Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2024): 8.431 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 11 | Issue:6 | June 2024 -Peer-Reviewed Journal

ANALYSIS OF FACTORS IMPACTING EFFICIENCY OF REMOTE BANKING SERVICES (EVIDENCE FROM PRIVATE BANKS)

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ABSTRACT
This research article examines the factors impacting efficiency of remote banking services in private banks. The SVAR model with statistical data covering the period 2018M9-2023M9 has been used in the analysis. According to the results of the model, the revenue of Private Joint-Stock "Trustbank" obtained from remote banking services is under a favourable impact of changes in the number of individuals using its remote services, number of bank cards issued into circulation, number of installed POS-terminals, and changes in the number of installed ATMs and self-Service kiosks. However, it has been revealed that the effect of the change in the number of legal entities and individual entrepreneurs using remote banking services on the bank's revenue from remote banking services is not statistically significant.
KEYWORDS: *remote banking service, POS-terminals, bank cards, digital banking service, innovation-based banking product.*

INTRODUCTION

The accelerating disruptive impact of information technology (IT) on value chains and business models has eliminated various constraints across industries.In particular, it considered one of the greatest impacts on the financial services sector, which can cause such consequences as disintermediation, loss of revenue and reorganization of the value chain with new participants. Currently banks are challenging the same situation as Kodak or Olivett experienced many years ago. Digitization has fundamentally changed their core products and value chains.

As time-to-market for digital banking products shrinks, thousands of financial technology (FinTech) startups and other non-bank lending institutions are developing new products, services and business models for all areas of payments in the banking sphere. Financial Technology (FinTech) startups such as these and other non-bank lending institutions are developing a range of services from front office to back office, to financing across the banking sector and financing across the entire value chain because the adoption of these new services by the population is accelerating. Osram, considered the lighting company, for example, has recently been forced to cut its worldwide workforce from 34000 to 26000 due to an unexpected rate of customer adoption of its new LED technology. In contrast, a financial services company like Wealthfront, although still small, has almost 4.5 billion USD in total assets. Such companies expand very quickly and establish new ecosystems with other non-banking and financial services companies.

The development of digital technologies, i.e. financial technology (FinTech)-based companies or non-banks, is expected to significantly impact six areas of commercial banks in the nearest future, including customers, operating models, revenue models, platforms, data and value chains.

It should be noted that the reforms implemented in our country in recent years in the economy have resulted in the digitization of the entire economy and, in particular, expansion of the number services of commercial banks. In this research paper we empirically analyze the factors impacting efficiency of remote banking services of commercial banks.

LITERATURE REVIEW

Recently many scholars and researchers are focusing on the investigation of such issues, as expansion of digital banking services, the risk and convenience of digital banking services, and the impact of digital banking services on banking efficiency. In this research paper we will examine the views and considerations of foreign and domestic scientists

According to P. Revathi, online banking is one of the most essential changes for the banking industry in its long history. However, despite the many incentives that online banking provides to customers, there are a number of key concerns and challenges for market analysts in the online banking sector. According to the researcher, traditional banking habits, security, technical problems, transaction difficulties and small marketing budgets constitute the main challenges that online banking market analysts have to compromise in order to succeed in this field, but the demand for this sector remains very strong. Thus, online banks can become more developed and successful because of their efforts to solve their marketing problems. However, despite the advantages of online banking, there are a number of obvious problems and challenges in the field of online banking. These are crucially important both for the banks that offer online banking and for their customers who depend on the efficient functioning of the banks. In order for online banking to be effective, they must be aware of such issues.[1]

