

Pham Tien Manh¹

Banking Academy of Vietnam, Hanoi, Vietnam

Quang Le Huy²

Banking Academy of Vietnam, Hanoi, Vietnam

Factors Impact on Financial Performance in Big 4 Banks in Vietnam: The Role of Corporate Social Responsibility Disclosure

Abstract. Multiple factors have contributed to the burgeoning emphasis on Corporate Social Responsibility (CSR) within the Vietnamese banking sector. There is a burgeoning consciousness among consumers and stakeholders regarding the significance of sustainable and ethical business practices. With increasing social awareness, customers are progressively opting to support businesses that are dedicated to CSR. Moreover, regulatory entities in Vietnam have initiated measures to encourage CSR practices among banks. This study underscores the profound impact of CSR on the financial performance of the banking sector. The authors developed hypotheses to find out the determinants of the financial performance of Big 4 banks in Vietnam by collecting secondary data in the 2017-2022 period. To answer this question, the Person test, Pool OLS, FEM, REM and FGLS models were used, and then the Hausman test, Wald test and Wooldridge test were used to test the suitable model. The research showed that financial performance in the Big 4 banks in Vietnam (Vietcombank, BIDV, VietinBank, and Agribank) was negatively impacted by capital ratio and financial leverage and positively and significantly influenced by corporate social responsibility and overhead expenses. Thus, by integrating CSR initiatives into their business strategies, banks can enhance their reputation, attract socially conscious customers, and improve return on assets (ROA). Overhead expenses are another key factor significantly impacting a bank's ROA. The Big 4 banks should focus on optimizing their cost structure by identifying and eliminating inefficiencies in their operations. Implementing digitalization initiatives, streamlining processes, and investing in technology can reduce overhead expenses and improve operational efficiency. From these results, the paper gave recommendations for banks to improve their financial performance.

Keywords: financial performance, corporate social responsibility, capital ratio, financial leverage, overhead expenses, big banks in Vietnam.

Suggested Citation

Manh, P. T., Huy, Q. L. (2024). Factors Impact on Financial Performance in Big 4 Banks in Vietnam: The Role of Corporate Social Responsibility Disclosure. *Oblik i finansi*, 2(104), 58-69. [https://doi.org/10.33146/2307-9878-2024-2\(104\)-58-69](https://doi.org/10.33146/2307-9878-2024-2(104)-58-69)

¹ **Pham Tien Manh**, Faculty of Finance, Banking Academy of Vietnam, Hanoi, Vietnam.

ORCID 0000-0002-7243-783X

E-mail: manhpham@hvn.edu.vn (Corresponding author)

² **Quang Le Huy**, International School of Banking Academy, Banking Academy of Vietnam, Hanoi, Vietnam.

ORCID 0009-0001-9141-588X

Фактори, що впливають на фінансову ефективність чотирьох великих банків В'єтнаму: роль розкриття інформації про корпоративну соціальну відповідальність

Анотація. Численні чинники сприяли зростанню уваги до корпоративної соціальної відповідальності (КСВ) у в'єтнамському банківському секторі. Споживачі та зацікавлені сторони все більше усвідомлюють важливість сталої та етичної ділової практики. Зі зростанням соціальної обізнаності клієнти поступово вирішують підтримувати компанії, які віддані КСВ. Крім того, регулюючі органи В'єтнаму вжили заходів для заохочення практик КСВ серед банків. Це дослідження підкреслює глибокий вплив КСВ на фінансову ефективність банківського сектору. Автори розробили гіпотези, щоб з'ясувати детермінанти фінансової ефективності 4 найбільших банків у В'єтнамі шляхом збору вторинних даних за період 2017-2022 років. Для аналізу даних було використано тест Персона, моделі Pool OLS, FEM, REM та FGLS, а потім тест Хаусмана, тест Вальда та тест Вулдріджа для перевірки відповідної моделі. Дослідження показало, що на фінансові показники 4 найбільших банків В'єтнаму (Vietcombank, BIDV, VietinBank та Agribank) негативно вплинули коефіцієнт капіталу та фінансовий важіль, натомість позитивний та суттєвий вплив мають корпоративна соціальна відповідальність і накладні витрати. Таким чином, інтегруючи ініціативи КСВ у свої бізнес-стратегії, банки можуть покращити свою репутацію, залучити соціально свідомих клієнтів і підвищити рентабельність активів. Накладні витрати є ще одним ключовим фактором, який значно впливає на рентабельність активів банку. Досліджувані банки повинні зосередитися на оптимізації структури витрат шляхом виявлення та усунення неефективності своїх операцій. Реалізація ініціатив цифровізації, оптимізація процесів та інвестиції в технології можуть зменшити накладні витрати та підвищити операційну ефективність. На основі отриманих результатів у статті надано рекомендації банкам щодо покращення їхніх фінансових показників.

Ключові слова: фінансові показники, корпоративна соціальна відповідальність, коефіцієнт капіталу, фінансовий важіль, накладні витрати, великі банки В'єтнаму.

1. INTRODUCTION

Corporate social responsibility (CSR) has attained a heightened level of significance within the realm of business operations on a global scale, encompassing the banking sector (Pérez, Martínez and Bosque, 2012). In the context of Vietnam, amidst the ongoing economic advancement and integration into the worldwide market, the attention towards promoting sustainable and responsible business conduct by banks has escalated among the public and regulatory bodies. Banks' provision of financial services to individuals, enterprises, and governmental bodies plays a pivotal role in the economy, thereby exerting a substantial influence on the nation's social, economic, and environmental fabric. This recognition has led to mounting anticipation for banks in Vietnam not only to prioritize financial performance but also to actively participate in CSR endeavours that yield benefits for society and the environment (Nguyen, Hang & Le, 2022). Multiple factors have contributed to the burgeoning emphasis on CSR within the Vietnamese banking sector. Primarily, there is a burgeoning consciousness among consumers and stakeholders regarding the significance of sustainable and ethical business practices. With increasing social awareness, customers are progressively opting to support businesses that are dedicated to CSR. Moreover, regulatory entities in Vietnam have initiated measures to encourage CSR

practices among banks. The issuance of guidelines and regulations by the State Joint Stock Commercial Bank of Vietnam, which functions as the country's central bank, catalyzes banks to embed CSR principles into their operations. Complying with these directives is not solely perceived as a legal obligation but also as a means for banks to fortify their reputation and cultivate trust among stakeholders. Furthermore, banks in Vietnam are encountering amplified scrutiny from international stakeholders such as foreign investors and multinational corporations, who frequently impose rigorous CSR criteria on their business associates (My & My, 2022). Embracing international CSR standards not only facilitates banks in attracting foreign investments but also aligns them with global benchmarks of excellence.

