

**RESEARCH ARTICLE**

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# The Role of Deposits and Securities in Shaping Banking Operations and Mutual Funds in Kazakhstan

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Studies*, 68(4), 89-100.**Conflict of interest:**author(s) declare that there is no  
conflict of interest**ABSTRACT**

This study examines the influence of client deposits, securities, and outstanding shares on key banking operations and their role in the development of mutual funds within Kazakhstan's financial system. The research focuses on identifying which financial instruments contribute significantly to resource allocation and the sustainability of mutual funds. Two primary hypotheses were tested: first, that securities and deposits of legal entities significantly impact banking performance and mutual fund growth, and second, that individual deposits and outstanding securities have a measurable influence on these outcomes. To address these questions, a multivariate analysis of covariance (MANCOVA) was conducted, supported by univariate tests and graphical methods such as Q-Q plots and raincloud plots. Data from Kazakhstan's financial institutions between 2012 and 2023 were analyzed to assess the statistical significance of these factors. Deposits from legal entities demonstrated their dominant role in the financial system, significantly impacting bank liquidity and resource allocation. In contrast, individual deposits and outstanding securities showed no statistical significance, reflecting the low engagement of private investors and their preference for traditional deposits over more complex investment instruments. Securities showed a significant impact on banking operations but were focused on the corporate sector and institutional investments. The results contrast with international markets in a strong dependence of the financial system on the corporate sector. Although securities are widely used to attract capital and manage investments, their market in Kazakhstan likely remains narrowly specialized and insufficiently liquid, a contrast rarely seen in studies of more developed markets.

**KEYWORDS:** Economy, Economic Development, Mutual Fund,  
Client Deposits Securities, Investment, Bank, Banking Sector, Capital  
Market, Public Investment Fund, Kazakhstan**SCSTI:** 06.73.55**JEL Code:** G20, G21, G23**FINANCIAL SUPPORT:** This study was not sponsored.

## 1. INTRODUCTION

Globally, there have appeared challenges for the banking sector due to economic uncertainty in the international arena, resulting mainly in rising interest rates and financial market volatility. The International Monetary Fund has emphasized the growing pressures on banking profitability and the capital-raising capacity of financial institutions. Banks find it difficult to attract capital through equity issuance, which in turn affects their investment capacity, particularly banks whose market value drops below their book value.

The banking sector in Kazakhstan has undergone tremendous changes over the last decade and has taken a fundamental role in economic development. It has become a primary conduit for resource allocation, financial intermediation, and productive investments. Since 2014, some crucial moments have been observed. In 2014, Kaspi bank launched an online marketplace platform and accumulative bonus system for the clients. In 2015, online bank loans became available for the population, especially car loans, and the next year, Kapsi extended its line of services and launched the KaspiRed shopping system. At the same time, in 2015, there was launched a state program in support of local businesses, particularly in rural areas or those who struggled to gain access to financial resources. That project involved the majority of the banks and put the banking sector as a core player in the development of the economy in Kazakhstan. The next prominent situation was the development of the dominant participant in the market, Halyk Bank, due to a merger with Kazkommertsbank, which holds a considerable share of assets, loans, and deposits. Banks are responsible for channeling deposits from households, businesses, and institutions into loans, securities, and other financial instruments.

A stable economy, especially for emerging ones such as Kazakhstan, depends on banking efficiency. Most of the bank liabilities are contributed by client deposits. In 2023, the deposit portfolio in the banking sector of

Kazakhstan accounted for 7.6% of client deposits, totaling 13.3% of bank assets. There is also the contribution of securities and outstanding shares to the investment portfolio of banks, which ensures liquidity management, mitigation of risks, and profitability. Banks stand out as backup for the economy of Kazakhstan through the provision of loans to legal entities and individuals, supporting the state, etc. Nevertheless, to keep up with the strategy of “maintaining balance”, they have to diversify their securities portfolio. Therefore, in Kazakhstan, banks have expanded their securities holdings, taking advantage of domestic and international investment opportunities.

