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Evaluating the Business Performance of the Big4 Banks in Vietnam in the Context of Digital Transformation

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Abstract

This article aims to analyze and evaluate the factors affecting the performance of the Big 4 banks in Vietnam based on research results, to propose solutions for improving their performance. The study utilizes data collected from the financial statements of the Big 4 commercial banks in Vietnam for the period 2014-2023. The author has calculated indicators within the research model, including independent variables such as Assets Size, Equity over Assets, Loan over Assets, Credit Risk Provisions, Cost over Assets, Cost over Income, Non-Performing Loans, Gross Domestic Product, and Consumer Price Index, as well as dependent variables measuring performance, namely ROA and ROE. Using panel data regression methods, OLS, FEM, and REM and selecting the appropriate research model, the factors influencing the performance of the Big 4 banks in Vietnam are estimated. The research findings indicate that factors such as Asset Size (SIZE), Cost over Assets (COA), and economic growth positively impact bank performance, whereas Cost over Income (COI) and Non-Performing Loans (NPL) negatively affect bank performance. Based on these results, the article offers policy recommendations for bank managers to enhance the business performance of the Big 4 banks in Vietnam in the near future.

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Data Availability Statement: Lan Nguyen-Thi-Huong can provide the supporting data of this study upon a reasonable request.
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1. Introduction

With the rapid development of information and communication technology, both the global and domestic economies are entering a new phase of comprehensive digitalization, and Vietnamese banks are no exception. The application of information technology throughout the banking system changes the model of providing and operating banking services, thereby affecting the business efficiency of banks.

Evaluating the efficiency of banks involves measuring their business performance. Studying the factors affecting business efficiency is essential; this provides the scientific basis for proposing solutions to improve the efficiency of the Big 4 banks in Vietnam within the context of digital transformation.

Big 4 banks in Vietnam are understood as the four largest banks in the Vietnamese market, including BIDV, Vietinbank, Vietcombank, and Agribank. These banks are also striving to improve business performance in the current period of fierce competition. Evaluating the performance of banks through measuring their performance and studying the factors affecting business performance is necessary; this provides the scientific basis for proposing solutions to improve the performance of Big4 banks in Vietnam in the context of digital transformation.

2. Theoretical Basis

2.1. Business Performance and Approaches to Measuring Effectiveness

Commercial banks are a type of bank that conducts all banking activities and other business operations as regulated, with the aim of achieving profit (Credit Institutions Law, 2024). In essence, a commercial bank is a business that operates with the goal of maximizing profits within an acceptable level of risk. Evaluating the business performance of banks is essential; it serves as a basis for proposing solutions to enhance the operational capacity and competitiveness of the banks. The business performance of a bank reflects the

relationship between output, which is revenue, and input, which is costs, to achieve the best output (Berger & Mester, 1997). Business performance is understood as generating the highest revenue output with the lowest costs.

There are many ways to evaluate business performance, and to date, two widely used approaches are the structural approach and the non-structural approach (Hughes & Mester, 2012). Unstructured approach: measuring effectiveness using financial indicators such as return on equity (ROE), return on assets (ROA), earnings per share (EPS), and market price-to-earnings ratio (P/E). This is a commonly used traditional approach. Structural approach: measuring business performance based on the efficiency equation through cost functions, profit functions, or production functions. This approach often relies on minimizing costs or maximizing profits. Currently, many studies utilize a structured method to measure the business performance of banks.

This study measures business performance using an unstructured approach with common indicators such as ROE and ROA. The ROE and ROA indicators are used to measure the operational efficiency of any organization, including banks and financial institutions. ROE is an important metric because it represents the net profit on shareholders' equity. This indicator is crucial for shareholders as it measures the profitability per dollar of equity invested by them. High ROE and ROA indicate that the bank's operational efficiency is high; on the contrary, if these indicators are low, banks need to take measures to improve their operational efficiency.