This study underscores the profound impact of CSR on the financial performance of the banking sector. CSR functions as a yardstick that shapes the financial performance metrics of businesses, encompassing indicators like Return on Assets (ROA), capital ratio, debt ratio, loan ratio, and operational expenses of banking entities. Moreover, it plays a crucial role in evaluating broader macroeconomic indicators such as inflation, Gross Domestic Product (GDP), economic advancement, and Foreign Direct Investment (FDI) (Makni et al., 2009). Presently, research in this domain primarily focuses on exploring the ramifications of CSR on the sustainable

progress of the banking industry globally, particularly within major banking institutions in Germany, France, and the United States (Matei & Voica, 2013). The field of state-owned banks in Vietnam has not been studied in detail. Therefore, this study will partially overcome that gap and demonstrate an academic, systematic, and logical view of the impact of CSR on the financial performance of the Big 4 Bank of Vietnam.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESIS DEVELOPMENT

2.1. Corporate social responsibility disclosure and financial performance

The positive correlation linking corporate social performance to asset return can also be elucidated by the 'good management theory,' which fundamentally represents another expression of stakeholder theory. 'Good management theory' suggests enhanced relationships with crucial stakeholders, consequently enhancing performance (Surroca & Waddock, 2006). The fundamental concept posited by this theory is that social responsibility can serve as an intangible asset leading to more effective resource utilization, thereby positively influencing financial performance (Yoon & Chung, 2018). Supporting this notion, Soana (2011) contends that firms, through adopting socially responsible practices, can mitigate potential reputational harm from adverse information in the future, thus safeguarding profits and financial outcomes. Consequently, an effective CSR initiative can cultivate valuable goodwill, shielding firms from unforeseen challenges and unlocking opportunities inaccessible to less socially engaged companies. Recent research indicates that CSR disclosure can significantly benefit firms, especially when tailored to stakeholder interests, presenting a mutually beneficial scenario. Stakeholders' concerns are addressed through firms' execution and communication of CSR initiatives, while firms enjoy reduced financing costs as a result of such engagements (Reverte, 2011). Empirical investigations exploring the relationship between social responsibility and concurrent asset return have considered lead/lag dynamics, examining the potential impact of corporate social performance on subsequent asset return and vice versa (Preston & O'Bannon, 1997). The theoretical underpinnings supporting a concurrent association between CSR and enterprise asset return may extend to the relationship between CSR and subsequent asset return (McGuire et al., 1988). Anticipating that the benefits of CSR utilization may materialize later, positively influencing enterprise profitability, it is plausible that the publication of CSR practices will enhance the future asset return of the nation's primary national joint-stock commercial bank. Based on the analysis above, the authors developed the first hypothesis:

H₁: Corporate social responsibility disclosure positively impacts on big 4 banks in Vietnam's financial performance.

2.2. Capital ratio and financial firm performance

The capital ratio of a company plays a pivotal role in shaping its investment choices, whereas the return on assets signifies the efficacy of those investments (Khan, 2012). A situation where the capital ratio surpasses the return on assets implies that the company is not generating adequate profits to offset financing expenses, potentially leading to financial challenges and necessitating a reassessment of the investment approach or exploration of alternate funding avenues. Conversely, when the return on assets outstrips the capital ratio, it indicates that the company is yielding profits surpassing the financing costs, signifying a favorable scenario where value is being created for shareholders and investors (Shalneva, 2021). If a company maintains a high capital ratio, predominantly relying on equity for funding its operations, the return on assets might be impacted, possibly resulting in a decline due to the extensive use of equity for profit generation. Conversely, a low capital ratio, indicative of substantial reliance on borrowed capital for business financing, could lead to an increase in return on assets. Nevertheless, the heightened utilization of borrowed funds also escalates financial risks (Ching & Novazzi, 2011). Empirical evidence underscores the significance of efficient working capital management in driving business success, as it directly enhances the profitability of the company's total assets (Muhammad et al., 2012). Therefore, we are going to develop the second research hypothesis:

H₂: Capital ratio negatively impact on big 4 banks in Vietnam's financial performance.

2.3. Financial leverage and financial firm performance

If a company has a high loan ratio, it means that a significant portion of its assets are financed with debt. This can lead to higher financial leverage, which can increase profits when the company performs well. However, it also increases financial risk, as higher debt levels can lead to higher interest costs and financial instability. In this case, the ROA may be higher due to the leverage effect. On the other hand, if a company has a low loan ratio, it indicates that it relies less on borrowed capital and more on equity. This can lead to lower and more stable financial risks as the company is not burdened by high debt levels. However, the ROA may be lower than that of a company with a high loan ratio, as the company fails to leverage its finances to increase profitability (Rajindra et al., 2021). Benefiting from financial leverage, when a company uses borrowed funds to fund business operations, it can leverage financing to increase ROA (Susilawati et al., 2022). The use of borrowed funds can help the company strengthen its business and generate higher returns from the same initial investment. In this case, ROA may increase as the Loan Ratio increases (Siswanto et al., 2022). Therefore, the next research hypothesis is:

H₃: Financial leverage positively influences on big 4 banks in Vietnam's financial performance.

2.4. Overhead Expenses and financial firm performance

When a corporation efficiently manages and diminishes overhead expenditures, it has the potential to enhance operational effectiveness. Diminished overheads equate to a higher amount of income generated, which can in turn bolster return on assets (ROA). Entities that streamline their activities and eliminate unnecessary costs might experience an upsurge in ROA as a consequence of reduced overheads. If overhead costs escalate without a proportional increase in revenues, there is a likelihood of diminished profit margins. This scenario could adversely influence ROA, given that elevated costs impact a corporation's ultimate financial outcome. Corporations with substantial operating expenditures about their revenues may encounter challenges in sustaining a favorable ROA (Erasmus, 2021). At times, increases in overhead expenditures may serve a strategic purpose when they are directed toward investments in expansion opportunities. One instance of this is the allocation of resources to activities like research and development, marketing, or training of employees, which have the potential to yield lasting advantages such as an expanded market share and enhanced profits (Novák et al., 2017). The enhancement of Return on Assets (ROA) can be observed gradually over time when overhead costs are judiciously utilized to foster growth. Conversely, inadequate management of overhead expenses, characterized by superfluous spending or ineffective measures for cost management, can result in diminished profitability and a decrease in ROA. Companies that neglect to effectively oversee and regulate their overhead expenditures may experience adverse effects on their financial performance (Njue, 2014). The fourth research hypothesis is:

H₄: Overhead expenses positively impact on big 4 banks in Vietnam's financial performance.