Considering the current state of action in the banking sector of Kazakhstan, mutual funds have gained traction as one of the core mechanisms for resource distribution and diversification of investments. Regarding banks, the position of mutual funds is loop-sided: they complement and compete with banks, driving innovation and diversification in the financial sector. Therefore, it is important to understand the influence of deposits and securities on banking operations and their relation to the development of mutual funds. Mutual funds reallocate capital and provide banks with alternative investment opportunities. The aim of this study is to examine the influence of deposits, securities, and outstanding shares on key banking operations, highlighting their role in resource allocation and the development of mutual funds.

## 2. LITERATURE REVIEW

Liquidity and sustainable funding ensure investment operations and development of mutual funds, and deposits are viewed as a critical source. Mainly, studies are devoted to the system of deposit resources utilization by banks based on the objective in terms of collective financial instruments to maintain liquidity, manage risks, and expand opportunities for investments. Some scientists suggest that deposits stand out as mechanisms

for a stable inflow of funds directed toward financing mutual funds, making them a significant element of the financial system.

Some works were more specific in the analysis of deposits' role in mutual funds development. Usually, deposits are attributed to such functions as support of investment operations in collective financial instruments, maintaining liquidity, managing risks, and consequently, the development of mutual funds. They are viewed as another source of liquidity and sustainable funding. Moreover, deposits ensure stable financial contributions or mutual funds inflow and, therefore, become a significant element of the financial system. Nanda et al. (2000) stated that liquid resources are a core element in providing market operations and managing share redemptions effectively. Thereby, banks reduce price risks and improve resistance to market volatility. Macey (2011) looked at mutual funds as an alternative to traditional bank deposits, as in the chase to achieve higher returns, clients usually reallocate funds from deposits to money market mutual funds. As a result, mutual fund assets grow due to retail and institutional investors. Chernykh and Cole (2011) showed that deposit insurance affects clients' perception as they develop confidence and stabilize deposit flows. Accordingly, part of the accumulated liquidity banks can invest in mutual funds. Pellinen et al. (2011) paid attention to clients' financial literacy level, as it affects their willingness to diversify their portfolios and increase the share of assets allocated to mutual funds. Ultimately, the inflow of new funds into mutual funds is developed, improving their liquidity and financial stability.

Another relevant topic is the capacity of banks to engage in investment activities. The significant volume of stable deposits develops the fundamental capacity of banks to finance or invest in projects and issue mutual fund products as they are provided with liquid funds (Estrin et al., 2000; Acaravcı & Çalim, 2013). At the same time, the issue of deposit withdrawal arises. Gros and Schoenmaker (2014) emphasized that deposit insurance systems are designed to prevent mass deposit

withdrawals distinctly during financial instability and maintain stable deposit flow. Ogege and Boloupremo (2014) studied the fact that funds raised through deposits are directed into investment projects, thereby increasing the volume of mutual fund assets. Since banks use part of depositors' funds to finance financial instruments, this promotes the growth of mutual fund assets within the collective investment market. According to Allen et al. (2015), a stable deposit base ensures banks have access to liquid resources to finance long-term investment projects, including mutual funds. Tuyishime et al. (2015) and Edem (2017) stated that the growth of the deposit base increases bank liquidity and its capacity to engage in investment operations, as banks direct excess liquidity into investments, contributing to the increase in mutual fund assets. Some research examined the role of securities, whereas investment funds utilizing securities can drive governance reforms and enhance market efficiency. Burkhanov (2018) stated the stabilization effects of securities within mutual fund portfolios, particularly during periods of economic uncertainty.

