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THE FINANCIAL PERFORMANCE DETERMINANTS OF THE LARGEST BANKS IN KAZAKHSTAN

The banking industry plays a significant role in the development of the economic growth of the country. The purpose of this study is to determine the key factors that influence the profitability of the banking industry in Kazakhstan from 2012 to 2020 using firm-specific and macroeconomic variables. For this research, 8 banks and 9 years were selected and the data were analyzed according to the feasible generalized least squares (FGLS) method.

Findings demonstrate that political stability, liquidity risk, and interest rate have negative, and GDP growth, inflation, and NPL have a positive, but insignificant impact on profitability. Capital adequacy and bank size resulted in a positive and significant effect on ROA. As a recommendation, the banks should emphasize TETA and size to be profitable.

To the best of our knowledge, this paper contributes to the existing literature is twofold. First of all, it is the first study that conducted empirical analysis on the 8 largest banks of Kazakhstan by employing the FGLS method determining the financial performance. Secondly, the number of variables and years were broadened compared to previous researchers and a political stability indicator was added to the study.

The practical significance of this paper recommends to policymakers, managers, and government officials should pay more attention to internal factors rather than external factors, because the expansion of the size of banks will improve the financial performance of banks, and eventually, this will be incorporated to into the development of the financial market of the country.

Key words: profitability; largest banks; economic growth; political stability.

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Қазақстандағы ірі банктердің қаржылық қызметінің детерминанттары

Ел экономикасының өркендеуінде банк саласының рөлі зор. Бұл зерттеудің мақсаты – фирмаға тән және макроэкономикалық айнымалыларды пайдалана отырып, 2012-2020 жылдар аралығындағы Қазақстандағы банк секторының табыстылығына әсер ететін негізгі факторларды анықтау. Зерттеу үшін 8 банк пен 9 жылдық кезең таңдалды және деректер мүмкін болатын жалпыланған ең кіші квадраттар (FGLS) әдісі бойынша талданды.

Зерттеу нәтижелері көрсеткендей, саяси тұрақтылық, өтімділік тәуекелі және пайыздық мөлшерлеме теріс әсер етсе, ал ЖІӨ өсуі, инфляция және мерзімі өткен несиелер табыстылыққа оң, бірақ мардымсыз әсер етеді. Капиталдың жеткіліктілігі мен банк көлемі ROA-ға оң және маңызды әсер етті. Ұсыныс ретінде банктер тиімді болу үшін TETA мен мөлшерге назар аударуы керек.

Біздің білуімізше, бұл қағазбастылық қолданыста бар әдебиетке екі жақты үлес қосады. Біріншіден, бұл қаржылық нәтижелерді анықтау үшін FGLS әдісін қолдана отырып, Қазақстанның 8 ірі банкіне эмпирикалық талдау жүргізілген алғашқы зерттеу болып табылады. Екіншіден, айнымалылар саны мен жыл алдыңғы зерттеушілермен салыстырғанда кеңейтілді және зерттеуге саяси тұрақтылық көрсеткіші қосылды.

Бұл жұмыстың практикалық маңыздылығына саясаткерлерге, менеджерлерге және мемлекеттік қызметкерлерге басты назарды сыртқы факторларға емес, ішкі факторларға бөлуді ұсыну кіреді, себебі банктердің көлемін ұлғайту банктердің қаржылық көрсеткіштерін жақсартады, нәтижесінде, ол елдің қаржы нарығын дамыту факторларының қатарына қосылады.

Түйін сөздер: табыстылық; ірі банктер; экономикалық өсу; саяси тұрақтылық.

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Детерминанты финансовых показателей крупнейших банков Казахстана

Банковская отрасль играет значительную роль в развитии экономического роста страны. Целью данного исследования является определение ключевых факторов, влияющих на прибыльность банковского сектора в Казахстане за период 2012-2020 гг., с использованием специфических для фирмы и макроэкономических переменных. Для этого исследования были выбраны 8 банков и 9 лет, и данные были проанализированы в соответствии с допустимым обобщенным методом наименьших квадратов (FGLS).