2.5. Inflation and financial firm performance

Discussions of calculated ROA for larger banking segments with officials and credit managers describe that when inflation is high then planning activities actually increase and asset utilization becomes efficient to some extent but creditor default risks are also high. Inflation may boost the nominal growth of bank loans due to increased demand for loans for investment, business production, and consumption amid rising prices of goods and services. This leads to an increase in interest revenue for the bank, which in turn contributes to boosting ROA (Khan et al., 2014). As inflation rises, the real value of the loan decreases over time. This is beneficial for banks with many long-term loans, especially fixed-rate loans, as they will have to pay back the loan at a lower real value than the original loan value. Inflation can make savings deposits less attractive than other investment channels with higher returns. This can motivate banks to raise capital through cheaper channels such as short-term mobilized capital, and interbank capital thereby helping to reduce the cost of raising capital and increase ROA (Boyd & Smith, 2001). Inflation can cause the value of some non-financial assets such as real estate and essential

goods to increase over time. This is beneficial for the bank that has more of these assets in its portfolio as the value of its assets will increase, resulting in a higher ROA. Banks can apply the method of revaluing assets at market prices when there are significant inflationary fluctuations. Revaluing assets above their original value will help increase the bank's total assets, thereby contributing to boosting ROA (Singkeruang et al., 2021). Inflation can create opportunities for investment banking services such as consulting, brokerage, M&A due to the high demand for investment and corporate restructuring in the context of economic fluctuations. Banks can take advantage of this opportunity to increase revenue from non-interest services. When inflation is high, central banks tend to raise interest rates to control inflation. This can create opportunities for banks to participate in the money market, and government bonds to profit from interest rate differentials, contributing to boosting ROA (Samhan & Khatib, 2015). The fifth research hypothesis is:

H₅: Inflation positively impact on big 4 banks in Vietnam's financial performance.

2.6. Gross Domestic Product and financial firm performance

Gross Domestic Product (GDP) growth positively affects ROA consistent with previous studies on bank performance and the factors that determine it. As the economy grows, businesses and individuals need to borrow capital to expand business, investment, and consumption activities. People's consumption demand increases in the context of economic development, promoting the development of the retail market. This creates opportunities for banks to provide credit products and services to individual customers such as home loans, car purchases, and credit cards, contributing to increasing revenue and ROA for banks (Dreca, 2012). GDP has a direct and significant impact on ROA. It shows that rapid economic growth increases profits in banks in Pakistan. Basically, GDP records up-and-down fluctuations manifested in business cycles. Therefore, fluctuations in the overall level of activity are expected to create a direct impact on banks' profitability. As the economy grows, unemployment usually falls and people's incomes rise. This leads to a reduction in NPL risk for banks, which in turn improves asset quality and ROA. The value of collateral for loans such as real estate, factories, machinery and equipment tends to increase with the value of GDP. This helps to minimize lending risks and enhance the bank's ability to recover capital, contributing to boosting ROA (Gul & Zaman, 2011). It is said to have a positive impact of financial developments on the bank's operating efficiency as this ratio reflects the relationship between ROA and economic activity as measured by GDP. If economic activity increases, the demand for banking services will increase, which means that banks will have more opportunities to make profits. From there, ROA will increase (M.Ameer, 2015). Therefore, the next research hypothesis is:

H₆: Gross Domestic Product positively impact on big 4 banks in Vietnam's financial performance.

2.7. Foreign Direct Investment and Financial Firm Performance

Foreign Direct Investment (FDI) has a close relationship with banks' ROA. Analyzing in more detail, FDI has a positive impact on banks' ROA. The results show that higher foreign direct investment inflows will lead to an increase in returns on the assets of commercial banks in Ghana and vice versa. FDI brings abundant capital to banks, enabling them to expand lending, investment, and other financial services. FDI sources are usually more stable and long-term than domestically mobilized capital, helping to minimize liquidity risks for banks (Musah et al., 2018). Supporting this view, Nwanji (2020) argued that FDI enterprises often apply advanced technology, as a result, this will effective corporate governance and a wide customer network. When cooperating with FDI enterprises, banks can learn from management experience, improve operational efficiency, and reduce costs. In addition, FDI helps banks access new markets, especially international markets. The market expansion helps the bank increase revenue and profitability, thereby improving ROA (Nwanji, 2020). Recent research shows that attracting FDI from abroad helps diversify banks' portfolios, thereby minimizing risks. FDI enterprises often have a good reputation and brand, helping to minimize credit risks for banks

(Kariuki, 2013). Predicting that the benefits of using foreign investment (FDI) can be realized later, positively affecting corporate profits, the use of FDI will enhance the future asset profitability of the country's main national joint-stock commercial bank is reasonable. The seventh research hypothesis is:

H₇: Foreign Direct Investment positively impact on big 4 banks in Vietnam's financial performance.

3. DATA AND RESEARCH METHOD

This research collected data from Big 4 banks (Vietcombank, BIDV, VietinBank, and Agribank) in Vietnam in period of 2017-2022, the data sources was collected from financial statements, stock exchanges and related websites. In this research after data processing, the authors will use Pearson test to find out the correlation relationship between variables in the research. Next, the Ordinary Least Squares regression (OLS), Fixed effects model (FEM), Random Effects Model (REM) and Hausman test, Wald test, Wooldridge test are going to use, in order to find out what factors impact on firm financial performance. The data processing software in this research is Stata 17.

Based on the previous literature review, the authors developed the following research model:

$$FFP_{i,t} = \beta_0 + \beta_1 CSR_{i,t} + \beta_2 CAP_{i,t} + \beta_3 LEV_{i,t} + \beta_4 OVE_{i,t} + \beta_5 GDP_{i,t} + \beta_6 INF_{i,t} + \beta_7 FDI_{i,t} + \varepsilon_{i,t}$$

Where: firm i, year t.

The variables under this research are described in the Table 1.