A second perspective centers on how investor behaviors or financial literacy affect the reliance on securities in mutual fund strategies. Also, regulatory implications of securities in mutual fund operations form the core of studies. Smirnova and Sprenger (2011) showed that the level of development of financial technologies and instruments creates so-called localized knowledge of market conditions, which differs in a deeper understanding of local demands and needs. Such strategic advantage enables mutual funds in Russia to outperform their foreign counterparts. Marian (2016) revealed that private investment funds use securities as instruments for tax avoidance. This creates the dual role of securities for investment and financial engineering. Baker and Puttonen (2017) focused on the trust preferences of investors, where regulatory mechanisms are crucial as they provide a level of accuracy in risk presentation. Misrepresentation of risky securities as safe investments weakens the level

of trust of clients (investors) and destabilizes mutual funds. Therefore, increased transparency and adherence to regulatory standards enhance interest in mutual funds. Public investment funds (PIFs) use securities as part of diversification strategies in favor of long-term macroeconomic goals. According to McPherson-Smith (2021), implementing PIFs into investment strategy enables the diversification of securities' assets. It reduces economic vulnerabilities and contributes to the economic image in global financial markets. Apart from financial instruments, Montambault Trudelle (2023) highlighted its political power and economic influence driven by the transformation of the domestic economy.

The literature review showed that mutual funds play a crucial role in the economy's diversification process, based on several factors such as deposits, securities, loans, etc. Therefore, it is important to analyze the role of highlighted factors in the perspective of banking sector development in Kazakhstan. The following hypotheses were developed.

*Hypothesis 1. Investments in securities and deposits placed with other banks influence bank loans and short-term liquidity operations, including retail loans, residential mortgage loans, and “reverse REPO” operations.*

*Hypothesis 2. Client deposits, including total deposits, deposits of legal entities, deposits of individuals, and outstanding shares, significantly impact retail loans and residential mortgage loans, reflecting their role as key resources for bank operations.*

### 3. RESEARCH METHODS

In this study, we aim to analyze the relationships between various banking factors and their influence on key loan and liquidity operations, focusing on the role of client deposits, securities, and outstanding shares in the context of mutual funds. Based on the conducted literature review, a set of factors influencing the dependent variables was identified in Table 1.

Table 1. Independent and Dependent Variables with Code Assignments

Variable	Code	Description	Type
Client deposits, including	CD1	Total client deposits	Independent
Deposits of legal entities	CD2	Deposits placed by corporate entities	Independent
Deposits of individuals	CD3	Deposits placed by individual clients	Independent
Outstanding shares	CD4	Issued securities into circulation	Independent
Deposits placed with other banks	BF1	Interbank deposits	Independent
Securities	BF2	Investments in securities	Independent
Bank loans and “reverse REPO” operations	BF3	Total bank loans and “reverse REPO” operations	Independent
Retail loans	BF4	Loans issued for retail purposes	Dependent
Residential mortgage loans	BF5	Loans issued for residential mortgages	Dependent
Loans to small and medium-sized enterprises	BF6	Loans issued to SMEs (Residents of Kazakhstan)	Independent
“Reverse REPO” operation	BF7	Short-term liquidity operations	Independent

Note: compiled by authors

MANCOVA will be applied to test the hypotheses and assess the combined effect of the independent variables on the dependent variables. The analysis includes multivariate tests to determine the strength and statistical significance of the effects. Additionally, the

specific contributions of each independent variable to the dependent variables will be provided through univariate tests. The Shapiro-Wilk test will be applied to validate normality assumptions further as well. For a visual assumption check of the results, Q-Q

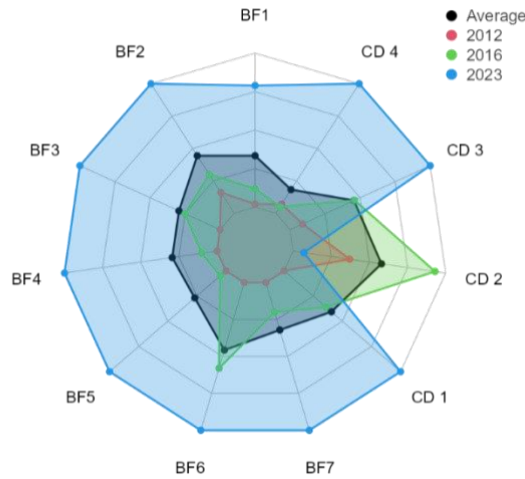
Plots will be applied for multivariate normality (for both groups of variables to visually examine the relationships between the independent and dependent variables to identify potential patterns, outliers, and nonlinear trends that may influence the results of the MANCOVA.