From the point of view of such economists as L.Wewege, J.Lee, and M.Thomsett, financial services or "FinTech" technologies, participants, and technology-tool-telecommunications companies are rapidly replacing the traditional banking industry by offering customer-oriented, financial services, which are faster, easier, more convenient and free of charge. Digital neo-banks have facilitated technological innovations such as digital wallets and R2R messaging, focusing on payments, remittances, SME lending and microfinance. In their opinion, FinTechs often lack the scale and credibility to be unregulated, in some cases exposed to lending risk or liquidity risk from a customer's point of view. FinTech is increasingly recognized as a partner for large, traditional and incumbent banks to create value through technological advancements and innovation as they undergo accelerated digital transformation. As the FinTech industry evolves, all of the innovative technologies that have laid the grounds for major disruptions in current digital banking revolutions, have set an unimaginable trajectory of collaboration and consolidation. Their academic papers focus on FinTech and digital banking transformation processes in existing banking institutions to demonstrate that access to FinTech trends will increase significantly in the upcoming years. The results of the analysis have showed that digitized-mobile-banking transitions will expand the capabilities of the banking infrastructure for data sharing, connectivity, stability and cybersecurity, and standardization of internal and external APIs as developments in the data protection regulatory framework continue within the framework of the Privacy Act and Open Banking Directives.[2]

Such economists as C. Mbama and P. Ezepue have studied the satisfaction and loyalty of the population with digital banking and their experience as a case study of financial indicators of Great Britain. They used financial statements of banks to investigate these issues and conducted Multivariate Factor Analysis, Structural Equation Modeling, and ANOVA tests to investigate research hypotheses about the relationships between the factors under consideration.

According to the analysis, the main determinants of customer experience in digital banking are banking service quality, functional quality, perceived value, employee-customer participation, perceived ease of use, and perceived risk. It has been revealed that there is a significant relationship between customer experience, satisfaction and loyalty with financial performance. On their part, this study focused on UK bank customers, limiting its generalizability to other banks globally. However, the fact that banks generally adopt common standards in bank financial management means that the results are potentially robust to global banking governance. It was agreed that replication of the study in banks in other countries would increase its robustness.[3]

From the point of view of V. Dubey, recently FinTech technologies have been evolved in digital banking around the world. These technologies include artificial intelligence, augmented reality and blockchain technology. Augmented reality *(AR)* technologies are currently having a fluctuating effect in many industries.From application in healthcare, oil and gas construction, and retail to manufacturing, AR technologies are now being used to improve process efficiency, reduce costs, and deliver a wide range of commercial benefits. He considered artificial intelligence to be "a rising star" in the world of technology. According to V.Dubey, it is necessary to have enough knowledge about artificial intelligence, because artificial intelligence is currently one of the hot topics of social networks and is being discussed by millions of people throughout the world. In 2018, the use of blockchain was firmly set as the technology shifted from the fringes to the mainstream in many significant industries such as healthcare, government, insurance, supply chain management, and, definitely, finance. According to statistics, 1.3 billion USDhas been invested globally in FinTech projects based on blockchain innovations.[4] Progressive financial institutions have also increased their spending on in-house banking technologies, especially those with permanent settlements.Therefore, nowadays it is crucially important to study the role of Artificial Intelligence, Augmented Reality (AR) and blockchain in digital banking.

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One of the economists from Uzbekistan, A.L. Gulyamova, has researched the role of innovations in raising efficiency of banks.In her opinion, it is possible to improve the efficiency of innovation-based services in banks by assessing the level of profitability of capital ($ROE_{innovation}$)and assets ($ROA_{innovation}$)in relation to the innovation-based services of a commercial bank and ensuring a level higher than the average level of profitability in the overall banking system. In addition, it has been emphasized that it is necessary to further raise efficiency of payment terminals, ATMs and infokiosks installed in banks by ensuring the their location in reliance upon the principle of maximizing profit for the bank.[5]

RESEARCH METHODOLOGY

Such methods s induction, deduction, synthesis, and comparative analysis have been used in the research process. Econometric models have been applied to evaluate factors impacting the efficiency of remote banking services of commercial banks.Taking into account that the empirical analysis is performed on the example of private banks, we have used the statistical data of the Private Joint-Stock "Trustbank".

In this regard we analyze the impact of such endogenous factors as indicators demonstrating efficiency of remote banking services of commercial banks on the income obtained ($TrustbankIncome_t$), return on assets y of remote bank services ($TrustbankROA_t$), and the return on equity of remote banking services ($TrustbankROE_t$). As endogenous factors impacting the performance of remote banking services have been accepted such aspects as a change in the number of legal entities and individual entrepreneurs using the bank's remote services ($TrustbankYShYTT_t$), as well as the changes in the number of individuals ($TrustbankJSh_t$), change in the number of bank cards issued into circulation ($TrustbankCards_t$), Number of installed POS-terminals ($Trustbankterminals_t$) and changes in the number of installed ATMs and Self-Service Kiosks ($TuastbankATMs_t$). Statistical data of the selected indicators for the period 2018M09-2023M09 have been obtained in the cross-section of months and growth. All data have been 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.