Table 1. **Variables under this research**

Variable	Ticker	Measurement	Sources
Dependent variable			
Firm financial performance	ROA	ROA = Net Income/Average Assets	Marshall (2024) Mehta and Bhavani (2017) Elen et al. (2021)
Independent variables			
Corporate social responsibility	CSR	Firms' CSR Index	Zhang and Yang (2021) Gallardo-Vázquez et al. (2019) Rouf (2011)
Capital ratio	CAP	Capitalization Ratio = TotalDebt/ Capitalization	Bragg (2024) Segal (2021) Abbas et al. (2021)
Financial leverage	LEV	Loan Ratio = Total Loan Amount / Total Asset Value	Wahyuni and Ayem (2017) Kim and Lee (2019) Treece and Amy (2023)
Overhead Expenses	OVE	Index	Tuovila (2024) Portillo and Stinn (2017) Okunbor (2014)
Control variables			
Inflation	INF	Inflation index (%)	Oner (2010) Schmidt (2024) Huang and Liu (2005)
Gross Domestic Product	GDP	GDP Index (%)	Callen (2019) Callen (2008) Smith (2012)
Foreign Direct Investment	FDI	Log (Value of foreign direct investment)	Damgaard et al. (2019) Tax Foundation (2021) Hayes (2023)

4. RESULTS AND DISCUSSION

Table 2. Descriptive statistics

Variable	Mean	Std. dev.	Min	Max
ROA	0.7314	0.3264	0.2712	1.5151
CAP	94.5567	0.9741	92.8016	95.9382
LEV	69.2587	7.6104	51.7072	78.806
CSR	0.7194	0.1961	0.423	1
OVE	13.1835	0.1206	12.9194	13.4169
GDP	5.8833	2.2882	2.6	8
INF	3	0.5985	1.8	3.5
FDI	1.2969	0.032	1.2455	1.3502

Source: Authors' processing.

From the Table 2 above, it can be seen that the average ROA value of the 4 largest banks in Vietnam is 0.73, the lowest value is 0.27 and the highest value is 1.515. The standard deviation of a relatively large ROA is 0.326. The capitalization ratio index has an average value of 94.56. The maximum value of the capitalization ratio is 95.94 and the minimum value of the capitalization ratio is 92.8. The relative standard deviation is only 0.97. This is followed by an average loan ratio of 69.26. The maximum value of the Loan Ratio index is 78.8 and the smallest value of the Loan Ratio index is 51.7. The standard deviation of the loan ratio index is 7.61. The CSR index has an average value of 0.72. The maximum value of the CSR indicator is 1. The smallest value of the CSR index is 0.423. The standard deviation of the relatively small CSR index is 0.196. The overhead index has an average value of 13.18. The maximum value of this index is 13.417 and the smallest

value of this index is 12.92. The standard deviation of the relatively small overhead index is only 0.1207. This is followed by a GDP growth rate with an average value of 5.8833. The maximum value of this indicator is 8, and the smallest value is 2.6. The standard deviation of this indicator is relatively large at 2.2882. The inflation index has an average value of 3. The maximum value of the inflation index is 3.5. The smallest value of the inflation index is 1.8. The standard deviation of this indicator is 0.5985. Finally, the FDI index has an average value of 1.297. The largest value of this indicator is 1.35. The smallest value of the FDI index is 1.2455. The standard deviation of this indicator is quite low, only 0.032. From the above analysis, this research paper found that if there is a relationship between banks with high CSR and overhead ratios, ROA will be higher than banks with low CSR and overhead ratios.

Table 3. Pearson correlation result

	ROA	CAP	LEV	CSR	OVE	GDP	INF	FDI
ROA	1							
CAP	-0.6282	1						
LEV	-0.6260	0.4634	1					
CSR	0.3670	-0.0908	-0.1156	1				
OVE	-0.2403	0.5072	0.6816	-0.2391	1			
GDP	-0.1603	-0.0269	-0.1222	-0.0541	-0.2762	1		
INF	-0.2359	0.0246	-0.1068	-0.1525	-0.36	0.6484	1	
FDI	0.2232	0.0646	0.2517	0.334	0.5559	0.0661	-0.1552	1

Source: Authors' processing.

According to Table 3, there is a positive relationship between financial firm performance and CSR, FDI, with the value of 0.3670 and 0.2232, respectively. On the other hand, CAP, LEV, OVE, GDP and INF negatively influence on ROA of Big 4 banks in Vietnam. Interestingly, the correlation between independent, dependent and control variables is below 0.8, this means that multicollinearity does not exist in the variables under the research.

Next, the authors use regression models to find out what factors impact on financial firm performance, which is measured by ROA. After running Pool OLS, FEM and REM regression, the authors use Hausmant test, the results show that the value of Prob > chi2 = 0.9852, this result showing that the REM model is suitable in this research. The results were shown in Table 4.

Table 4. Regression results

	POOL	FEM	REM	FGLS
	ROA	ROA	ROA	ROA
CAP	-0.208***	-0.166	-0.208***	-0.205***
	(-4.25)	(-1.39)	(-4.25)	(-4.80)
LEV	-0.0347***	-0.0376	-0.0347***	-0.0322***
	(-5.15)	(-1.07)	(-5.15)	(-5.19)
CSR	0.769**	0.681	0.769***	0.684***
	2.73	1.07	2.73	2.75
OVE	2.206**	3.661*	2.206***	1.887***
	2.61	2.12	2.61	2.65
GDP	-0.114	0.0814	-0.114	-0.0918
	(-0.50)	0.17	(-0.50)	(-0.51)
INF	0.273	0.438	0.273	0.0489
	0.56	0.79	0.56	0.14
FDI	-1.247	-4.027	-1.247	-0.335
	(-0.57)	(-0.79)	(-0.57)	(-0.19)
_cons	-5.255	-24.77	-5.255	-2.529
	(-0.74)	(-0.97)	(-0.74)	(-0.42)

(*), (**), (***) represent for significant at 10%, 5% and 1%, respectively

Source: Authors' processing.

The variance of the alternate error will make the estimates obtained by the OLS method stable but ineffective, and the regression coefficient estimates are no longer reliable. This leads to the misconception of independent variables in the meaningful research model, at which point the validation factor and R squares cannot be used. Because the variance of the variable error loses the effectiveness of the estimate, it is necessary to test the variance hypothesis of zero error by means of the Wald test, the result shows that Prob > chi2=0.9975, the authors could conclude that the model does not have heteroscedasticity.

In the Wooldridge test, Prob > F = 0.0869, this means that there is no autocorrelation phenomenon. In the next step, the research applies FGLS to explain the relationship between independent variables, control variables and individual variables. The results from table 4 shows that, there are 4 variables impact of financial firm performance in Big 4 banks in Vietnam, including capital ratio (CAP), financial leverage (LEV) and corporate social responsibility (CSR).