#### 4. FINDINGS AND DISCUSSIONS

The structure of the analysis included an analysis of the key factors in the Banking

Factors and Client Deposits groups, highlighting their dynamics over time. As revealed in the literature review, deposits play a significant part in the growth of banks' investment ability, portfolio diversification, and state project implementation. Next, an analysis of both groups of indicators is provided.

Figure 1 presents changes in the relative scale and distribution of variable groups in 2012, 2016, and 2023 to clearly identify growth patterns and stability.



**FIGURE 1.** Comparative Overview of Banking Factors and Client Deposits

*Note:* compiled by authors

As presented in the chart, total client deposits and deposits of legal entities showed consistent growth, especially after 2019. It could be assumed that the role of institutional deposits in supporting banking operations increased. Deposits of individuals and outstanding shares, on the contrary, showed rather slow growth and fluctuating behavior as a limited contribution to the overall funding structure of banks. The most striking growth was from 2020 to 2023, where key variables (client and corporate deposits) showed a sharp

increase. Shifts in financial market conditions and regulatory changes could cause this. In contrast, a delayed impact was observed among variables like outstanding shares exhibiting sporadic growth, with a significant rise only in 2022 and 2023. To sum up, the results showed the growing importance of institutional funding sources for banks. At the same time, it also showed instability and slower growth in the role of individual deposits and securities.

Table 2 presents the results of the BF group multivariate tests.

**TABLE 2.** Bank financial operations multivariate tests

Var	Tests	Value	F	df1	df2	p
BF1	Pillai's Trace	0.989	216.32	2	5	<.001
	Wilks' Lambda	0.0114	216.32	2	5	<.001
	Hotelling's Trace	86.528	216.32	2	5	<.001
	Roy's Largest Root	86.528	216.32	2	5	<.001

BF2	Pillai's Trace	0.882	18.73	2	5	0.005
	Wilks' Lambda	0.1177	18.73	2	5	0.005
	Hotelling's Trace	7.494	18.73	2	5	0.005
	Roy's Largest Root	7.494	18.73	2	5	0.005
BF3	Pillai's Trace	0.925	31.06	2	5	0.002
	Wilks' Lambda	0.0745	31.06	2	5	0.002
	Hotelling's Trace	12.422	31.06	2	5	0.002
	Roy's Largest Root	12.422	31.06	2	5	0.002
BF6	Pillai's Trace	0.422	1.82	2	5	0.254
	Wilks' Lambda	0.5784	1.82	2	5	0.254
	Hotelling's Trace	0.729	1.82	2	5	0.254
	Roy's Largest Root	0.729	1.82	2	5	0.254
BF7	Pillai's Trace	0.365	1.44	2	5	0.321
	Wilks' Lambda	0.6349	1.44	2	5	0.321
	Hotelling's Trace	0.575	1.44	2	5	0.321
	Roy's Largest Root	0.575	1.44	2	5	0.321

Note: compiled by authors

The multivariate tests showed that there are significant effects of BF1, BF2, and BF3 variables, based on their low Wilks' Lambda values and high F-statistics, all with p-values below 0.01. They had a strong influence on the dependent variables, due to their role in institutional liquidity management and resource allocation. BF6 and BF7 variables showed insignificant effect (p-values exceed

the 0.05 threshold) and limited contribution to overall bank operations. The results identified BF1, BF2, and BF3 variables as critical drivers of banking activities. The failure to achieve significance for variables BF6 and BF7 is the ground for further exclusion of these variables from the model. In Table 3, results of the Univariate Tests demonstrated relationships between dependent variables and independent.

