.0011	0.0007
Skewness	-1.7386	0.8787	0.5553	-0.6369	3.9589	3.4215	1.4784
Kurtosis	6.5102	1.7800	5.0692	3.2902	28.131	23.055	20.310
Jarque-Bera	71.204	13.349	16.087	4.9794	2024.95	1309.76	899.44
Probability	0.0000	0.0012	0.0003	0.0829	0.0000	0.0000	0.0000
Sum	323.20	322.78	323.09	323.15	322.37	322.37	322.38
Sum Sq. Dev.	0.0001	0.0011	0.0042	0.0002	6.45E-05	9.86E-05	4.11E-05
Observations	70	70	70	70	70	70	70

According to the monitoring results, the average indicator of the volume of loans of "Uzmilliybank" JSC in natural logarithm is equal to 4.6053, and this indicator was equal to the maximum of 4.6115 and the minimum of 4.6029 during the observed period. The standard deviation of this indicator was equal to 0.0009. Also, the average indicator of the volume of loans of "Uzsanoatqurilishbank" ADB in the natural logarithm state is equal to 4.6053, and this indicator was equal to the maximum of 4.6121 and the minimum of 4.6016 during the considered period. The standard deviation of this indicator was equal to 0.0011. The average indicator of the volume of "Turonbank" ATB loans in the natural logarithm state is 4.6055, and this indicator was the maximum at 4.6098 and the minimum at 4.6021 during the considered period. The degree of deviation from the average of this indicator was equal to 0.0007. It was determined that the standard deviation of the volume of Uzsanoatkurilishbank's ATB loans is greater than the indicators of other commercial banks. Below, the correlation between liquidity, lending potential and interest policies of selected commercial banks with endogenous indicators is analyzed.

Table 2

Correlation matrix between selected indicators

	INR	RR	CPI	MMR	LOANRATE	LIQUIDITY
INR	1					
RR	-0.5810	1				
CPI	0.01046	0.1335	1			

MMR	0.7965	-0.6669	0.0534	1		
LOANRATE	0.8082	-0.7614	-0.1069	0.7916	1	
LIQUIDITY	0.1400	-0.0943	-0.0603	0.2142	0.0478	1
NBULOAN	-0.0772	0.2074	-0.0267	-0.1787	-0.2281	0.1114
PSBLOAN	-0.0254	0.1440	-0.0595	-0.1159	-0.1365	0.0519
TURONB.LOAN	0.0256	0.1620	0.01305	-0.0067	-0.01842	0.0762

The correlation of the average interest rate of commercial banks' loans with the Central Bank refinancing rate and the interest rate in the money market is 0.80 and 0.79, respectively, which indicates that there is a logical and strong connection between them. At the same time, it can be seen that the Central Bank mandatory reserve ratio has no effect on the percentage of short-term loans of commercial banks.

The correlation of the level of liquidity of commercial banks with the percentage of refinancing, the interest rate in the money market and the percentage of short-term loans is 0.14, respectively; 0.21 and 0.11 respectively. With this, we can say that the increase in interest rates increases the income of commercial banks, which in turn improves their liquidity. At the same time, the correlation of -0.09 between the mandatory reserve ratio and the banks' liquidity indicates that there is a logical, albeit weak, relationship between them.

If we look at the relationship between the volume of loans of the selected banks and monetary policy instruments, then the correlation between the refinancing percentage and the change in the volume of loans of "Uzmilliybank" JSC and "Uzsanoatkurilishbank" ADB is equal to -0.08 and -0.03, respectively. These banks have the main interest rate. It indicates that the volume of loans did not increase in response to the increase and the correlation between these indicators is very weak.

On the contrary, the change in the volume of "Turonbank" ADB loans is highly sensitive to the refinancing rate. That is, if the correlation between these two indicators is 0.03, it indicates that the main interest rate of the Central Bank has an effect, albeit weak, on the volume of small bank loans.