Augmented Dickey-Fuller Test has been used in this research paper. Augmented Dickey-Fuller Test model is as follows:

$$\Delta TrastbankYShYTT_t = \alpha_1 + \beta_1 t + \gamma_1 TrastbankYShYTT_{t-1} + \varphi_1 \Delta TrastbankYShYTT_{t-1} + \ldots + \varphi_{p-1} \Delta TrastbankYShYTT_{t-(p-1)} + \tau_t$$

$$\Delta TrastbankJSh_t = \alpha_2 + \beta_2 t + \gamma_2 TrastbankJSh_{t-1} + \omega_1 \Delta TrastbankJSh_{t-1} + \ldots + \omega_{p-1} \Delta TrastbankJSh_{t-(p-1)} + \theta_t$$

$$\Delta TrastbankCards_t = \alpha_3 + \beta_3 t + \gamma_3 TrastbankCards_{t-1} + \mu_1 \Delta TrastbankCards_{t-1} + \cdots + \mu_{p-1} \Delta TrastbankCards_{t-(p-1)} + \sigma_t$$

$$\Delta Trastbankterminals_t = \alpha_4 + \beta_4 t + \gamma_4 Trastbankterminals_{t-1} + \varphi_1 \Delta Trastbankterminals_{t-1} + \ldots + \varphi_{p-1} \Delta Trastbankterminals_{t-(p-1)} + \tau_t$$

$$\Delta TrastbankATMs_t = \alpha_5 + \beta_5 t + \gamma_5 TrastbankATMs_{t-1} + \omega_1 \Delta TrastbankATMs_{t-1} + \ldots + \omega_{p-1} \Delta TrastbankATMs_{t-(p-1)} + \theta_t$$

$$\Delta TrastbankIncome_t = \alpha_6 + \beta_6 t + \gamma_6 TrastbankIncome_{t-1} + \mu_1 \Delta TrastbankIncome_{t-1} + \cdots + \mu_{p-1} \Delta TrastbankIncome_{t-(p-1)} + \sigma_t$$

$$\Delta TrastbankROA_t = \alpha_7 + \beta_7 t + \gamma_7 TrastbankROA_{t-1} + \varphi_1 \Delta TrastbankROA_{t-1} + \ldots + \varphi_{p-1} \Delta TrastbankROA_{t-(p-1)} + \tau_t$$

$$\Delta TrastbankROE_t = \alpha_8 + \beta_8 t + \gamma_8 TrastbankROE_{t-1} + \omega_1 \Delta TrastbankROE_{t-1} + \ldots + \omega_{p-1} \Delta TrastbankROE_{t-(p-1)} + \theta_t$$

Here, $\alpha_1, \alpha_2, \ldots, \alpha_8$are constant values, $\beta_1, \beta_2, \ldots, \beta_8$are coefficients of variation due to time trend.

ANALYSIS AND RESULT DISCUSSION

Commercial banks are expanding their digital and innovation-based products aimed at improving the quality of remote services. Some of these services have become popular among the population, while others show the