2.2. Factors Affecting the Business Performance of Banks

Evaluating the business performance of banks, from which to propose solutions to enhance their capabilities, requires identifying the factors that influence the operational efficiency of banks. These factors include macroeconomic factors and internal factors of the bank. Specifically:

2.2.1. Macroeconomic Factors

Macroeconomic factors include GDP growth, socio-economic characteristics, technology, legislation, and the inflation rate. These factors create the operating environment of the bank, with some factors having a positive impact while others negatively affect the bank's business performance. This study refers to two representative factors: GDP and CPI, which are two elements related to macroeconomics that impact the operational efficiency of banks.

GDP consists of macroeconomic factors that are commonly used in research. GDP is a macroeconomic indicator of the economy, reflecting whether the state of an economy is good or bad. Research indicates that GDP is a factor that positively impacts the profitability of banks (Athanasoglou, Brissimis, & Delis, 2008; Bourke, 1989; Nguyen & Vo, 2018; Yılmaz-Altiok, 2013).

The inflation rate (CPI) of the economy influences bank interest rates and serves as an important indicator in the economy overall, particularly within the banking sector. Inflation (CPI) positively impacts the profitability (ROE) of banks (Athanasoglou et al., 2008; Bourke, 1989; Thuy & Kim, 2017; Yılmaz-Altiok, 2013).

2.2.2. Internal Factors of the Bank

The group of internal factors of the bank includes factors related to financial capacity, management capability, quality of human resources, technology, and infrastructure. This study focuses solely on evaluating the impact of the financial capacity of banks on their performance. This article will evaluate the impact of factors such as: Asset Size; Capital Safety (equity over assets); Asset Quality (Credit Risk Provision Ratio, non-performing loan ratio); Liquidity (Loan Outstanding/Total Assets); and Cost Management (Cost over Assets, Cost over Income) on the operational efficiency of banks.

Asset Size (SIZE): Asset size is the result formed from the capital that the bank uses in its business operations. Asset size is a factor that positively influences bank performance (ROA, ROE) (Al-Jafari & Alchami, 2014; Sufian & Habibullah, 2009; Thuy & Kim, 2017). However, there are also studies suggesting that Asset Size does not have an impact or may have a negative effect on the profitability of banks (ROE) (Staikouras & Wood, 2004).

Capital Safety: The Equity Over Assets ratio (EOA) is one of the indicators used to measure the capital safety level of a bank in order to assess the bank's financial capacity. Many previous studies have shown that equity has a positive relationship with the profitability of banks (Al-Jafari & Alchami, 2014; Bourke, 1989; Thuy & Kim, 2017). However, some studies indicate that this factor does not affect profitability indicators (Dietrich & Wanzenried, 2011) and has a negative impact on the profitability of banks (Nguyen & Nguyen, 2020).

Asset quality: The ratio of outstanding loans to assets (LOA), the credit risk provision ratio (CRP); and the non-performing loan ratio (NPL) are indicators used to assess the quality of a bank's assets and measure its financial capacity. These indicators, as shown in some previous studies, suggest that they impact the profitability of banks. The ratios of outstanding loans to assets (LOA) and credit risk provisions (CRP) positively influence the financial performance of banks through profitability indicators such as return on

equity (ROE) (Bourke, 1989; Sufian & Habibullah, 2009). However, in another study, LOA and CRP negatively affected the profitability of banks (ROE, ROA) (Miller & Noulas, 1997; Nguyen & Nguyen, 2020) and there are studies that found the CRP indicator had no impact on the profitability of banks (ROE, ROA) (Phuong, Nguyen, & Tran, 2022). The non-performing loan (NPL) ratio has an opposite effect. Many previous studies have shown that the NPL ratio negatively impacts ROE (Hamza, 2017; Phuong et al., 2022). However, a study by Alshatti (2015) suggests that the NPL ratio has a positive effect on ROE.

Cost management: In previous studies using quantitative research methods, cost-effectiveness is often measured by indicators such as operating costs to total assets and operating costs to total income. Many studies suggest that indicators reflecting cost management (Cost over Assets COA, Cost over Income COI) positively influence the profitability of banks (Nguyen, 2017; Pasiouras & Kosmidou, 2007). The Cost over Assets (COA) and the Cost over Income (COI) are low, which indicates a higher profitability potential. However, some studies suggest that they do not affect profitability (ROA, ROE) (Nguyen & Nguyen, 2020).