Table 3

Parameters of the factors affecting the liquidity of Uzmilliybank JSC calculated in the least square model

Dependent Variable: NBU_LIQUIDITY

Method: Least Squares
Sample (adjusted): 2017M01 2022M10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INR	0.067196	0.182789	0.367616	0.7144
RR	-0.019138	0.053786	-0.355820	0.7232
CPI	-0.017920	0.018423	-0.972667	0.3344
MMR	0.290230	0.139643	2.078372	0.0418
LOANRATE	-0.199450	0.124443	-1.602744	0.1140
NBULOAN	0.138825	0.151089	0.918827	0.3617
C	3.408799	0.978993	3.481945	0.0009

R-squared	0.118160	Mean dependent var	4.605335
Adjusted R-squared	0.034175	S.D. dependent var	0.001173
S.E. of regression	0.001153	Akaike info criterion	-10.59818
Sum squared resid	8.38E-05	Schwarz criterion	-10.37334
Log likelihood	377.9365	Hannan-Quinn criter.	-10.50887
F-statistic	1.406922	Durbin-Watson stat	2.292969
Prob(F-statistic)	0.226039		

We conduct our econometric analysis using a least squares model. First, we study the impact of monetary policy decisions on the liquidity of "Uzmilliybank" JSC.

According to the results of the analysis, when checking with a probability of 5%, only the interest rate in the money market has an effect on the liquidity of this bank. In particular, a one percent increase in the interest rate in the money market increases the liquidity of "Uzmilliybank" JSC by 0.14 percent. Through this model, the remaining indicators with a probability of 5%, in particular, the influence of monetary policy decisions on the liquidity of "Uzmilliybank" JSC was not observed.

Using the least square model, we study the impact of monetary policy decisions on the liquidity of Uzsanoatkurilishbank ADB.According to the results of the analysis, when checking with a probability of 5%, only the interest rate in the money market has an effect on the liquidity of this bank. In particular, a one percent increase in the interest rate in the money market increases the liquidity of Uzsanoatkurilishbank ADB by 0.14 percent. Through this model, the remaining indicators with a probability of 5%, in particular, the influence of monetary policy decisions on the liquidity of "Uzmilliybank" JSC was not observed.

Using the least square method, we analyze the impact of monetary policy decisions on changes in the volume of Uzsanoatkurilishbank ADB loans. According to the results of the analysis, we can see that monetary policy decisions have no effect on the volume of Uzsanoatkurilishbank ADB loans.

In small banks, the impulse of the interest rate on loans to the level of inflation calculated from macroeconomic indicators was also strong. In particular, the increase in the level of inflation in the economy has been affecting the increase in the interest rate on "Turonbank" ADB loans for two months.

Autocorrelation of indicators has always been strong in the economy of Uzbekistan. In this case, the autocorrelation of the percentage of "Turonbank" ATB loans is also strong. In particular, the increase in the percentage of loans by "Turonbank" ATB is the reason for the decrease of these percentages in the following months. This process continues for a long time.