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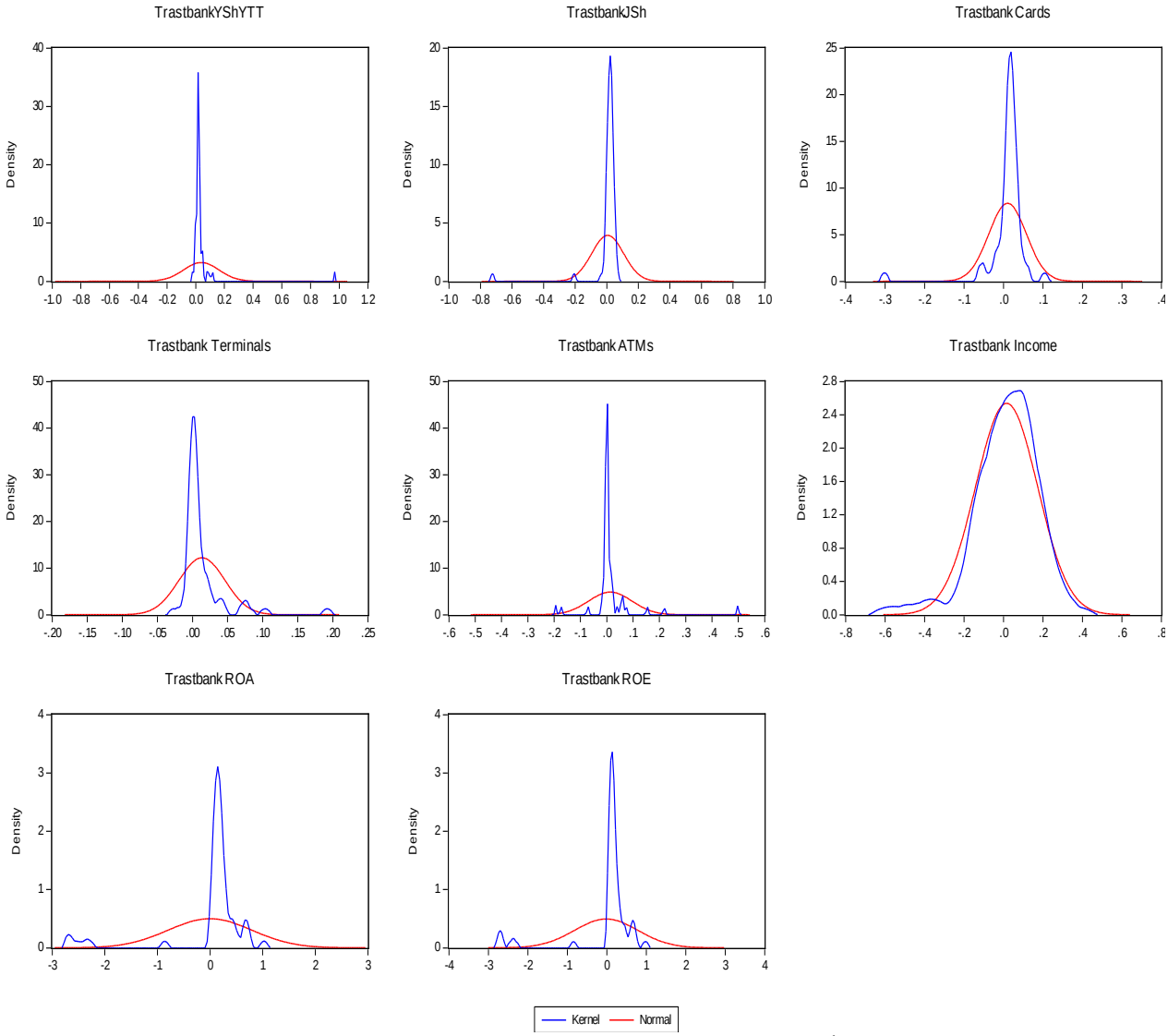
opposite outcome. However, one of the essential issues to determine efficiency of such innovation-based services when studied scientifically, or the power of factors impacting efficiency of such banking services. As we mentioned above, although banks are actively introducing or discovering innovation-based products, there are not many research papers analyzing their efficiency. In reliance upon this fact we will perform an empirical analysis of the factors impacting the yield of remote banking services and their profitability on the example of private banks operating in our country. Taking into account that the empirical analysis is normally performed on the example of private banks, we use the statistical data of Private Joint-Stock Trustbank.



-Figure 1. Normal distribution of selected indicators[1]

A number of statistical calculations have been made at the initial stage of the econometric analysis. These are the descriptive statistics of the selected data, which mainly analyze the data's average values, maximum and minimum values, deviation from the mean (standard deviation). Moreover, the normal distribution of the indicators selected in the research paper has been analyzed.

The Jacques Bera coefficient has been used to test the normal distribution of the data. The analysis illustrates that all the selected indicators have a normal distribution, except for the distance banking return on assets and the distance banking return on capital. Because it has been disclosed that the calculated Jacques-Bera coefficient for all the selected indicators is reliable and their probability is less than 0.05.