Firstly, CSR positively impacts on financial firm performance, this means that the higher CSR index, the higher ROA value in these banks. Soana (2011) argues that companies, through the adoption of socially responsible practices, can minimize potential reputational harm from adverse information in the future, thus protecting profitability and financial results including ROA. Thus, an effective CSR initiative can nurture valuable goodwill, protect companies from unforeseen challenges, and open up opportunities that are inaccessible to less socially engaged companies. Recent

research indicates that CSR disclosure can bring significant benefits to companies, especially when aligned with stakeholder interests, presenting a win-win scenario. Stakeholder concerns are addressed through the implementation and communication of corporate CSR initiatives, while companies enjoy reduced financing costs as a result of those commitments (Reverte, 2011). Another piece of evidence suggests that the theoretical foundations supporting the simultaneous link between CSR and corporate asset returns can extend to the relationship between CSR and subsequent asset returns (McGuire. Et al, 2008).

Secondly, capital ratio (CAP) negatively impacts on financial firm performance, significantly at 1%. A company's capital ratio plays a key role in shaping its investment choices, while the rate of return on assets indicates the performance of those investments (Agha, 2014). There is also evidence that in cases where the capital ratio exceeds the rate of return on assets means that the company is not generating enough profit to cover financing costs, potentially leading to financial challenges and the need to reevaluate investment methods or explore alternative sources of funding. Conversely, when the return on assets far exceeds the capital ratio, it indicates that the company is delivering profits that exceed the cost of financing, signifying a favorable scenario in which value is created for shareholders and investors (Shalнева, 2021). Another study also showed that if a company maintains a high capital ratio, relying primarily on equity to fund its operations, then returns on assets can suffer, which can lead to a decline due to the widespread use of equity to generate profits. Conversely, a low capital ratio,

indicating a significant reliance on borrowed capital to finance business operations, can lead to increased return on assets (Ching et al., 2011).

Thirdly, financial leverage negatively influences financial firm performance, significantly at 1% level. This can lead to higher financial leverage, which can increase profits when the company performs well. However, it also increases financial risk because higher debt levels can lead to higher interest costs and financial instability. In this case, the ROA may be higher due to the leverage effect (Susilawati et al., 2022). On the other hand, if a company has a low loan ratio, it indicates that it relies less on borrowed capital and more on equity. This can lead to lower and more stable financial risks as the company does not incur a high debt burden. However, the ROA may be lower than that of a company with a high loan ratio due to the company's failure to leverage its financing to increase profitability (Rajindra et al., 2021). Another study indicates that when a company uses borrowed funds to fund its business, it can leverage financing to increase ROA. The use of borrowed funds can help the company strengthen its business and generate higher returns from the same initial investment. In this case, ROA may increase as Loan Rates increase (Siswanto et al., 2022).

5. CONCLUSION AND RECOMMENDATIONS

This research uses data from Big 4 banks in Vietnam in 2017-2022 period, to answer the question: what factors impact on financial firm performance, especially focusing on corporate social responsibility. The research result from FGLS model shows that there are 4 variables which statistically and significantly influence financial firm performance, including capital ratio, financial leverage, overhead expenses and corporate social responsibility. However, in these banks under the research, the regression model shows that overhead expenses, gross domestic product, inflation rate, foreign direct investment does not impact on financial firm performance. The Big 4 banks in Vietnam play a significant role in the country's financial sector. Improving the Return on Assets (ROA) is crucial for these banks to enhance their financial performance and competitiveness in the market. Several key factors influence the ROA of banks, including loan ratio, corporate social responsibility (CSR) initiatives, overhead expenses, and capitalization ratio. By strategically managing these factors, these banks can boost their ROA and achieve sustainable growth.

Firstly, financial leverage is a critical metric that directly impacts a bank's profitability. To improve ROA, these banks should focus on optimizing their loan portfolio by balancing risk and return, diversifying their loan portfolio across different sectors and customer segments, banks can reduce credit risk and enhance their

interest income. Additionally, implementing robust credit risk assessment processes and monitoring mechanisms can help mitigate loan defaults and non-performing loans, thereby improving the overall quality of the loan portfolio and boosting ROA.

Secondly, corporate social responsibility has become increasingly important for banks as stakeholders demand more accountability and transparency in business operations. By integrating CSR initiatives into their business strategies, banks can enhance their reputation, attract socially conscious customers, and improve ROA. Engaging in sustainable lending practices, supporting community development projects, and promoting environmental sustainability not only benefit society but also create long-term value for the banks and their shareholders.

Thirdly, overhead expenses are another key factor that can significantly impact a bank's ROA. The Big 4 banks should focus on optimizing their cost structure by identifying and eliminating inefficiencies in their operations. Implementing digitalization initiatives, streamlining processes, and investing in technology can help reduce overhead expenses and improve operational efficiency. By controlling costs effectively, banks can enhance their profitability and ROA.

Fourthly, capitalization ratio, which measures a bank's financial strength and stability, is crucial for maintaining investor confidence and regulatory compliance. The Big 4 banks should ensure that they maintain adequate capital levels to support their business activities and absorb potential losses. By optimizing their capital structure, banks can improve their risk-adjusted returns and enhance their ROA. Strategic capital planning, stress testing, and capital allocation strategies are essential for maintaining a healthy capitalization ratio. In conclusion, the Big 4 banks in Vietnam can enhance their ROA by strategically managing key factors such as loan ratio, corporate social responsibility, overhead expenses, and capitalization ratio. By focusing on optimizing their loan portfolio, implementing CSR initiatives, controlling costs, and maintaining a strong capital base, these banks can improve their financial performance, drive sustainable growth, and remain competitive in the dynamic banking industry.

In addition, although other factors do not affect ROA such as FDI, INF and GDP, Big 4 banks still need to pay attention because these factors are important macro factors. When observing these factors, the bank will come up with more reasonable financial activities, thereby improving the bank's financial position.

ACKNOWLEDGEMENT

The authors gratefully acknowledge the Banking Academy of Vietnam for the financial support.