**TABLE 3.** Univariate analysis of bank financial operations

Code	Dependent Variable	Sum of Squares	df	Mean Square	F	p
BF1	BF5	2.05e+7	1	2.05e+7	517.906	<.001
	BF4	1.60e+8	1	1.60e+8	425.757	<.001
BF2	BF5	1.13e+6	1	1.13e+6	28.731	0.002
	BF4	1.65e+7	1	1.65e+7	43.860	<.001
BF3	BF5	2.82e+6	1	2.82e+6	71.362	<.001
	BF4	2.59e+7	1	2.59e+7	68.858	<.001
BF6	BF5	135698	1	135698	3.436	0.113
	BF4	526894	1	526894	1.403	0.281
BF7	BF5	81006	1	81006	2.051	0.202
	BF4	190145	1	190145	0.506	0.503
Residuals	BF5	236940	6	39490		
	BF4	2.25e+6	6	375576		

Note: compiled by authors

The univariate tests demonstrate statistically significant results for BF1, BF2, and BF3 across both dependent variables, BF5 (residential mortgage loans) and BF4 (retail loans). Specifically, BF1 exhibits the largest effect, with extremely high F-values (517.906 for BF5 and 425.757 for BF4,  $p < 0.001$ ),

confirming its critical role in influencing both outcomes. Similarly, BF2 and BF3 show significant effects, with F-values ranging from 28.731 to 71.362 and p-values well below the 0.05 threshold. These results highlight the strong contribution of interbank deposits, securities, and bank loans to banking

operations. In contrast, BF6 and BF7 failed to achieve statistical significance, as their p-values exceeded 0.05. The observed F-values (3.436 for BF6 and 2.051 for BF7 on BF5) suggest limited explanatory power, likely due to lower variability or smaller scale relative to other financial operations. The residuals indicate that a notable portion of the variance remains unexplained, particularly for BF4, reinforcing the dominance of BF1, BF2, and

BF3 as key predictors. Overall, the results confirm the substantial impact of institutional tools like interbank deposits and securities on loan operations. At the same time, the insignificant outcomes for BF6 and BF7 may reflect their secondary role in resource allocation strategies or sample limitations.

Table 4 presents the results of the CD group multivariate tests.

**TABLE 4.** Client deposit factors multivariate tests

Var	Tests	Value	F	df1	df2	p
CD 1	Pillai's Trace	b	118.053	2	6	<.001
	Wilks' Lambda	0.0248	118.053	2	6	<.001
	Hotelling's Trace	39.351	118.053	2	6	<.001
	Roy's Largest Root	39.351	118.053	2	6	<.001
CD 2	Pillai's Trace	0.7645	9.739	2	6	0.013
	Wilks' Lambda	0.2355	9.739	2	6	0.013
	Hotelling's Trace	3.246	9.739	2	6	0.013
	Roy's Largest Root	3.246	9.739	2	6	0.013
CD 3	Pillai's Trace	0.0957	0.317	2	6	0.740
	Wilks' Lambda	0.9043	0.317	2	6	0.740
	Hotelling's Trace	0.106	0.317	2	6	0.740
	Roy's Largest Root	0.106	0.317	2	6	0.740
CD 4	Pillai's Trace	0.1140	0.386	2	6	0.695
	Wilks' Lambda	0.8860	0.386	2	6	0.695
	Hotelling's Trace	0.129	0.386	2	6	0.695
	Roy's Largest Root	0.129	0.386	2	6	0.695

Note: compiled by authors

The multivariate tests for the CD group reveal that the variables CD1 and CD2 have a statistically significant impact on banking operations. The significance of these variables is confirmed by multiple statistical tests, including Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root, all of which returned p-values below the commonly accepted threshold of  $p < 0.05$ . For CD1, the p-value was  $< 0.001$ , and for CD2, the p-value was 0.013, confirming their significant influence on key banking outcomes. On the other hand, the variables CD3 and CD4 did not demonstrate statistical significance, as their p-values exceeded the 0.05 threshold in all four multivariate tests. This indicates that these factors have limited explanatory power in the context of the analyzed banking activities. The higher Wilks' Lambda values for CD3 (0.9043)

and CD4 (0.8860) suggest a weaker contribution to the variation in banking outcomes, as opposed to CD1 and CD2, which exhibited much lower Wilks' Lambda values of 0.0248 and 0.2355, respectively.