[1] Developed by the author based on selected statistical data.

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60 observations have been made using selected indicators. Descriptive statistics of ten selected indicators are presented below.

Table 1
Descriptive statistics of selected indicators

	TrastbankYShYTT	TrastbankJSh	TrastbankCards	TrastbankTerminals	TrastbankATMS	TrastbankIncome	TrastbankROA	TrastbankROE
Mean	0.038958	0.005690	0.010568	0.013693	0.013738	0.016222	-0.003299	-0.015015
Median	0.019305	0.022770	0.016697	0.003283	0.000000	0.041649	0.159746	0.139119
Maximum	0.968000	0.065682	0.104354	0.191971	0.498087	0.349534	1.025890	0.981434
Minimum	-0.023623	-0.723802	-0.301124	-0.026734	-0.193707	-0.554519	-2.696013	-2.743266
Std. Dev.	0.124447	0.101879	0.048067	0.032855	0.082533	0.157167	0.804343	0.812649
Skewness	7.109002	-6.410171	-4.603373	3.361282	3.320941	-0.993013	-2.558828	-2.595045
Sum Sq. Dev.	0.913741	0.612378	0.136317	0.063686	0.401894	1.457388	38.17112	38.96355
Observations	60	60	60	60	60	60	60	60

According to the results of the analysis, it has been determined that the standard deviation of the change in the return on assets and return on equity of remote banking services of Private Joint-Stock Trustbank is greater than the rest of the indicators.

Correlation between ten selected indicators is presented in the table below.

Table 2
Correlation matrix between selected indicators

	TrastbankYShYTT	TrastbankJSh	TrastbankCards	TrastbankTerminals	TrastbankATMS	TrastbankIncome	TrastbankROA	TrastbankROE
TrastbankYShYTT	1							
TrastbankJSh	-0.2703	1						
TrastbankCards	-0.0022	0.0040	1					
TrastbankTerminals	0.0543	-0.0025	0.0750	1				
TrastbankATMS	0.1287	0.0048	0.1975	-0.0535	1			
TrastbankIncome	0.4780	0.3167	0.2327	0.0766	0,5728	1		
TrastbankROA	-0.4008	0.0905	0.35095	0.1059	0.0029	0.6365	1	
TrastbankROE	-0.4142	0.0918	0.3478	0.0997	0.0121	0.6447	0.9988	1

The correlation analysis demonstrates that the revenue of Private Joint-Stock Trustbank from remote banking services has a positive correlation with all the endogenous indicators impacting it.

Different econometric models can be used to evaluate the strength of endogenous factors, which demonstrate the impact of the remote banking services of Private Joint-Stock Trustbank on the yield, return on assets and return on equity. It depends primarily on the statistical development of the selected indicators. In our research paper we use econometric models, least square method and Structural vector autoregression (SVAR) models.

First, we use the least square method to estimate the strength of endogenous factors of the impact of remote banking services of Private Joint-Stock Trustbank on the yield, and of the impact of remote banking services on the return on assets and return on equity. Here we consider the factors, which impact the bank' revenue obtained from remote banking services.

Table 3
Parameters calculated in the least square model

DependentVariable: **TrustbankIncome**
Method: Least Squares
Sample (adjusted): 2018M09 2023M09
Included observations: 60 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TrustbankYShYTT	-0.642244	0.150494	-4.267571	0.0001
TrustbankJSh	-0.186968	0.181853	-1.028132	0.3085

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TrustbankCards	0.769930	0.379857	2.026894	0.0476
TrustbankTerminals	0.400194	0.546448	0.732355	0.4671
TrustbankATMS	-0.092973	0.223066	-0.416796	0.6785
C	0.029967	0.020393	1.469423	0.1475

R-squared	0.305842	Mean dependent var	0.016222
Adjusted R-squared	0.241569	S.D. dependent var	0.157167
S.E. of regression	0.136874	Akaike info criterion	-1.044878
Sum squared resid	1.011657	Schwarz criterion	-0.835444
Log likelihood	37.34635	Hannan-Quinn criter.	-0.962957
F-statistic	4.758427	Durbin-Watson stat	2.644740
Prob(F-statistic)	0.001127		

The results of the analysis show that among the endogenous factors selected with 95.0 percent accuracy, there is no impact of changes in the number of individuals using remote services, changes in the number of installed POS-terminals, and changes in the number of installed ATMs and Self-Service Kiosks on revenue obtained from remote services. However, it has been revealed that a one percent increase in the number of legal entities and individual entrepreneurs using the bank's remote services reduces their income gained from remote services by -0.64 percent, and a one percent increase in the number of bank cards issued into circulation raises their income from remote banking services by 0.76 percent.