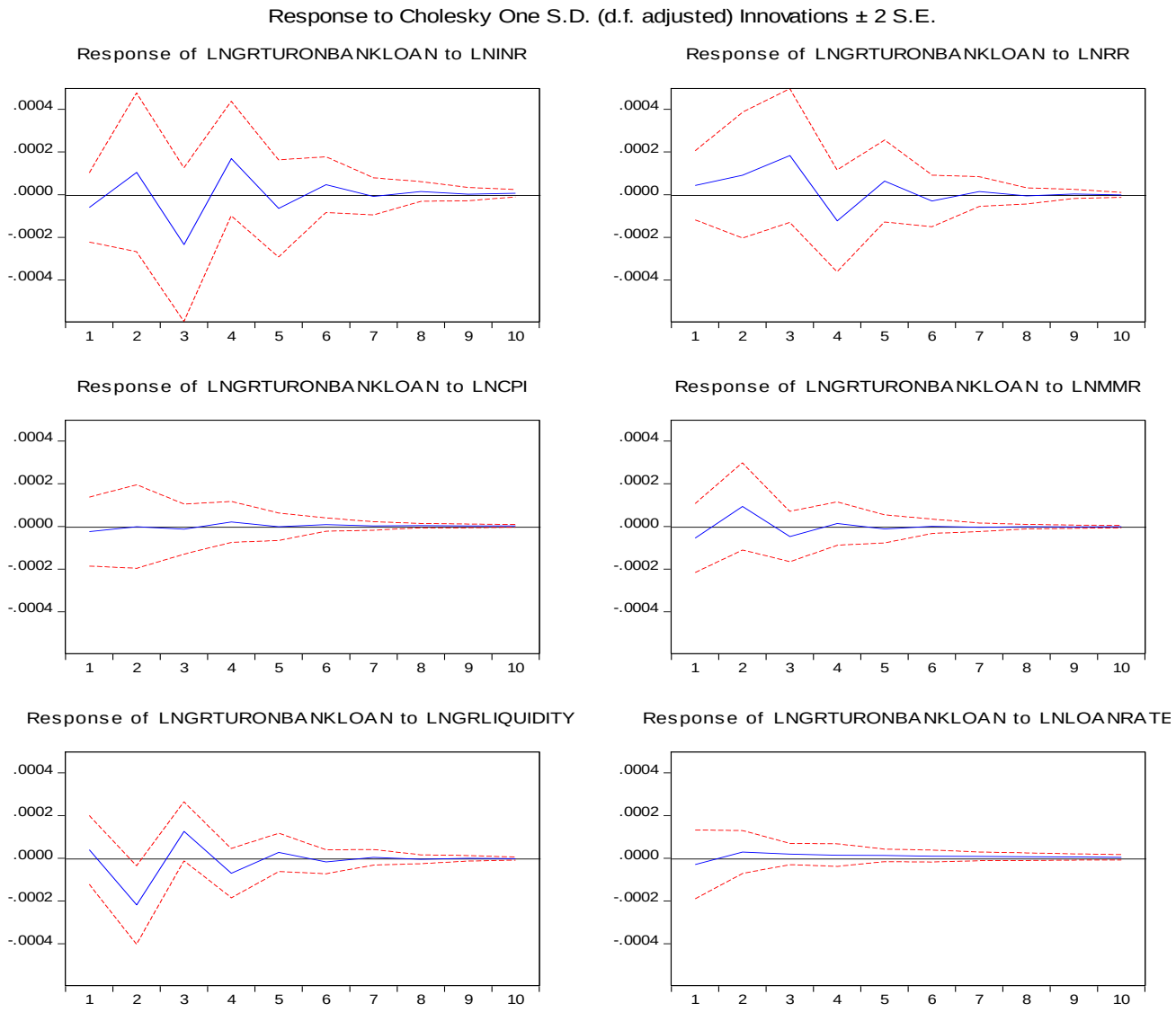

Figure 2. Impulse reaction of the volume of "Turonbank" ADB loans to monetary decisions

The impulse of the change in the volume of "Turonbank" ADB loans to the refinancing rate of the Central Bank and the change in the reserve requirement ratio is not noticeable. But the impact of this bank's loan portfolio on liquidity was significant. In particular, the increase in liquidity by the bank affects the

decrease in the volume of loans for two months. The impulse of the volume of "Turonbank" ADB loans to the level of inflation and the interest rate in the money market was also imperceptible.

CONCLUSION

Analyzing the impact of the monetary policy instruments of the Central Bank of the Republic of Uzbekistan on the lending potential of small banks, we can see that a 1% increase in the refinancing interest rate leads to an increase in the percentage of short-term loans of Turonbank ADB selected as a small bank by 0.28%.

Also, the increase of the mandatory reserve percentage by the Central Bank by 1% reduces the liquidity of "Turonbank" ADB by -0.31%. That is, the increase in the mandatory reserve percentage by the Central Bank leads to a decrease in the resources of small banks and a decrease in their excess resources. The increase in the required reserve ratio of the Central Bank also increases the loan portfolio of this bank. But this effect is imperceptible.

The efforts of small banks to increase their liquidity are different from those of large banks. There will be an opportunity to increase the liquidity of large banks without reducing the volume of loans. But small banks achieve this by reducing the size of their loans. Our econometric analysis also proves this hypothesis. In particular, increasing the liquidity of "Turonbank" by ADB by 1% decreases the volume of loans by -0.17%.

We can see from our previous analysis that the change in the interest rate in the money market has a high impact on large banks. However, the change in the money market interest rate does not lead to a change in the volume of loans to small banks, in particular to "Turonbank" ATB.

As a result of empirical analysis, it is determined that small banks, unlike large banks, are more sensitive to macroeconomic indicators, more precisely, this affects the percentage of loans. In particular, a 1% increase in the level of inflation in the economy increases the percentage of short-term loans of "Turonbank" ADB by 2.9%.

Autocorrelation of the volume of "Turonbank" ATB loans is becoming significant. In particular, a 1% increase in the volume of loans of this bank in the previous month reduces the volume of loans in the following month by -0.43%. This means that small banks do not have the opportunity to find enough resources to continuously increase their loans.