Полученные результаты показывают, что политическая стабильность, риск ликвидности и процентная ставка оказывают отрицательное влияние, а рост ВВП, инфляция и просроченные кредиты — положительное, но незначительное влияние на прибыльность. Достаточность капитала и размер банка оказали положительное и значительное влияние на ROA. В качестве рекомендации банкам следует сделать акцент на TETA и размере, чтобы быть прибыльными.

Насколько нам известно, эта бумажная работа вносит двоякий вклад в существующую литературу. Во-первых, это первое исследование, в котором был проведен эмпирический анализ 8 крупнейших банков Казахстана с использованием метода FGLS для определения финансовых показателей. Во-вторых, количество переменных и год были расширены по сравнению с предыдущими исследователями, и в исследование был добавлен показатель политической стабильности.

Практическая значимость этой работы рекомендует политикам, менеджерам и государственным служащим уделять больше внимания внутренним факторам, а не внешним, потому что увеличение размера банков улучшит их финансовые показатели, в конечном итоге это будет включено в развитие финансового рынка страны.

Ключевые слова: рентабельность; крупнейшие банки; экономический рост; политическая стабильность.

Introduction

It is common knowledge that one of the most crucial and fundamental components of a market economy is the banking system. The banking system is the "circulatory system" of the economy, which is controlling the movement of financial flows, accumulating and investing monetary resources, conducting mutual settlements between economic organizations, and lending to various economic sectors and to the general public.

By holding a nation's deposits in deposit accounts and issuing further loans through the process of creating money, banking sectors may make significant profits. As a result of globalization, banks had to handle a wide range of risks, including liquidity risk, currency risk, credit risk, and interest rate risk. The failure to adequately manage these risks has led to several financial crises in the previous 20 years around the world. Due to these issues, several firms have gone bankrupt and numerous individuals have lost their jobs. Banks must thus control their assets and the risks they take properly to have profitability and stable economies (Yuksel et al. 2018). In terms of banking-related economic issues, analysis on the profitability of the banking industry is essential for recognising challenges as well as reducing economic risks.

Bank profitability is defined as the difference between the income provided by assets and the expenditure generated by liabilities. Both micro and macro factors are referred to as indicators of bank profitability. The internal operations of banks (micro variables) are called "bank-specific variables". In contrast, macro factors have nothing to do with a bank's internal controls but significantly affect profitability. According to Yuksel et al. 2018, marketable securities, non-performing loans, size, capital, risk management, and expenditure management are examples of common bank-specific variables. Inflation, interest rates, growth of the domestic product, and tax rates are used as macro variables.

After the former Soviet Union fell apart in 1991, Kazakhstan gained independence and became a sovereign state. Since then, it has undergone a significant transformation, moving from a one-party political system and a planned economy to a market focused democratic model. The financial system in Kazakhstan is divided into two levels. The top tier is made up of the National Bank of the Republic of

Kazakhstan (NBRK), that reports to the president, while the second tier is made up of commercial banks. The National Bank regulates monetary policy and financial sector. In this regard, the NBRK is responsible for managing the banking industry, stock market, pension system, insurance, microcredit organizations, debt collection agencies, and credit bureaus (Shyngysov et al. 2014). According to Yermekbayeva 2011, who is a lecturer in finance at Kazakh-British Technical University, the Kazakhstani banking industry's profitability drivers have not been thoroughly researched. All research that is now available analyses this issue qualitatively rather than quantitatively. To provide outcomes with an econometric foundation, comprehensive quantitative analysis is essential.

Therefore, the main objective of this research is to examine the impact of both external and internal factors on the profitability of banks in Kazakhstan, with the following sub-objectives in mind:

To analyze the effect of bank-specific variables on the banks' profitability in Kazakhstan.

To investigate how macroeconomic factors affect Kazakhstani banks' profitability.

To identify problems and provide policymakers with recommendations and suggestions for improving the financial performance of Kazakhstan's banks.

The paper is organized in the following way: Section 1 discusses the introduction part, where the purpose and significance of the paper are discussed. Section 2 reviews the relevant literature on banking profitability. Section 3 outlines the research methodology and data collection. Section 4 presents the findings and analysis. Finally, section 5 provides conclusion, and gives recommendations and possible limitations for the use of policymakers and external users.