Table 4
Parameters calculated in the least square model

Dependent Variable: **TrustbankROA**
Method: Least Squares
Sample (adjusted): 2018M09 2023M09
Included observations: 60 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TrustbankYShYTT	-0.988457	0.780442	-1.266535	0.2109
TrustbankJSh	0.315073	0.825464	0.381692	0.7042
TrustbankCards	3.670740	1.781315	2.060691	0.0443
TrustbankTerminals	1.495295	2.470576	0.605242	0.5476
TrustbankATMS	0.368133	1.037240	0.354916	0.7241
Trustbank Income	2.615368	0.614726	4.254527	0.0001
C	-0.073330	0.093750	-0.782180	0.4376

R-squared	0.473870	Mean dependent var	-0.003299
Adjusted R-squared	0.414309	S.D. dependent var	0.804343
S.E. of regression	0.615568	Akaike info criterion	1.976737
Sum squared resid	20.08296	Schwarz criterion	2.221078
Log likelihood	-52.30212	Hannan-Quinn criter.	2.072312
F-statistic	7.955938	Durbin-Watson stat	2.370314
Prob (F-statistic)	0.000004		

The results of the analysis show that among the endogenous factors selected with 95.0 percent accuracy in the least square method, among the selected endogenous factors, there is no impact of changes in the number of legal entities, individual entrepreneurs and individuals using their remote services, changes in the number of installed POS-terminals, and changes in the number of installed ATMs and Self-Service Kiosks on the return on assets. However, it has been revealed that a one percent increase in the volume of revenue from remote banking services raises the return on assets of remote banking services relative to assets by 2.61 percent, and a one percent increase in the number of bank cards issued into circulation increases the return on assets of remote banking services by 3.67 percent.

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Table 5
Parameters calculated in the least square model

Dependent Variable: **Trustbank ROE**
Method: Least Squares
Sample (adjusted): 2018M09 2023M09
Included observations: 60 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TrustbankYShYTT	-1.080766	0.779790	-1.385971	0.1716
TrustbankJSh	0.300997	0.824775	0.364945	0.7166
TrustbankCards	3.593403	1.779827	2.018962	0.0486
TrustbankTerminals	1.396581	2.468512	0.565758	0.5739
TrustbankATMS	0.504003	1.036374	0.486314	0.6287
Trustbank Income	2.671300	0.614212	4.349148	0.0001
C	-0.081972	0.093672	-0.875093	0.3855

R-squared	0.485432	Mean dependent var	-0.015015
Adjusted R-squared	0.427179	S.D. dependent var	0.812649
S.E. of regression	0.615054	Akaike info criterion	1.975066
Sum squared resid	20.04941	Schwarz criterion	2.219406
Log likelihood	-52.25197	Hannan-Quinn criter.	2.070641
F-statistic	8.333155	Durbin-Watson stat	2.403651
Prob(F-statistic)	0.000002		

The results of the analysis demonstrate that the impact of the selected endogenous factors on the return on equity of remote banking services with 95.0 percent accuracy in the least square method has provided the same result as the impact on the return on assets.

The impact of the selected indicators of the remote banking on the profitability of remote banking services, the impact of the remote banking services on the return on assets and return on equity determined by the least square method causes non-usage of "lag" in this model. Therefore, it is appropriate to perform our analysis using other models. In particular, in the next step of our analysis we use the structural vector autoregression (SVAR) model. When using the SVAR model, we need to perform the Augmented Dickey-Fuller Test based on the initially selected indicators.

Through this Augmented Dickey-Fuller Test model, it is appropriate to check the indicators for unit root and conclude whether these indicators are stationary or non-stationary.