The results obtained showed the central role of client deposits (CD1) and corporate deposits (CD2) as key sources of funding for banks, directly supporting their capacity for lending and operational flexibility. The limited impact of individual deposits (CD3) and outstanding shares (CD4) may be due to the relatively smaller scale of household savings and the underdeveloped role of market-issued securities a major bank funding source.

Table 6 shows the results of the Shapiro-Wilk multivariate normality test for CD and BF groups.

**TABLE 5.** Univariate analysis of client deposit factors

Code	Dependent Variable	Sum of Squares	df	Mean Square	F	p
CD 1	BF5	1.88e+8	1	1.88e+8	225.8327	<.001
	BF4	2.24e+7	1	2.24e+7	273.6317	<.001
CD 2	BF5	1.08e+7	1	1.08e+7	12.9990	0.009
	BF4	1.79e+6	1	1.79e+6	21.8862	0.002
CD 3	BF5	514587	1	514587	0.6189	0.457
	BF4	60071	1	60071	0.7329	0.420
CD 4	BF5	302115	1	302115	0.3634	0.566
	BF4	2071	1	2071	0.0253	0.878
Residuals	BF5	5.82e+6	7	831432		
	BF4	573764	7	81966		

Note: compiled by authors

The univariate tests for the CD group revealed that CD1 and CD2 had statistically significant effects on the dependent variables BF4 and BF5, confirmed by the F-tests, where p-values for the variables are well below the commonly accepted threshold of  $p < 0.05$ . Specifically, for CD1, the F-statistics are 225.83 for BF4 and 273.63 for BF5, with p-values less than 0.001, a strong influence on both outcomes is supported. Similarly, CD2 demonstrated significant effects, with p-values of 0.009 for BF4 and 0.002 for BF5, confirming its relevance in explaining variations in these dependent variables. In contrast, CD3 and CD4 do not exhibited statistical significance, as all p-values exceeded 0.05. The F-values for CD3 are 0.6189 for BF4 and 0.7329 for BF5, while for CD4, the F-values are 0.3634 and 0.0253,

respectively. Lack of significance reports that deposits from individuals and outstanding shares did not meaningfully contribute to variations in BF4 and BF5 within the analyzed period. These findings emphasize the dominant role of client deposits (CD1) and corporate deposits (CD2) in driving changes in retail loans and residential mortgage loans. The strong impact of these variables reflects their role as essential sources of bank liquidity and credit supply. In contrast, the insignificant effects of individual deposits (CD3) and outstanding shares (CD4) may be attributed to the smaller scale or limited utilization of these resources within the broader banking strategy.

In Table 6, there are results for Shapiro-Wilk multivariate normality test for CD and BF groups.

**TABLE 6.** Shapiro-Wilk Multivariate Normality Test

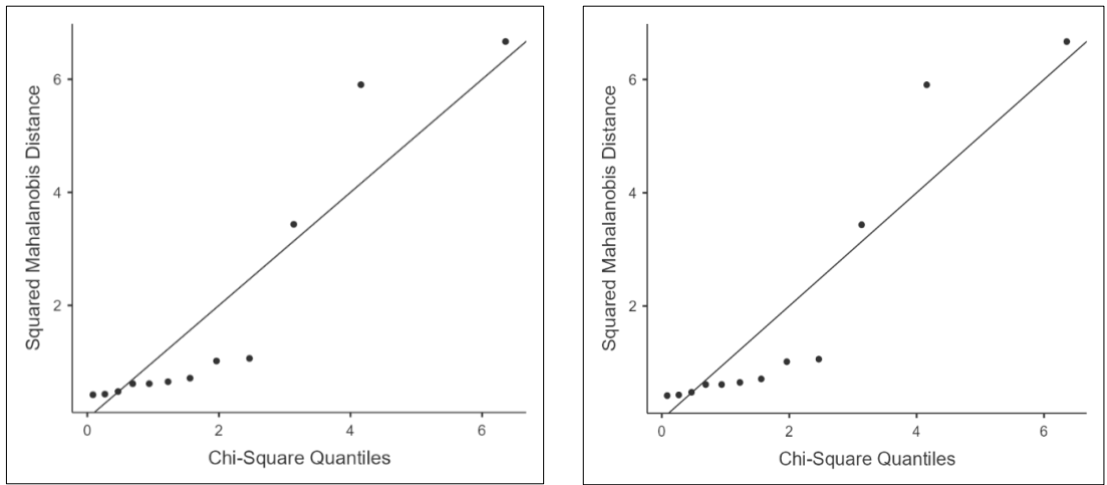
Hypotheses	W	p
BF	0.870	0.066
CD	0.870	0.066