Literature review

Empirical literature review

A lot of research has been done to identify the variables that affect bank performance. Whether the study is done on a single country or a panel of countries, the factors that determine bank profitability are divided into internal and external variables. In scientific literature, the bank's internal and external factors serve as independent variables, with return on assets (ROA), return on equity (ROE), and net interest margin (NIM) serving as dependent variables. For this research, ROA as dependent variable was chosen.

Dependent variable

The financial ratio known as return on assets (ROA), which is calculated as net income divided by total assets, reveals how profitable a bank is about its total assets. Corporate management, analysts, and investors can assess a bank's potential for profit using the indicator known as ROA. Although this ratio ignores so-called off-balance sheet assets, it is the most commonly used profitability indicator, according to Golin 2001.

Bank-specific variables

Internal determinants, sometimes referred to as micro or bank-specific drivers of profitability, are variables that management may influence. Financial statements from banks can be used to determine these variables (Abel, 2016).

One of the bank-specific variables is size which is measured as a logarithm of total assets. Athanasoglou et al. 2005 state that the bank's size is not important and does not affect its performance. A different result was derived by Pervan et al. 2015, which discovered that size has a favourable impact on bank profitability, implying that larger banks earn more since they can take advantage of economies of scale, resulting in lower costs, more operational efficiency, and better profits. Banks, for example, can improve their efficiency and competitiveness by implementing innovative processes and technology in their operations and/or hiring more qualified personnel. The bank's size also has a favourable effect on its reputation, making it easier to offer premium goods and services at higher prices, and generate more profit.

H1: The size of the bank is assumed to have a positive impact on profitability

When establishing additional variables that affect bank profitability, we also consider capital adequacy. The capital that a bank receives over the long term, largely from its shareholders, is made up of reserves, retained earnings, and preferred and common shares. High capital ratio banks tend to be more resilient, easier to acquire low-cost borrowing, more adaptable when pursuing business prospects, and better equipped to absorb any unforeseen losses. Numerous studies have shown that as a result, these banks may expect to become more profitable. However, an adverse correlation between profitability and the high capital ratio may be expected considering that banks with adequate capital are thought to be more secure since they take less risk and, as a result, provide lower returns (Saona, 2016). Similarly, a study by Buchory [2015] demonstrates a negative correlation between capital sufficiency and bank

profitability because having greater capital means providing less credit to clients.

H2: Capital adequacy is expected to hurt profitability

The credit risk is the risk of default on a debt due to a debtor's inability to make required payments and to fulfill their obligations. Athanasoglou et. al 2005 findings confirmed that credit risk negatively and significantly affects bank profitability. Similarly, the findings of Sufian and Chong 2008 imply that banks in the Philippines with higher credit risk have poorer profitability. According to the findings, Philippines banks should place a greater emphasis on credit risk management, which has so far been a challenge in recent years. According to Bourke 1989, credit risk has a clear detrimental impact on bank profitability. This conclusion may be related to the fact that the accumulated debt increases in proportion to the number of financial institutions exposed to high-risk loans, which means that a number of banks have had lower returns due to these loan losses.

H3: Credit risk is negatively associated with profitability

The likelihood that a bank won't be able to pay its bills on time, which might result in the bank going bankrupt, is known as liquidity risk. Generally, the ratio of loans to deposits is used to calculate liquidity risk (Kosmidou, 2008). To reduce the risk of insolvency, banks keep more easily convertible liquid assets (lower loan-to-deposit ratios). Liquid assets, however, frequently provide lower rates of return. Therefore, decreased profitability is correlated with more liquidity (lower loan-to-deposit ratio). Thus, liquid assets offer lower returns than illiquid ones.

H4: Liquidity risk is positively associated with profitability.

Macroeconomic variables

The legal and economic environment in which banks operate are examples of external variables, which are those over which management has no influence. This affects the operations of the banks and, consequently, their general performance, although they are independent of bank management (Abel, 2016). According to the external factors that influence the banking sector GPD, interest, inflation rate and political stability were analyzed.