Table 6
Results of Augmented Dickey-Fuller Test

	Indicators	t-Statistic	Probability	Conclusion
1	TrustbankYShYTT	-7.528338	0.0000	I(0)
2	TrustbankJSh	-7.713578	0.0000	I(0)
3	TrustbankCards	-5.493132	0.0000	I(0)
4	TrustbankTerminals	-3.324888	0.0181	I(0)
5	TrustbankATMS	-7.158401	0.0000	I(0)
6	TrustbankIncome	-11.39797	0.0000	I(0)
7	TrustbankROA	-17.11062	0.0000	I(0)
8	TrustbankROE	-15.78990	0.0000	I(0)

As it is obvious from the table data, when we have verified the selected indicators in the unit root, it has been found that all the indicators are in a stationary state. So, we can use the structural vector autoregression model to evaluate the impact of these indicators.
At the next stage of our analysis we need to choose the optimal "lag" for the SVAR model. For this we use the Lag Length Criteria method.

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Table 7
Lag Length Criteria method for SVAR model

VAR Lag Order Selection Criteria
Sample: 2018M09 2023M09
Included observations: 60

Lag	LogL	LR	FPE	AIC	SC	HQ
0	451.9890	NA	2.37e-17	-15.57856	-15.29182	-15.46712
1	507.1653	92.92850*	3.30e-17*	-15.26896	-12.68826	-14.26601
2	533.0500	36.32946	1.43e-16	-13.93158*	-9.056930*	-12.03712*
3	588.7415	62.53079	2.74e-16	-13.64005	-6.471451	-10.85409

The analysis illustrates that the optimal number of lags for our model is 1 according to the sequential modified LR test statistic and Final prediction error tests. However, according to the Akaike information criterion, Schwarz information criterion and Hannan-Quinn information criterion tests, it is 2. Based on this, it is not a mistake to choose the number of lags for our model as 2.

Table 8
SVAR model of the selected indicators

Vector Autoregression Estimates (with restrictions))

	TrustbankYShYTT	**TrustbankJSh**	**TrustbankCards**	**TrustbankTerminals**	**TrustbankATMS**	**TrustbankIncome**	**TrustbankROA**	**TrustbankROE**
TrustbankJSh(-2)	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.131033 (0.14393) [2.91041]	0.284499 (0.81515) [0.34902]	0.299946 (0.82256) [0.36465]
TrustbankCards(-2)	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.267986 (0.35828) [2.74797]	-1.722740 (2.02919) [-0.84898]	-1.464892 (2.04765) [-0.71540]
TrustbankTerminals(-2)	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.232946 (0.46856) [3.58252]	1.341071 (2.65378) [0.50534]	0.983570 (2.67791) [0.36729]
TrustbankATMS(-2)	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.328839 (0.18137) [2.60009]	1.120861 (1.02722) [1.09116]	1.122443 (1.03656) [1.08285]
TrustbankIncome(-2)	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	0.000000 --- ---	-0.190768 (0.18095) [-1.05427]	0.350745 (1.02483) [3.34225]	0.349615 (1.03415) [2.33807]
C	0.040034 (0.01646) [2.43198]	0.004972 (0.01347) [0.36915]	0.010194 (0.00636) [1.60308]	0.013407 (0.00435) [3.08485]	0.014212 (0.01092) [1.30090]	0.049683 (0.02255) [2.20319]	-0.047594 (0.13769) [-0.34566]	-0.062270 (0.13884) [-0.44849]

We can see the results of the SVAR model based on the selected "lag" in the table below.
According to the results of the model, the revenue income of Private Joint-Stock Trustbank from remote banking services is under a favourable impact of the changes in the number of individuals using its remote services, changes in the number of bank cards issued into circulation, changes in the number of installed POS-terminals, and changes in the number of installed ATMs and Self-Service Kiosks. However, it has been revealed that the effect of the change in the number of legal entities and individual entrepreneurs using remote banking services on the bank's revenue from remote banking services is not statistically significant.