Note: compiled by authors

According to the Shapiro-Wilk multivariate normality test results, the assumption of multivariate normality is not violated by both the BF and CD groups. The test produced a  $W = 0.870$  and a  $p = 0.066$  for both groups. Since

the p-value is greater than 0.05, we fail to reject the null hypothesis of normality. Therefore, the data for the BF and CD variables are sufficiently normal. Figure 2 shows the results of normality validation for BF and CD groups.





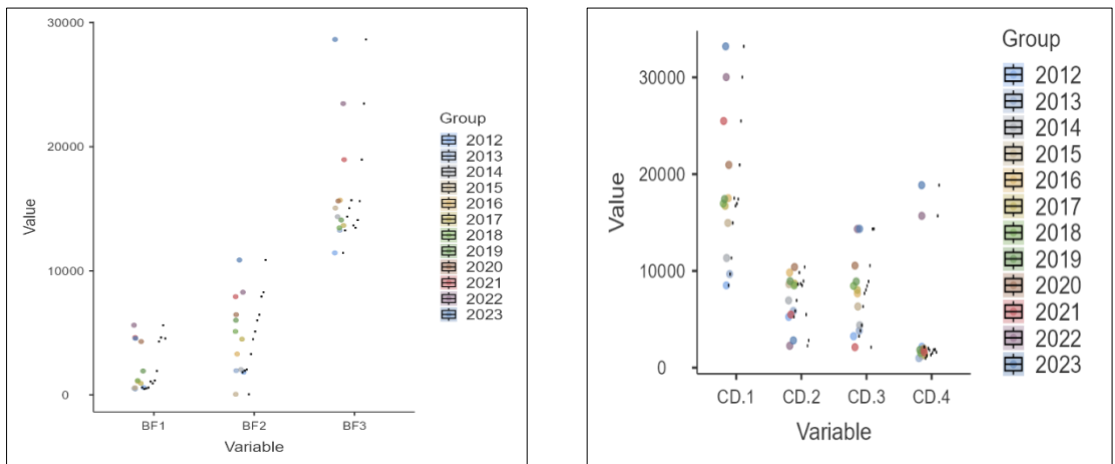
**FIGURE 2.** Q-Q Plots Normality validation for banking factors and client deposits

*Note:* compiled by authors

The Q-Q plots for both hypotheses provide a graphical assessment of the multivariate normality assumption, which is critical for validating the results of the MANCOVA analysis. In both cases, most data points align closely with the diagonal reference line, indicating that the squared Mahalanobis distances are approximately chi-square distributed. This alignment suggests that the assumption of multivariate normality is generally satisfied. However, slight deviations are observed in the upper quantiles, where a

few points diverge from the reference line, indicating the presence of mild outliers. The deviations, though noticeable, are not substantial enough to undermine the overall validity of the normality assumption. Thus, the Q-Q plots confirm that the data sufficiently meets the requirement of multivariate normality for both hypotheses.

The raincloud plots in Figure 3 clearly confirm the findings from the Q-Q plots and multivariate tests, illustrating which factors play a significant role in bank performance.



**FIGURE 3.** Contributions of banking factors and client deposits

*Note:* compiled by authors

In the banking factors group, variables such as BF2 and BF3 showed steady growth, particularly from 2018 onwards, showing their substantial contribution to banking activities. In contrast, BF1 remained stable but less influential. In the Client Deposits group, CD1 and CD2 had consistent and notable growth, especially in recent years, supporting their statistically significant role in the multivariate tests. Conversely, CD3 and CD4 exhibited lower and more inconsistent values, which explains their limited impact on banking performance.