GDP, an indicator of a country's economic activity is another macroeconomic factor that affects bank profitability. Banks may charge greater margins and lend more as a result of economic growth, which also improves asset quality. Athanasoglou, Brissimis, and Delis's 2008 study on the connection between economic growth and financial sector profitability predicts that bank profitability will increase as a result of GDP growth**.** Moreover, as Flamini, McDonald, & Schumacher [2009] state GDP growth controls for cyclical output effects and it is anticipated to affect several factors related to the supply and demand for loans and deposits. As an instance, during a cyclical upswing, lending demand rises, resulting in a positive impact on bank profitability. However, during the crisis, the effect is vice versa.

H5: GDP growth is expected to have a positive effect on profitability

Given a large body of literature, interest rates and bank profitability are positively correlated. However, when interest rates rise, people and businesses become less likely to borrow, which eventually results in a decline in bank profits. This assertion is backed by the results of Staikouras and Wood 2003, Noman et al. 2015, and Islam and Nishiyama 2016.

H6: The interest rate is expected to have a negative effect on profitability

Inflation, as assessed by the Consumer Price Index, can have both positive and negative effects on bank profitability. According to economic theory, inflation plays a significant impact in the structure of interest rates. As a result, higher inflation leads to higher loan interest rates and, hence, increased bank profitability. The impact of inflation on bank profitability, as first studied by Revell 1979, is dependent on whether banks' operating expenses rise faster than inflation. Considering that forecasting inflation is possible due to the stability of the macroeconomic environment, it follows that inflation's effects are dependent on it. Athanasoglou, Brissimis, and Delis 2008 note that inflation should be accurately forecasted, otherwise if the inflation rate is not fully predicted by the bank's management, banks will be unable to adjust interest rates adequately to avoid the risk of costs rising faster than bank revenues, reducing bank profitability. However, if interest rates on loans rise, the risk of loan payback rises as well, because high inflation rates affect people' and businesses' budgets, threatening their liquidity and reducing their ability to pay off debts. In this scenario, the impact of inflation on banks' profitability would be negative (Pervan et.al, 2015).

H7: Inflation is expected to have a positive/negative effect on profitability

Another macroeconomic variable that has an influence on bank profitability is political stability or instability. Sanlsoy et al. 2017 investigated the impact of political instability in Turkey and found a strong negative correlation. The study by Ghosh

2016 discovered a negative link between political unrest and bank performance in the MENA region. Similarly to this, Jebnoun 2015 examined the effects of political unrest in Tunisia and discovered a significant negative relationship. Conversely, in a 2017 study by Yahya, Akhtar, and Tabash 2017, the effect of political instability on bank profitability in Yemen was found to be positively correlated. When the government works to strengthen the political stability, the banks will have to incur costs.

H8: Political instability is assumed to have a positive impact on profitability

Theoretical literature review

Economic scales are the cost advantages that businesses get when production reaches its efficiency by cutting cost through the expansion. Firms can achieve economies of scale by increasing production and reducing costs. Costs can be either fixed or variable. Scale efficiency theory that is consistent with the independent variables mentioned will be taken into account in his research. According to the scale efficiency theory, larger companies can lower unit costs by producing more and generating higher revenue. The scale efficiency paradigm places a strong focus on economies of scale (Kounetas and Tsekouras 2007).

Research methodology and data collection tool

Data

The research's data for 8 banks for the period of 2012-2020 comes from four separate sources and is provided as a panel dataset. Bank-specific variables are derived from the Kazakhstan Stock Exchange (KASE) and the missing data is derived from the financial statements and annual reports on the official websites of the banks. Macroeconomic variables are obtained from the World Bank database and one external variable, particularly political stability was collected from the Index of Economic Freedom.

Banks were selected for the sample based on the following factors: they have to be KASE-listed and have a comprehensive data set with yearly financial statements between 2012 and 2020. The reason to choose KASE-listed banks is that KASE is governed by a license from the National Bank of the Republic of Kazakhstan, which means laws are in place to control every part of KASE activities. Thus, listing on KASE makes it possible for banks to gain trust in their operations among their creditors, customers, and suppliers as a result of the disclosure of information about their activities and transparent credit history. In order to have balanced data, only banks with complete annual financial statements between 2012-2020 were chosen. So, the banks that were issued later than 2012, were not taken into account to make data consistent throughout the study. Table 1 below shows the dependent and independent variables and their description.