4 References

- Abbas, F., Masood, O., Ali, S., & Rizwan, S. (2021). How do capital ratios affect bank risk-taking: New evidence from the United States. *Sage Open*, 11(1), 2158244020979678. <https://doi.org/10.1177/2158244020979678>
- Ameer, B. M. (2015). Determinants of banking sector performance in Pakistan. *Global Journal of Management and Business Research*, 15(C6), 21-48. Available at: <https://gjmr.com/index.php/gjmr/article/view/331> (Accessed: 13 May 2024).
- Ayem, S., & Wahyuni, S. (2017). PENGARUH LOAN TO DEPOSIT RATIO, CAPITAL ADEQUACY RATIO, RETURN ON ASSET DANNON PERFORMING LOAN TERHADAP RETURN SAHAM. *Jurnal Akuntansi*, 5(1), 71-87. Available at: <https://jurnalfe.ustjogja.ac.id/index.php/akuntansi/article/view/258> (Accessed: 29 March 2024).
- Birken, E., & Curry, B. (2022). *Understanding return on assets (ROA)*, *Forbes*. Available at: <https://www.forbes.com/advisor/investing/roa-return-on-assets/> (Accessed: 29 March 2024).
- Boateng, E., Amponsah, M., & Baah, C. (2017). Complementarity Effect of Financial Development and FDI on Investment in Sub-Saharan Africa: A Panel Data Analysis. *African Development Review*, 29(2), 305-318. <https://doi.org/10.1111/1467-8268.12258>
- Boyd, J. H., Levine, R., & Smith, B. D. (2001). The impact of inflation on financial sector performance. *Journal of Monetary Economics*, 47(2), 221-248. [https://doi.org/10.1016/S0304-3932\(01\)00049-6](https://doi.org/10.1016/S0304-3932(01)00049-6)
- Bragg, S. (2024). *Capitalization ratios*, *AccountingTools*. Available at: <https://www.accountingtools.com/articles/capitalization-ratios.html> (Accessed: 29 March 2024).
- Callen, T. (2008). *What is gross domestic product?* Available at: <https://purochioe.rrojasdatabank.info/imfongdp.pdf> (Accessed: 29 March 2024).
- Callen, T. (2019). *Gross domestic product: An economy's all*, *IMF*. Available at: <https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/gross-domestic-product-GDP> (Accessed: 29 March 2024).
- Ching, H., & Novazzi, A. (2011). Relationship between Working Capital Management and Profitability in Brazilian Listed Companies. *Journal of Global Business and Economics*. Available at: <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=5c1f384f2478efb17a83c2f5ade6da059c7dbbea> (Accessed: 29 March 2024).
- Damgaard, J., Elkjaer, T., & Johannesen, N. (2019). *What is real and what is not in the Global FDI network?*, *Google Sch.* Available at: https://books.google.com.vn/books?hl=vi&lr=&id=1skaEAAAQBAJ&oi=fnd&pg=PP1&dq=What%2Bis%2BFDI&ots=cUtxz6cUn6&sig=di7C70sNQepKBg-3mLW7t_6-eDU&redir_esc=y#v=onepage&q=What%20is%20FDI&f=false (Accessed: 13 May 2024).
- Dawood, M., ur Rehman, S., Majeed, U., & Idress, S. (2023). Contribution the Effect of Corporate Governance on Firm Performance in Pakistan. *Review of Education, Administration & Law*, 6(1), 51-62. <https://doi.org/10.47067/real.v6i1.304>
- Dreca, N. (2012). *Evaluation of Financial Performance of Banking Sector: Evidence from Bosnia and Herzegovina, Croatia, Serbia and, ajindex*. Available at: <https://www.ajindex.com/dosyalar/makale/acarindex-1423906030.pdf> (Accessed: 13 May 2024).
- Erasmus, E. (2021). *Cost Management Practice and Financial Performance of Listed Deposit Money Banks in Nigeria*, *iiardjournals*. Available at: <https://www.iiardjournals.org/get/JAFM/VOL.%207%20NO.%201%202021/Cost%20management%20practice%20and%20Financial.pdf> (Accessed: 13 May 2024).
- Gallardo-Vazquez, D., Barroso-Mendez, M. J., Pajuelo-Moreno, M. L., & Sanchez-Meca, J. (2019). Corporate social responsibility disclosure and performance: A meta-analytic approach. *Sustainability*, 11(4), 1115. <https://doi.org/10.3390/su11041115>
- Gunawan, R., Widiyanti, M., Malinda, S., & Adam, M. (2022). The effect of current ratio, total asset turnover, debt to asset ratio, and debt to equity ratio on return on assets in plantation sub-sector companies listed on the Indonesia stock exchange. *International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration (IJEBA)*, 2(1), 19-28. <https://doi.org/10.54443/ijevas.v2i1.139>
- Hargrave, M. (2024). *Return on assets (ROA): Formula and 'good' roa defined*, *Investopedia*. Available at: <https://www.investopedia.com/terms/r/returnonassets.asp> (Accessed: 29 March 2024).
- Hayes, A. (2023). *What is the debt ratio?*, *Investopedia*. Available at: <https://www.investopedia.com/terms/d/debtratio.asp> (Accessed: 29 March 2024).
- Hayes, A. (2024a). *Direct foreign investment (FDI): What it is, types, and examples*, *Investopedia*. Available at: <https://www.investopedia.com/terms/f/fdi.asp> (Accessed: 29 March 2024).
- Hayes, A. (2024b). *Loan-to-value (LTV) ratio: What it is, how to calculate, example*, *Investopedia*. Available at: <https://www.investopedia.com/terms/l/loantovalue.asp> (Accessed: 29 March 2024).
- Huang, K. X., & Liu, Z. (2005). Inflation targeting: What inflation rate to target?. *Journal of Monetary Economics*, 52(8), 1435-1462. <https://doi.org/10.1016/j.jmoneco.2004.08.008>
- Jamal, A., Karim, M., & Hamidi, M. (2012). Determinants of Commercial Banks' Return on Asset: Panel Evidence from Malaysia. *IRACST – International Journal of Commerce, Business and Management (IJCBM)*, 1(3). Available at: https://www.researchgate.net/publication/235962256_Determinants_of_Commercial_Banks'_Return_on_Asset_Panel_Evidence_from_Malaysia (Accessed: 29 March 2024).