3. Research Method

To analyze the effectiveness of the activities of the Big4 banks in Vietnam, the author conducts the analysis in two stages: Stage 1 involves evaluating business performance using an unstructured measurement approach based on financial indicators ROA and ROE; Stage 2 focuses on analyzing the factors related to the banks' financial capacity that affect their business efficiency, with the dependent variables being ROA and ROE. In Stage 1, financial performance is analyzed and evaluated through the measurement indicators ROA and ROE according to CAMEL standards. In Stage 2, the impact of factors on the operational efficiency of the Big 4 banks is analyzed using OLS, FEM, and REM regression models, with the appropriate model selected using STATA software.

3.1. Research Model

Based on previous studies, the article proposes variables for the research model, including factors affecting business performance through indicators such as ROA and ROE. The research model incorporates macroeconomic factors and internal bank factors that influence the business performance of banks, measured by the dependent variables (ROA, ROE). The regression equation is as follows:

$$ROEit = \beta 0 + \beta 1GDPit + \beta 2CPIit + \beta 3SIZEit + \beta 4EOAit + \beta 5LOAit + \beta 6CRPit + \beta 7NPLit + \beta 8COAit + \beta 9COIit + uit$$

$$ROAit = \beta 0 + \beta 1GDPit + \beta 2CPIit + \beta 3SIZEit + \beta 4EOAit + \beta 5LOAit + \beta 6CRPit + \beta 7NPLit + \beta 8COAit + \beta 9COIit + uit$$

Table 1 Code factor of Variables used in the research model.

Table 1. Variables used in the research model.

Code	Variable name	Calculation method
Dependent variable		
ROA	Return on assets	Net profit after tax / Average total assets
ROE	Return on equity	Net profit after tax / Average equity
Independent variable		
SIZE	Assets size	Log of total assets
EOA	Equity over assets	Equity/Total assets
LOA	Loan over asset	Loan outstanding / Total assets
CRP	Credit risk provisions	Risk provisions / Loan balance
NPL	Non-performing loan	Bad debt / Total debt
COA	Cost over assets	Operating expenses/Total assets
COI	Cost over income	Operating expenses / Total income
GDP	Gross domestic product	The growth rate of gross domestic product
CPI	Consumer price index	Inflation rate

3.2. Research Methods

This study employs STATA 17.0 software to analyze three models: the ordinary least squares (OLS), fixed effects (FEM), and random effects (REM). After conducting descriptive statistical analysis, the author selects the most appropriate model for the sample.

3.3. Research Data

- Research sample: Vietcombank, Vietinbank, BIDV, Agribank.
- Research data: The group of internal factors was collected from the financial reports of the Big 4 banks in Vietnam during the period 2014-2023; macroeconomic factors (GDP, CPI) were collected from the website of the General Statistics Office and the State Bank.

4. Research Results

4.1. Measuring the Business Performance of the Big 4 Banks in Vietnam

The ROE and ROA indicators are used to measure the operational efficiency of any organization, including banks and financial institutions. ROE and ROA are important indicators that represent financial ratios, as they reflect the net profit on equity. These metrics are crucial for shareholders, measuring the profitability per unit of shareholder capital. A high ROE and ROA ratio indicates high operational efficiency of the bank, while a low value suggests that banks need to implement measures to improve their operational efficiency.

- ROE

ROE is one of the indicators used to measure the efficiency of capital utilization; it is a typical metric used to assess the profitability of banks. The ROE indicator can be high or low depending on the business season, as well as the scale and level of risk of the banks. According to the data collected and calculated by the author from the annual reports of Big4 banks during the period 2014-2023, the results show that it is higher than the CAMEL standard (according to the CAMEL standard, this indicator should be>= 15%), which is clearly illustrated in the Figure 1:

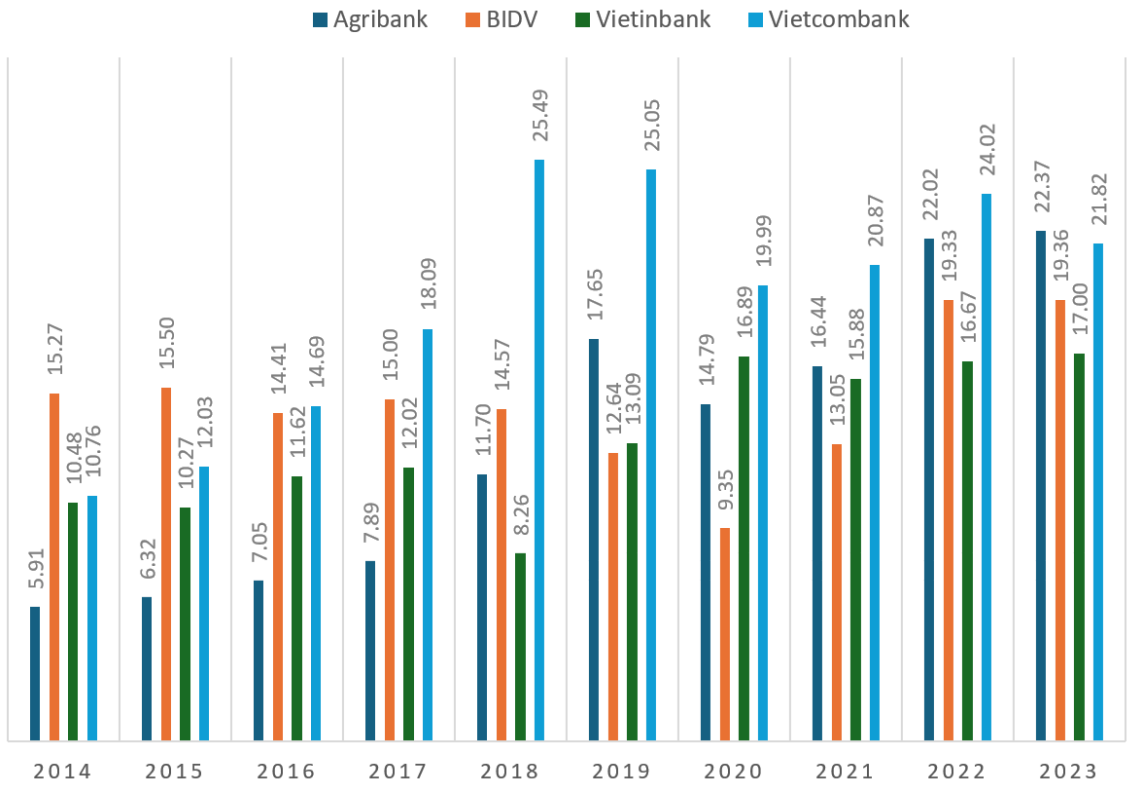

Figure 1. ROE of the big 4 banks in Vietnam from 2014 to 2023.
Source: Annual reports of the Big4 banks.

Looking at the chart above it shows that the ROE of the Big 4 banks in Vietnam from 2014 to 2023 has fluctuated. During the period from 2014 to 2017, most of the Big 4 banks did not meet the CAMEL standards, and this ratio increased in the following year of this period. Vietcombank is the bank with the best ROE growth over the years, meeting the CAMEL standards. Vietinbank has had a consistently low ROE over the years, almost failing to meet the CAMEL standards.

From 2014 to 2017, the ROE ratio of banks was low because this was a period when commercial banks faced difficulties due to the impact of the economy. Some weak banks underwent restructuring and M&A, resulting in a decrease in bank profits, while equity increased, leading to a decline in ROE, especially in 2015 when a series of banks merged. From 2018 to 2023, the activities of banks have gradually stabilized, and the economy has experienced growth. Banks have focused on increasing non-interest income, leading to a gradual increase in after-tax profits at a rate faster than the growth rate of equity capital. This led to a significant increase in the ROE of banks during this period.

- ROA

ROA is a measure of the business efficiency of banks. According to the CAMEL standards, the ROA of banks should be ≥1%. A higher ROA indicates better operational efficiency of the bank; however, an excessively high ROA is not a good signal for commercial banks.