In this research, ROA was employed as the dependent variable. 8 independent variables are used of which 4 bank-specific variables (capital adequacy, credit risk, size, liquidity risk) and 4 macroeconomic variables (GDP, inflation, interest rate and political stability). The variables were mostly selected based on an earlier study by several scholars described in this paper.

Table 1 – Variables description

Symbol	**Variables**	**Proxy**
Dependent variable		
ROA	Return on assets	Net income/total assets
Independent variables		
Size	Bank Size	Logarithm of Total Assets (log)
TETA	Capital Adequacy	Total Equity / Total Assets
NPL	Credit risk	Impaired Loans(NPLs)/ Gross Loans
lrisk	Liquidity Risk	Loans/ Customer Deposits
GDP	Economic Growth	GDP per capita growth (annual %)
	Interest rate	Deposit interest rate
INF	Inflation	Annual inflation rate
POL	Political Stability	Political Stability Index
Note: Compiled and prepared by the authors based on Stata results		

Methodology

The FGLS model will be employed in this research due to the characteristics of the panel dataset. Parks 1967 presented a feasible generalized least-squares (FGLS) approach to address issues with heteroskedasticity, cross-sectional correlation, and autocorrelation. Moreover, OLS and FGLS were compared by Bai, Choi, and Liao 2020 who discovered that FGLS performed better than OLS. Both of the methodological approaches are impartial, however FGLS is more accurate than OLS because of its lower standard error. When time dimension T is more than cross-sectional dimension N, the FGLS approach is used. Thus, the feasible generalized least squares technique would be the most applicable as this research includes 8 banks(N) in Kazakhstan and 9-year (T) timeframe.

Every methodological approach has benefits and drawbacks, but this research paper will focus on the feasible generalized least squares methodology due to the features of the panel dataset utilized in the study and its advantages over other approaches. The model will be checked for multicollinearity, autocorrelation, and heteroscedasticity before the regression is done.

The following model is used to create the estimated model:

$$Y = \beta 0 + \beta 1size + \beta 2TETA + \beta 3NPL + \beta 4lrisk + + \beta 5GDP + \beta 6r + \beta 7infl + \beta 8POL + \varepsilon$$

where

Y represents ROA, the dependent variable

β – the he coefficient parameters

β0 -the constant term

ε -the error

Our regression model using dependent variable ROA will look as follows:

$$ROA = \beta 0 + \beta 1size + \beta 2TETA + \beta 3NPL + + \beta 4lrisk + \beta 5GDP + \beta 6r + \beta 7infl + \beta 8POL + \varepsilon$$

Empirical results

Table 2 – Descriptive Statistics of banks in Kazakhstan

Variable	Obs	Mean	Std.Dev.	Min	Max
ROA	72	.0229251	.0410652	- .178339	.1882901
size	72	6.108719	.3692046	5.117301	7.016525
TETA	72	.1086532	.0469563	- .1578185	.2408015
NPL	72	.0964847	.1110938	0	.8522
LIQ	72	.8518085	.2127345	.4984594	1.696295
GDP	72	.0304444	.0252408	- .026	.06
INT	72	.0919444	.0323445	.055	.16
INF	72	.0728889	.0252913	.048	.136
POL	72	65.58889	2.675057	63	69.6

Note: Compiled and prepared by the authors based on Stata results

The descriptive analysis of the independent and dependent variables employed in the study is shown in Table 2 above. The descriptive statistics includes information about means, standard deviations, minimums and maximums of each variable. From the table it can be seen that there are three negative indicators of the profitability: in minimum ROA -0. 1783, TETA -0.1578 and GDP -0.026. Political stability shows the largest mean which equals 65.5889 and the highest standard deviation comprising of 2.675057. ROA has the lowest mean of 0.0229251 and the same standard deviation as TETA which is correspondingly 0. 0410652 and 0.0469563. We may infer that these variables have a high degree of variation.