- Kang, K. H., Lee, S., & Huh, C. (2010). Impacts of positive and negative corporate social responsibility activities on company performance in the hospitality industry. *International journal of hospitality management*, 29(1), 72-82. <https://doi.org/10.1016/j.ijhm.2009.05.006>
- Kariuki, A. (2013). *Foreign direct investment and bank performance in Kenya*, library.ku. Available at: <https://ir-library.ku.ac.ke/bitstream/handle/123456789/18771/Foreign%20direct%20investment%20and%20bank%20performance%20in%20kenya....pdf?sequence=1> (Accessed: 13 May 2024).
- Khan, A. (2012). *The relationship of capital structure decisions with firm performance: a study of the engineering sector of Pakistan*, Semantic Scholar. Available at: <https://pdfs.semanticscholar.org/8522/33ca046fecaa4f73560a1a866d885a653206.pdf> (Accessed: 13 May 2024).
- Khan, W. A., Shahid, M., Bari, R., Anam, W., Shehzad, N., & Siddique, S. (2014). Impacts of inflationary trends on banks' performance (large banks segment) in Pakistan. *International Journal of Accounting and Financial Reporting*, 4(1), 296. <https://doi.org/10.5296/ijafr.v4i1.6083>
- Kim, J., Kim, M., & Lee, J. H. (2019). The effect of TARP on loan loss provisions and bank transparency. *Journal of Banking & Finance*, 102, 79-99. <https://doi.org/10.1016/j.jbankfin.2019.03.006>
- Lentner, C., Szegedi, K., & Tatay, T. (2015). *Corporate Social Responsibility in the Banking Sector*, MTA. Available at: <http://real.mtak.hu/92953/1/social-responsibility-csaba-lentner-krisztina-szegedi-tibor-tatay.pdf> (Accessed: 29 March 2024).
- Matei, M., & Voica, M. (2013). Social Responsibility in the Financial and Banking Sector, *Economic Insights – Trends and Challenges*, II(LXV), 115-123. Available at: https://upg-bulletin-se.ro/old_site/archive/2013-1/11.Matei_Voica.pdf (Accessed: 13 May 2024).
- McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of management Journal*, 31(4), 854-872. Available at: <https://www.jstor.org/stable/256342> (Accessed: 13 May 2024).
- Muhammad, M., & Jan, W. (2012). Working Capital Management and Profitability An Analysis of Firms of Textile Industry of Pakistan. *Journal of Managerial Sciences*, VI(2156). Available at: https://qurtuba.edu.pk/jms/default_files/JMS/6_2/JMS_July_December2012_155-165.pdf (Accessed: 29 March 2024).
- Musah, A., Gakpetor, E. D., Kyei, S. N. K., & Akomeah, E. (2018). Foreign Direct Investment (FDI), economic growth and bank performance in Ghana. *International Journal of Finance and Accounting*, 7(4), 97-107. <https://doi.org/0.5923/j.ijfa.20180704.02>
- My, H., & My, S. (2022). Relationship between Corporate Social Responsibility and bank performance of listed banks in Vietnam. *Journal of Hunan University Natural Sciences*, 49(1). Available at: <http://jonuns.com/index.php/journal/article/view/946> (Accessed: 29 March 2024).
- Njue, F. (2014). *The relationship between overhead allocation techniques and financial performance of manufacturing companies in Kenya*, Erepository. Available at: http://erepository.uonbi.ac.ke/bitstream/handle/11295/76322/THE_RELATIONSHIP_BETWEEN_OVERHEAD_ALLOCATION_TECHNIQUES_AND_FINANCIAL_PERFORMANCE_OF_MANUFACTURING_COMPANIES_IN_KEN.pdf?sequence=4 (Accessed: 29 March 2024).
- Novák, P., Dvorský, J., Popesko, B., & Strouhal, J. (2017). Analysis of overhead cost behavior: case study on decision-making approach. *Journal of International Studies*, 10(1), 74-91. doi:10.14254/2071-8330.2017/10-1/5
- Nwanji, T. I., Howell, K. E., Faye, S., Otekunrin, A. O., Eluyela, D. F., Lawal, A. I., & Eze, S. C. (2020). Impact of foreign direct investment on the financial performance of listed deposit banks in Nigeria. *International Journal of Financial Research*, 11(2), 323. <https://doi.org/10.5430/ijfr.v11n2p323>
- Okunbor, J. A. (2013). The application of cost behaviour and estimation in organisational decision making process. *Journal of Research in National Development*, 11(1), 217-227. Available at: <https://www.ajol.info/index.php/jorind/article/view/104263> (Accessed: 29 March 2024).
- Oner, C. (2010). Back to Basics: What Is Inflation? *Finance and Development*, 47, 44-45. Available at: <https://www.imf.org/external/pubs/ft/fandd/2010/03/basics.htm> (Accessed: 29 March 2024).
- Pérez, A., Martínez, P., & Rodríguez del Bosque, I. (2013). The development of a stakeholder-based scale for measuring corporate social responsibility in the banking industry. *Service Business*, 7, 459-481. Available at: <https://link.springer.com/article/10.1007/s11628-012-0171-9> (Accessed: 13 May 2024).
- Petersen, M., & Schoeman, I. (2008). Modeling of Banking Profit via Return-on-Assets and Return-on-Equity. In *Proceedings of the World Congress on Engineering 2008 Vol II WCE 2008*, July 2-4, 2008, London, U.K. Available at: https://www.researchgate.net/publication/44262060_Modeling_of_Banking_Profit_via_Return-on-Assets_and_Return-on-Equity (Accessed: 29 March 2024).
- Portillo, J. E., & Stinn, J. (2018). Overhead aversion: Do some types of overhead matter more than others?. *Journal of Behavioral and Experimental Economics*, 72, 40-50. <https://doi.org/10.1016/j.socec.2017.11.003>
- Preston, L., & O'Bannon, D. (1997). *The corporate social-financial performance relationship*, finance.uw. Available at: https://finance.uw.edu/sites/default/files/The_Corporate_Social-Financial_Performance_Relationship_a_Typology_and_Analysis.pdf (Accessed: 13 May 2024).
-
-