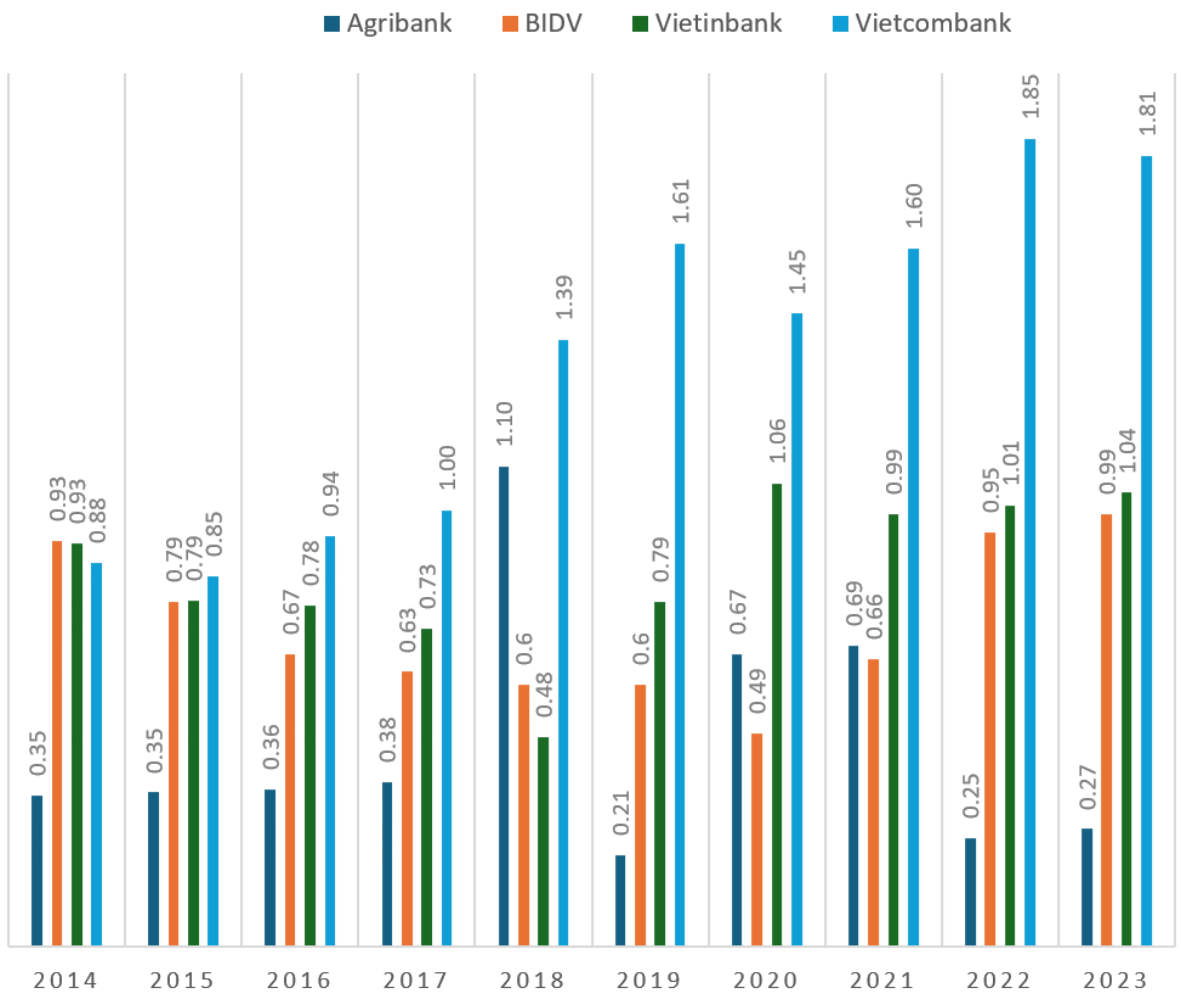

Figure 2. ROA of the Big 4 banks in Vietnam from 2014 to 2023.

Source: Annual reports of the Big4 banks.