Overall, the raincloud plots demonstrate that institutional deposits and investments, such as securities and mutual funds, have a far more significant influence on banking operations than individual deposits or smaller financial instruments.

Some of the obtained results align with existing studies. Total client deposits significantly impact key banking operations and the development of mutual funds. The results supported conclusions drawn in the existing literature that stable deposit flows facilitate liquidity management and enable banks to allocate resources to long-term projects, including mutual funds (Chernykh & Cole, 2011; Edem, 2017). Similarly, deposit-based diversification enhances bank liquidity and capacity to invest in financial instruments, thereby supporting the growth of mutual funds (Tuyishime et al., 2015). The findings also resonate with the fact that securities are significant in diversification and risk management by stabilizing mutual fund portfolios, particularly during periods of economic volatility (Burkhanov, 2018), and they are instrumental in achieving long-term asset diversification and economic resilience (McPherson-Smith, 2021; Montambault Trudelle, 2023).

However, some results diverge from studies concerning the role of individual deposits and outstanding securities. Notably, individual deposits in the analysis did not exhibit statistically significant effects on the analyzed banking operations, contradicting the study of Pellinen et al. (2011). Similarly, the findings

did not comply with existing studies on the positive effect of individual deposit reallocation to money market mutual funds (Macey, 2011). Additionally, outstanding securities showed no significant influence, whereas the literature identified securities as the main factors and tools for corporate governance, investor attraction, and tax planning (Estrin, 2000; Marian, 2016).

## 5. CONCLUSIONS

Mutual funds in Kazakhstan may be a relatively new financial instrument with limited introduction into the financial system. Thus, the results reflect the unique regional characteristics of Kazakhstan. The primary objective of this study was to analyze the impact of key banking operations and client deposits on bank performance, focusing on identifying significant contributors, such as institutional deposits, securities, and mutual funds. This goal has been achieved through a comprehensive statistical analysis, including multivariate tests, Q-Q plots, and visualizations that demonstrated clear trends and relationships among the variables.

The first hypothesis, focused on the role of banking operations, confirmed that investments in securities and bank loans, including reverse REPO operations, significantly impact bank performance. These factors showed consistent growth and strong statistical significance, highlighting their critical role in shaping banking outcomes. Conversely, other operations, such as deposits placed with other banks, contributed less, indicating a stable but relatively smaller influence.

The second hypothesis examined client deposits and related instruments. The analysis revealed that total client deposits and deposits of legal entities exert a substantial and statistically significant influence on bank performance. In contrast, individual deposits and outstanding shares were found to have limited explanatory power, reflecting their smaller scale and variability over time.

The structure of the financial market in Kazakhstan differs from that of more mature markets and is still in its developmental stage. The share of individual investors and the accessibility of financial instruments, such as securities or mutual funds, as considered in the study, is significantly lower, limiting the influence of factors like individual deposits on the overall banking system. Financial literacy in Kazakhstan is considered to be lower compared to developed markets, affecting the behavior of individuals. As a result, people may prefer traditional forms of savings over more complex instruments like mutual funds. Therefore, the involvement of individuals in mutual fund development is challenging. Limited capital market development reduces the significance of outstanding securities in the banking system and mutual funds. This could be explained by the possibility that in Kazakhstan, individual deposits are not directly channeled into instruments like mutual funds. Moreover, individuals prefer using deposits for savings purposes rather than as a source for investments in complex financial instruments. Another moment is that Kazakhstan's regulatory environment and economic strategies do not consider mutual funds development or utilization of securities. Therefore, the results showed that bank deposits are regarded as the primary means of capital mobilization, which explains the high significance of corporate deposits in the analysis.

### AUTHOR CONTRIBUTION

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 Visualization: Lyudmila Kan, Zhanat Malgarayvea, Rakhat Arzikulova.  
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