Table 3 – Correlation matrix for banks of Kazakhstan

	ROA	size	TETA	NPL	LIQ	GDP	INT	INF	POL
ROA	1.0000								
size	0.1294	1.0000							
TETA	0.7680	0.0580	1.0000						
NPL	-0.2334	-.0.0889	-0.4708	1.0000					
LIQ	-0.02204	-0.2889	-0.3360	0.2209	1.0000				
GDP	-0.0706	-0.3021	-0.0903	0.1687	0.4048	1.0000			
INT	-0.0393	0.2386	0.0661	-0.1742	-0.2474	-0.5072	1.0000		
INF	-0.0299	0.0694	0.0121	-0.0593	-0.0407	-0.5247	0.8195	1.0000	
POL	0.1017	0.3507	0.1231	-0.2079	-0.3909	-0.3479	0.0624	-0.2412	1.0000

Multicollinearity, heteroskedasticity and autocorrelation tests

Prior to beginning regression analysis, it is crucial to test it for multicollinearity, heteroskedasticity and autocorrelation tests. The heteroskedasticity test showed us that the heteroskedasticity problem exist in the model (p<level of significance).

The existence of multicollinearity is one of the basic premises of the linear regression model. Multicollinearity refers to both the inclusion of one or more meaningless variables in the model as well as the presence of highly correlated variables. Larger population variances are a result of higher population correlations, which in turn leads to inaccurate coefficients (Christopher,2007).

There is multicollinearity, if independent variables are correlated with each other. When changing the model and interpreting the results, a strong correlation between variables might be problematic. Table 3 displays a correlation matrix of independent and dependent variables. The strong positive correlation can be seen between inflation and interest rate (0.8195) and as well as between capital adequacy and ROA (0.7680). The lack of multicollinearity was shown by the comparatively low or negative correlation with other variables.

Table 4 – Variance Inflationary Factor (VIF) of regression model.

Variable	VIF	1/VIF
INF	6.18	0.161867
INT	4.56	0.219230
GDP	2.43	0.411748
POL	2.09	0.478825
LIQ	1.60	0.623397
TETA	1.42	0.704343
NPL	1.37	0.730818
size	1.25	0.800716
Mean VIF	2.61	

Note: Compiled and prepared by the authors based on Stata results

The variance inflation factor (VIF) test was run in addition to the correlation matrix. The mean VIF is 2.61 and below 5, which means there is no multicollinearity in the model from table 4.

Autocorrelation test

The autocorrelation states that disturbance terms have zero covariance, which indicates that the disturbance term in each observation be determined independently of the other observations. The disturbance term is said to be prone to autocorrelation, also known as serial correlation, when this criteria is not met (Christopher, 2007). One method to determine if there is autocorrelation or serial correlation among the observations in the sample dataset is the Wooldridge test. From Table 5, the probability value is 0.0002, which is less than 1%, given that there is autocorrelation.

Table 5 – Regression analysis of 8 largest banks in Kazakhstan by using FGLS method

Estimated covariances	=	8	Number of obs	=	72	
Estimated autocorrelations	=	1	Number of groups	=	8	
Estimated coeggicients	=	9	Time periods	=	9	
Wooldridge test for autocorrelation in planet data			Wald chi2(8)	=	87.12	
HO: no first-order autorrelation			Prob > chi2	=	0.0000	
F(1, 7)= 52.701						
Prob > F = 0.0002						
ROA	Coef.	Std.Err.	z	P > I z I	[95% Conf. Interval]	
size	.07358	.0094332	1.84	0.066	-.0011307	.0358467
TETA	.7061316	.0885796	7.97	0.000	.5325189	.8797444
NPL	.0326462	0.431681	0.76	0.449	-.0519617	.117254
LIQ	- .009502	.016561	-0.57	0.565	-.0419792	.0229389
GDP	.0516891	.1006021	0.51	.0607	-.1454873	.2488655
INT	- .1596267	.1187486	-1.34	0.179	-.3923696	.0731163
NF	.1456567	.158656	0.92	0.359	-.1657141	.4570276
POL	- .0000918	.0008208	-0.11	0.911	-.0017005	.0015169
_cons	-.1457059	.082214	-1.77	0.076	-.3068423	.0154305