CONCLUSION AND PROPOSALS

As a conclusion, we can say that the impact of endogenous variables on the bank's remote services income is as follows:

It has been revealed that a one percent increase in the number of legal entities and individual entrepreneurs using remote banking services raises their income from remote banking services by 0.09 percent after two months, and a one percent increase in the number of individuals raises their income from remote banking services by 0.13 percent after two months;

It has been determined that a one percent increase in the number of bank cards issued into circulation raises its income from remote banking services by 0.27 percent with a two-month lag;

It Has been revealed that a one percent increase in the number of installed POS-terminals raises its revenue from remote banking services by 0.23 percent after two months;

It has been revealed that a one percent increase in the number of installed ATMs and Self-Service Kiosks raises its revenue from remote banking services by 0.33 percent with a two-month lag.

The influence of endogenous variables on the profitability of the bank's remote services is as follows:

It has been revealed that a one percent increase in the number of individuals using remote banking services raises the return on assets of remote banking services by 0.28 percent and the return on equity of remote banking services by 0.30 percent after two months;

It has been revealed that a one percent increase in the number of installed POS-terminals raises the return on assets of remote banking services by 1.34 percent and the return on equity of remote banking services by 0.78 percent after two months;

It has been revealed that a one percent increase in the number of installed ATMs and Self-Service Kiosks raises the return on assets of remote banking services by 1.10 percent and the return on equity of remote banking services by 1.12 percent with a two-month lag;

It has been revealed that a one percent increase in the bank's income obtained from the remote services raises the return on assets by 0.35 percent and the remote return on equity by 0.29 percent after two months;

The Increase in the number of legal entities and individual entrepreneurs using remote services and the increase in the umber of bank cards issued into circulation did not make any impact on the return on assets and return on equity of remote banking services.

REFERENCE

1. *Revathi, P. (2019). Digital banking challenges and opportunities in India. EPRA International Journal of Economic and Business Review, 7(12), 20-23.*
2. *Wewege, L., Lee, J., &Thomsett, M. C. (2020). Disruptions and digital banking trends. Journal of Applied Finance and Banking, 10(6), 15-56.*
3. *Mbama, C. I., &Ezepue, P. O. (2018). Digital banking, customer experience and bank financial performance: UK customers' perceptions. International journal of bank marketing, 36(2), 230-255.*
4. *Dubey, V. (2019). FinTech innovations in digital banking. International Journal of Engineering Research & Technology (IJERT), 8(10), 597-601.*
5. *A.L. Gulyamova (2023). Improving the use of innovations in raising efficiency of banking activities. Abstract of the dissertation claiming for the PhD degree on economics.*
6. *Евлахова Ю. С, Кобулов Х. А. О банковских вкладах физических лиц в Узбекистане //Сберегательное дело за рубежом. 2022. № 2. С. 35–41. DOI: 10.36992/2782-5949_2022_2_35*
7. *Евлахова Ю. С., Кобулов Х.А. Анализ рынка банковских депозитов в Узбекистане // Банковские услуги. 2022. № 11. С. 33–37. DOI: 10.36992/2075-1915_2022_11_33*
8. *Eremina I. et al. Automation of investment and project management based on the introduction of an enterprise resource planning system in the power grid company //Sustainable Development and Engineering Economics. – 2023. – №. 1. – С. 8-26.*
9. *Enikeev A. A. et al. XVII International Multidisciplinary Conference "Prospects and Key Tendencies of Science in Contemporary World". Proceedings of the Conference (March, 2022). Bubok Publishing SL, Madrid, Spain. 2022. 100 p. – 2022.*
10. *Karimova G. A. Qobulov XA Banklarning raqamli xizmatlari turlari va ularning ommabopligini oshirish masalalari //Интернаука: электрон. научн. журн. – 2021. – Т. 45. – №. 190. – С. 76-77.*
11. *Кабулов Х. А. Вопросы финансовой безопасности в условиях модернизации Республики Узбекистан //Интернаука. – 2020. – №. 3-2. – С. 12-14.*
12. *Kaur, S. J., Ali, L., Hassan, M. K., & Al-Emran, M. (2021). Adoption of digital banking channels in an emerging economy: exploring the role of in-branch efforts. Journal of Financial Services Marketing, 26, 107-121.*
13. *Nguyen, O. T. (2020). Factors affecting the intention to use digital banking in Vietnam. The Journal of Asian Finance, Economics and Business, 7(3), 303-310.*