REFERENCES

1. Ampudia, M., Georgarakos, D., Slacalek, J., Tristani, O., Vermeulen, P., & Violante, G. (2018). Monetary policy and household inequality.
2. Auclert, A. (2019). Monetary policy and the redistribution channel. American Economic Review, 109(6), 2333-67.
3. Başţav, L. (2020). Monetary Polıcy Interest Rate Channel in Turkey: Toda-Yamamoto Method (2011-2018). Fiscaoeconomia, 4(2), 311-331.
4. Bernanke, B. S. (2020). The new tools of monetary policy. American Economic Review, 110(4), 943-83.
5. Bernanke B., Blinder A. (1988). Credit, Money and aggregate Demand/ The American Economic Review. №78.
6. Bernanke B. Gertler M. (1995). Inside the Black Box: The Credit Channel of Monetary Policy Transmission. Journal of Economic Perspectives, 9(4).
7. Blinder A.S., Stiglitz J.E. (1983). Money, Credit Constraints and Economic Activity. American Economic Review 73.
8. Cloyne, J., Ferreira, C., Froemel, M., & Surico, P. (2018). Monetary policy, corporate finance and investment (No. w25366). National Bureau of Economic Research.
9. Dornbusch R. (1976). Expectations and Exchange Rate Dynamics. Journal of Political Economy 84.
10. Eggertsson, G. B., Juelsrud, R. E., Summers, L. H., & Wold, E. G. (2019). Negative nominal interest rates and the bank lending channel (No. w25416). National Bureau of Economic Research.
11. Frederic S. Mishkin (1995). Symposium on the Monetary Transmission Mechanism/ The journal of Economic Perspective Vol. 9, No. 4.
12. Friedman M.A. (1957). Theory of the Consumption Function. NBER Books No.57-1, September.
13. Irving Fisher (1963). The Purchasing Power of Money: Its Determination and Relation to Credit Interest and Crises/ Rev. Ed. New York: reprints of Economics Classics.
14. Kashyap A. K., Stein J. C. (1995). The Impact of Monetary Policy on Bank Balance Sheets. Carnegie-Rochester Conference Series on Public Policy, 42(1).
15. Kalemli-Özcan, Ş. (2019). US monetary policy and international risk spillovers (No. w26297). National Bureau of Economic Research.

16. Peter N. Ireland (2005). The Monetary Transmission Mechanism / FRB of Boston WP No. 06-1.

17. Taylor, J.B., (1995). The Monetary Transmission Mechanism: An Empirical Framework. Journal of Economic Perspectives, 9 (4).

18. Tobin J. (1969). A General Equilibrium Approach to Monetary Theory/ Journal of Money, Credit and Banking №1.

19. Twinoburyo, E. N., & Odhiambo, N. M. (2018). Monetary policy and economic growth: A review of international literature. Journal of Central Banking Theory and Practice, 7(2), 123-137.

20. Valerie Ramey (1993). How important is the credit channel in the transmission of monetary policy/ Cornegie – Rochester Conference Series on Public Policy Vol. 39. North-Holland – Elsevier Science Publishers B.V.

21. Wicksell Knut (1950). Lectures on Political Economy/ Vol. 2. Edited by Lionel Robins. London. Rutledge and Kegan Paul Ltd.

22. Wong, A. (2019). Refinancing and the transmission of monetary policy to consumption. Unpublished manuscript, 20.

23. Absalamov, A. (2020). Interest rate channel of monetary policy transmission mechanism in Uzbekistan-VECM approach. International Journal of Research in Social Sciences, 10(1), 165-173.

24. Absalamov, A. (2020). Analysis of factors affecting on credit channel. International Finance and Accounting, 2020(5), 7.

25. 25.Tursunov B. (https://www.scopus.com/authid/detail.uri?authorId=57210803189) FINANCIAL SECURITY in SMALL BUSINESS in PERIOD of DIGITAL ECONOMY: In CASE of UZBEKISTAN. ACM International Conference Proceeding Series, 2022, pp. 491–498

26. 26.Burkhanov, A.U., Tursunov, B., Uktamov, K., Usmonov, B. ECONOMETRIC ANALYSIS of FACTORS AFFECTING ECONOMIC STABILITY of CHEMICAL INDUSTRY ENTERPRISES in DIGITAL ERA: In CASE of UZBEKISTAN. ACM International Conference Proceeding Series, 2022, pp. 484–490

27. 27.Tursunov, B. METHODOLOGY for ASSESSING the FINANCIAL SECURITY of ENTERPRISES in the POST-PANDEMIC PERIOD of DIGITAL ECONOMY. ACM International Conference Proceeding Series, 2022, pp. 110–115.

28. 28.Tursunov, B. (https://www.scopus.com/authid/detail.uri?authorId=57210803189) Provincial Features of Industrial Production Dynamics in the Research of Textile Enterprises'

Financial Security in Uzbekistan. Lecture Notes in Networks and Systems, 2022, 368 LNNS, pp. 601–610.