Note: Compiled and prepared by the authors based on Stata results

Table 5 illustrates the regression analysis for ROA using FGLS method. From the table, NPL has positive, liquidity risk negatively but does not significantly impact profitability, that's why we reject our third and fourth hypotheses. Regression analysis shows that inflation is positive, while interest rate and political stability are negatively associated with profitability and therefore accept and correspond with hypotheses seven (H7), six (H6), and eight (H8). We accept the fifth hypothesis because GDP growth has a beneficial impact on profitability (H5).

Since only size, capital adequacy and constant term are significant according to p-value, we will concentrate on these variables. As an example, in respect of the fact that liquidity risk, interest rate, and political stability affect negatively ROA, we don't take them into consideration since the p-value is more than all the levels of significance (more than 0.01, 0.05, or 0.10). The p-value of bank-specific variables specifically TETA (0.000), size (0.066) and the constant term (0.076) are less than the level of significance of 1% and 10% respectively.

The P value of size is 0.066 which is less than the level of significance (less than 1%). We can conclude that our coefficient is statistically significant and positively affects the profitability of the banks. The larger the bank, the more advantage of economies of scale it has. The scale efficiency theory supports it and thus is approved. The study of Pervan et al. [2015] underlines the same results. We accept Hypothesis 1 and conclude that the size of the bank has a positive impact on ROA.

Return on asset is positively and significantly correlated with capital adequacy, which is measured as the ratio of total equity to total assets at the 1% level of significance (p-value 0.000). The results indicate that ceteris paribus, if TETA increases by 1%, ROA would raise by 0.706. A well-capitalized banks face a lower cost of financial distress, acts as financial leverage and eventually, it leads to more profits. The higher the capital adequacy, the bigger the bank, which correlates with positive bank size on ROA. Furthermore, higher capital adequacy enables banks to lend more, thus increasing profitability. These findings are in line with Bourke [1989] and Sufian et. al 2009). Thus, we reject our second hypothesis and conclude that capital adequacy has a statistically significant positive influence on bank profitability (ROA).

Conclusion

The key factors influencing Kazakhstan's banking industry's profitability were the focus of this research. The empirical literature described the bank-specific variables including capital adequacy, size, liquidity, and credit risk, along with macroeconomic variables such as inflation (CPI), interest rate, GDP growth, and political stability index that were used in the regression model. As the dependent variable, ROA was chosen.

The feasible generalized least square method (FGLS) was chosen after identifying its benefits over alternative methods since FGLS is free from multicollinearity, autocorrelation, and heteroscedasticity errors. Moreover, if N<T, FGLS is applied. The panel dataset spans a period of nine years from 2012 to 2020 and contains information about 8 banks in Kazakhstan. The data was mainly collected from the Kazakhstan Stock Exchange (KASE), the World Bank database, and the Index of Economic Freedom.

Results show that political stability, liquidity risk, and interest rate have negative, and credit risk, GDP growth, and inflation has favorable but insignificant impact on profitability. Capital adequacy and size resulted in a positive and significant effect on ROA. As a recommendation, the banks should put emphasis on TETA and size to be profitable. Although this report attempted to pinpoint the key factors influencing the profitability of banks in Kazakhstan, several areas still require more research. The practical significance of this paper recommends to policymakers, managers, and government officials should pay more attention to internal factors rather than to external factors, because the expansion of size of banks will improve the financial performance of banks, and eventually, this will be incorporated to into the development of the financial market of the country. As it has been mentioned in previous studies that there is a positive and significant relationship between the profitability of banks and market capitalization that is proxied to the financial market (Faizulayev et al., 2018:35). The list of determinants can be expanded to include more firm-specific as well as macroeconomic factors. Thus, a limited number of observations is one the weaknesses of this paper. Likewise, the time frame for this research was also restricted to nine years (2012 to 2020). Therefore, a larger sample that includes more time periods, can help to see the wider picture.

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