Looking at Figure 2, it can be observed that during the period from 2014 to 2017, the Big 4 banks did not meet the CAMEL standard for the ROA indicator (>1%). After this period, the ROA ratio increased significantly at Vietcombank and Vietinbank, meeting the CAMEL standards, while Agribank and BIDV had lower ratios that did not meet the CAMEL standards.

The reason for such fluctuations is due to the influence of the economy. At the end of 2011, due to the difficulties of the economy and the accumulated risks of many previous years in the banking system, many commercial banks faced liquidity challenges, an increase in bad debt ratios, and a decrease in profits. To address the internal difficulties and weaknesses of the banks, the government issued a plan for the restructuring of credit institutions for the period 2011-2015. During this period, many banks experienced a decrease in net profit, and the average growth rate of after-tax profit for commercial banks was slower than the growth rate of assets. Consequently, the ROA from 2013 to 2015 showed a decreasing trend, while from 2016 to 2017, there were signs of recovery and gradual increase. This affected the business operations of the Big 4 banks. Since 2018, the economy has shown signs of recovery, and banks have strengthened their management operations. Banks have focused on non-interest income, leading to an increase in net profit, which has grown at a faster rate than asset growth. As a result, the ROA ratio has seen significant growth, especially at Vietcombank, despite the impact of the COVID-19 pandemic.

Table 2: Statistics of the variables used in the research model.

Table 2. Descriptive statistics of the variables used in the research model.

Variables	Number of observations	Average value	Standard deviation	Minimum	Maximum
SIZE	40	1306867	452399.6	576996	2300814
ROE	40	0.151	0.051	0.059	0.255
ROA	40	0.008	0.004	0.002	0.018
EOA	40	0.058	0.012	0.041	0.089
LOA	40	0.638	0.224	0.008	0.801
LPL	40	0.015	0.007	0.006	0.045
CRP	40	0.019	0.012	0.008	0.085
COI	40	0.392	0.0716	0.2893	0.579
COA	40	0.0132	0.00273	0.0068	0.0196
GDP	40	0.0584	0.0174	0.0258	0.0802
CPI	40	0.0286500	0.0095366	0.0063	0.0409

4.2. The Research Results on the Factors Affecting the Business Performance of the Big 4 Banks in Vietnam

4.2.1. Research Sample Statistics

From the table above, it can be seen that the minimum value of the ROA variable is approximately 0.021%, while the maximum value is 18.5%. The average ROA for the entire sample during the period from 2014 to 2023 is 0.0084, with a standard deviation of 0.0412. The highest ROA value is 1.85%. The summary table also shows that the average ROE is 15.14%, with a standard deviation of 5.14%, and the highest ROE is 25.49%.

4.2.2. Regression Results

This study continues to examine the OLS, FEM, and REM models with the aim of addressing the limitations of previous regression models. Subsequently, the appropriate model for the study, either FEM or REM, is selected using the Hausman test command in STATA. The chosen model is then used for subsequent regression analysis. Since the FEM and REM models cannot control for changing error variance and autocorrelation of the noise, the author proceeds to apply the GLS regression method to address these issues. Consequently, the GLS model is selected as the primary model for the experimental results, while the other models are used for comparison to test the robustness of the findings.

4.2.2.1. Regression with the Dependent Variable ROE

After analyzing OLS, FEM, and REM regressions to select a model for the study, the author conducted the Hausman test to compare the two models, FEM and REM, and chose the appropriate model for further research.

The results of the regression analysis are presented in Table 3:

Table 3. Results of model FEM and REM regression with the dependent variable ROE

Variables	FEM model		REM model	
	β	Pvalue	β	Pvalue
SIZE	0.073	0.015**	0.033	0.186
EOA	-0.720	0.417	0.315	0.644
LOA	-0.046	0.279	-0.008	0.857
LPL	-0.120	0.937	-1.027	0.472
CRP	-0.394	0.499	-0.158	0.804
COI	-0.356	0.049**	-0.511	0.005***
COA	5.488	0.216	4.833	0.203
GDP	0.250	0.478	0.438	0.246
CPI	-0.021	0.977	0.350	0.650
Hausman FEM, REM	Chi2(9)= 24.67 Prob>Chi2 = 0.0034			

Note: ***, ** correspond to significance levels of 1%, 5%.

The results of the FEM and REM regressions show that, in the FEM model, there are two statistically significant variables: SIZE and COI, while in the REM model, COI is statistically significant.

The Hausman test selects the model for the study, with the test result Chi2(9)=24.67; Prob =0.0034 < 0.05, thus, accepting the hypothesis H1: There is a difference between the estimates of the FEM and REM models, and the FEM model is suitable for further research.

After selecting the appropriate FEM model for the study, continue to test for variance changes and the correlation of the model. Results of the variance change test:

Modified Wald test for groupwise heteroskedasticity
In fixed effect regression model
H0: sigma(i)^2 = sigma^2 for all i
chi2 (4) = 25.23
Prob > chi2 = 0.0000

The analysis results show that Prob = 0.0000 < 0.05, therefore, we reject the null hypothesis Ho and accept the alternative hypothesis H1. Thus, the model exhibits heteroscedasticity. Therefore, this issue needs to be addressed. The results of the autocorrelation test of the model:

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F(1, 3) = 47.161
Prob > F = 0.0063

The results show that Prob = 0.0063 < 0.05; therefore, we reject the null hypothesis Ho and accept the alternative hypothesis H1, indicating that the model exhibits autocorrelation. Consequently, this autocorrelation phenomenon needs to be addressed. The FEM model with ROE dependence exhibits heteroscedasticity and autocorrelation; therefore, running the GLS model addresses these issues. Correcting model defects through GLS estimation yields the following results:

Table 4 results of model FEM and GLS regression with the dependent variable ROE.

Table 4. Results of FEM and GLS regression.

Variables	FEM model		GLS model	
	β	Pvalue	β	Pvalue
SIZE	0.073	0.015**	0.063	0.004***
EOA	-0.720	0.417	0.197	0.732
LOA	-0.046	0.279	-0.024	0.367
LPL	-0.120	0.937	-0.421	0.637
CRP	-0.394	0.499	-0.209	0.477
COI	-0.356	0.049**	-0.303	0.003***
COA	5.488	0.216	3.654	0.063*
GDP	0.250	0.478	0.315	0.055*
CPI	-0.021	0.977	0.102	0.743
cons	-0.742	0.088	-0.668	0.043
F-test	F(3,27) = 3.69 Prob > F = 0.0239		Wald chi2(9) = 41.02 Prob > chi2 = 0.0000	

Note: ***, **, * correspond to significance levels of 1%, 5%, and 10%.

The research results of the model with the dependent variable being ROE, using GLS estimation, address the shortcomings of the model. The results show that SIZE, COI, COA, and GDP have an impact on the ROE of banks, while the other variables in the model are not statistically significant.

4.2.2.2. Regression with the Dependent Variable ROA

With the ROA regression model, the study follows the same steps as with the ROE regression model. First, OLS is run, followed by the FEM and REM models, and then the appropriate model for the study is selected using the Hausman test. The results of the FEM and REM regression analyses are as follows:

Table 5 results of model FEM and REM regression with the ROA model.

Table 5. Results of FEM and REM regression with the ROA model.

Variables	FEM model		REM model	
	β	Pvalue	β	Pvalue
SIZE	0.002	0.314	0.0020	0.431
EOA	0.126	0.050**	0.126	0.000***
LOA	0.002	0.566	0.002	0.156
LPL	-0.144	0.184	-0.144	0.018**
CRP	-0.015	0.713	-0.015	0.837
COI	-0.003	0.777	-0.003	0.289
COA	0.217	0.482	0.217	0.964
GDP	-0.004	0.875	-0.004	0.659
CPI	0.019	0.707	0.019	0.321
Cons	-0.028	0.355	-0.028	0.441
Hausman FEM, REM	Chi2(9)= 15.77 Prob>Chi2 = 0.0718			

Note: ***, ** correspond to significance levels of 1%, 5%.

The Hausman test results for model selection indicate Chi2(9) = 15.77, Prob>Chi2 = 0.0718 > 0.05, suggesting that the REM model is appropriate for subsequent research. Additionally, tests for autocorrelation and heteroscedasticity of the REM model with the dependent variable ROA show no evidence of heteroscedasticity or autocorrelation, confirming that the research results are suitable for the REM model.

Table 6 regression results for the ROE and ROA models.

Table 6. Regression results for the ROE and ROA models.

Variables	ROE		ROA	
	β	Pvalue	β	Pvalue
SIZE	0.063	0.004***	0.002	0.431
EOA	0.197	0.732	0.126	0.000***
LOA	-0.024	0.367	0.002	0.156
LPL	-0.421	0.637	-0.144	0.018**
CRP	-0.209	0.477	-0.015	0.837
COI	-0.303	0.003***	-0.003	0.289
COA	3.654	0.063*	0.217	0.964
GDP	0.315	0.055*	-0.004	0.659
CPI	0.102	0.743	0.020	0.321
Cons	-0.667	0.043	-0.028	0.441
	Wald chi2(9) = 41.02 Prob > chi2 = 0.0000		Wald chi2(9) = 67.27 Prob > chi2 = 0.0000	

Note: ***, **, * correspond to significance levels of 1%, 5%, and 10%.

4.2.2.3. Research Results

- The dependent variable model of ROE:

$$ROEit = -0.667 + 0.063.SIZEit + 3.654.COAit - 0.303.COIit + 0.315.GDPit + uit$$

The research results indicate that the variables SIZE, COA, COI, and GDP have a positive impact on the dependent variable ROE, while the variable COI has a negative impact on ROE. Meanwhile, the variables EOA, LPL, LOA, CRP, and CPI are not statistically significant.

- The dependent variable model of ROA:

The results of the regression model studying ROA indicate that the variables SIZE, LOA, CRP, COI, COA, GDP, and CPI do not have statistically significant effects on the dependent variable ROA.

$$ROAit = -0.028 + 0.126.EOAit - 0.144.LPLit + uit$$

The results of the regression model for ROA indicate that the variables EOA and LPL have an impact on ROA at significance levels of 1% and 5%. EOA has a positive effect on ROA, while LPL has a negative effect on ROA.

5. Conclusion and Recommendations

Research on evaluating the business performance of the Big 4 banks in Vietnam during the period 2014-2023 using GLS regression estimation with the dependent variable ROE and REM regression with the dependent variable ROA. The research results confirm that the factors SIZE, COA, and GDP, EOA have a positive impact on the business performance of banks; meanwhile, COI and LPL have a negative effect on the business performance of banks.

The research results indicate that as SIZE, COA, and GDP increase, the business performance of banks improves. The higher the COI and LPL, the lower the banks' business efficiency. Based on these findings, the author suggests several implications for bank managers to enhance the operational efficiency of banks, specifically:

Firstly, increase the size of bank assets. The research results show that the size of bank assets positively affects the business performance of the bank. Therefore, banks have measures to improve asset value. Banks can increase total assets by raising equity in various forms. Banks may consider increasing their capital by issuing shares for public offering, thereby expanding their capital through attracting investment. Banks need to have a roadmap and proactively develop a budget plan to choose methods for mobilizing resources, structure investment assets reasonably, and focus on investing in modern technology to enhance their competitive capacity. In the current digital transformation era, investing in technology and successful digital transformation (AI, big data, etc.) will help listed commercial banks enhance their business performance.

Secondly, using effectively mobilized capital and continuing to grow credit will help the Big 4 banks in Vietnam enhance their business performance. To increase credit growth, banks need to have appropriate capital mobilization policies, diversify funding channels, and develop electronic banking and digital banking services. In addition, to ensure safety, avoid risks, and reduce bad debts, banks need to have a strict credit management process at all stages of lending, focusing on post-disbursement control to minimize risks, improve credit quality, and reduce bad debts.

Thirdly, maximize cost reduction to enhance cost management efficiency and improve the bank's business performance. Banks need to review the operational efficiency of their branches to determine if any branch or transaction office is underperforming; they should have a strategy for consolidation. For operational costs, banks need to have specific regulations regarding the use of resources to ensure cost savings, and there should be monitoring and supervision to ensure that expenses are in accordance with regulations, saving and being efficient.

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