- Puspitasar, E., Sudiyatno, B., Hartoto, W. E., Widati, L. W. (2020). Net Interest Margin and Return on Assets: A Case Study in Indonesia. *Journal of Asian Finance, Economics and Business*, 8(4), 0727–0734. doi: 10.13106/jafeb.2021.vol8.no4.0727 Available at: <https://koreascience.kr/article/JAKO202109554061500.pdf> (Accessed: 29 March 2024).
- Rajindra, R., Guasmin, G., Burhanuddin, B., Anggraeni, R. N. (2021). Costs and Operational Revenue, Loan to Deposit Ratio Against Return on Assets: A Case Study in Indonesia. *Journal of Asian Finance, Economics and Business*, 8(5), 0109–0115. Available at: <https://koreascience.kr/article/JAKO202112748674877.pdf> (Accessed: 29 March 2024).
- Resnik, D. (2020). *What is ethics in research and why is it important?*, National Institute of Environmental Health Sciences. Available at: <https://www.niehs.nih.gov/research/resources/bioethics/whatis#:~:text=When%20conducting%20research%20on%20human,and%20burdens%20of%20research%20fairly.> (Accessed: 29 March 2024).
- Reverte, C. (2012). The impact of better corporate social responsibility disclosure on the cost of equity capital. *Corporate Social Responsibility and environmental management*, 19(5), 253-272. <https://doi.org/10.1002/csr.273>
- Reviso (2020). *What is the Debt Ratio? | Accounting Terms*. Available at: <https://www.reviso.com/debt-ratio/> (Accessed: 29 March 2024).
- Rouf, A. (2011). *The Corporate Social Responsibility Disclosure: A Study of Listed Companies in Bangladesh*, Ajindex. Available at: <http://www.ajindex.com/dosyalar/makale/acarindex-1423871716.pdf> (Accessed: 29 March 2024).
- Samhan, H., & Khatib, A. (2015). Determinants of Financial Performance of Jordan Islamic Bank. *Research Journal of Finance and Accounting*, 6(8). Available at: https://www.researchgate.net/publication/283150473_Determinants_of_Financial_Performance_of_Jordan_Islamic_Bank (Accessed: 13 May 2024).
- Schmidt, J. (2024). *How inflation erodes the value of your money*, Forbes. Available at: <https://www.forbes.com/advisor/investing/what-is-inflation/> (Accessed: 29 March 2024).
- Segal, T. (2021). *Capitalization ratios: Types, examples and their significance*, Investopedia. Available at: <https://www.investopedia.com/terms/c/capitalization-ratios.asp#:~:text=Capitalization%20ratios%20are%20indicators%20that,assess%20a%20company's%20financial%20health.> (Accessed: 29 March 2024).
- Sharman, P. (2003). The case for management accounting. *Strategic Finance; Montvale*, 85(4), 42-47. Available at: <https://www.proquest.com/docview/229793604?fromopenview=true&pq-origsite=gscholar&sourcetype=Scholarly%20Journals> (Accessed: 04 February 2024).
- Singeruang, T., Nawir, F., & Saeni, N. (2021). The Effects of Inflation and Economic Growth on the Profitability of Regional Development Banks (BPD) in Indonesia Listed on the Indonesia Stock Exchange. In *Proceeding Book of The 3rd International Conference on Business and Banking Innovations (ICOBBI) 2021 "Unlocking New Marketing Strategies on ASEAN After Covid-19 Pandemic"*. Available at: <http://eprints.perbanas.ac.id/3850/1/A.%20We%20Tenri%20Fatimah%20Singeruang%20-%20The%20Effects%20of%20Inflation%20and%20Economic%20Growth%20on%20the%20Profitability%20of%20Regional%20Development%20Banks%20%28BPD%29%20in%20Indonesia%20Listed%20on%20the%20Indonesian%20Stock%20Exchange.pdf> (Accessed: 13 May 2024).
- Siswanto, D. J., Maudhiky, F., Wahyudi, I., & Syah, T. Y. R. (2022). The Influence of Debt to Equity Ratio (DER), Return on Assets (ROA) and Company Size on Profit Growth. *Journal of Social Science*, 3(6), 2137-2147. <https://doi.org/10.46799/jss.v3i6.486>
- Smith, J. (2012). *The GDP illusion: Value added versus value capture*, Monthly Review. Available at: https://monthlyreviewarchives.org/index.php/mr/article/view/MR-064-03-2012-07_6 (Accessed: 13 May 2024).
- Soana, M. G. (2011). The relationship between corporate social performance and corporate financial performance in the banking sector. *Journal of business ethics*, 104, 133-148. Available at: https://www.researchgate.net/publication/226527339_The_Relationship_Between_Corporate_Social_Performance_and_Corporate_Financial_Performance_in_the_Banking_Sector (Accessed: 29 March 2024).
- Surroca, J., Tribó, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic management journal*, 31(5), 463-490. <https://doi.org/10.1002/smj.820>
- Susilawati, D., Shavab, F. A., & Mustika, M. (2022). The effect of debt to equity ratio and current ratio on return on assets. *Journal of Applied Business, Taxation and Economics Research*, 1(4), 325-337. <https://doi.org/10.54408/jabter.v1i4.61>
- Tai, T. D. (2022). Impact of corporate social responsibility on social and economic sustainability. *Economic research-Ekonomska istraživanja*, 35(1), 6085-6104. <https://doi.org/10.1080/1331677X.2022.2046480>
- The Ministry of Finance (2015). *Hệ Thống Ngân Hàng Việt Nam hiện nay: Vấn đề đặt Ra và Khuyến Nghị chính sách 30/11/2015 13:49:00 35032, Tin bộ tài chính*. Available at: https://mof.gov.vn/webcenter/portal/btcvn/pages_r/1/tin-bo-tai-chinh?dDocName=MOF147841 (Accessed: 29 March 2024).
- Treece, D. (2023). *What is loan-to-value (LTV) ratio and how to calculate it*, Forbes. Available at: <https://www.forbes.com/advisor/mortgages/loan-to-value-ratio/> (Accessed: 29 March 2024).
- Tretiakova, V., Shalнева, M., & Lvov, A. S. (2021). The Relationship between Capital Structure and Financial Performance of the Company. In *SHS Web of Conferences*. Available at: https://www.shs-conferences.org/articles/shsconf/pdf/2021/02/shsconf_ies2020_01002.pdf (Accessed: 29 March 2024).
- Tuovila, A. (2024). *Overhead: What it means in business, major types, and examples*, Investopedia. Available at: <https://www.investopedia.com/terms/o/overhead.asp> (Accessed: 29 March 2024).

- Van Nguyen, T., Bui, H. T., & Le, C. H. (2022). The impacts of corporate social responsibility to corporate financial performance: A case study of Vietnamese commercial banks. *Cogent Economics & Finance*, 10(1), 2132642. <https://doi.org/10.1080/23322039.2022.2132642>
- Wu, M. W., & Shen, C. H. (2013). Corporate social responsibility in the banking industry: Motives and financial performance. *Journal of Banking & Finance*, 37(9), 3529-3547. <https://doi.org/10.1016/j.jbankfin.2013.04.023>
- Yoon, B., & Chung, Y. (2018). The effects of corporate social responsibility on firm performance: A stakeholder approach. *Journal of Hospitality and Tourism Management*, 37(4), 89-96. <https://doi.org/10.1016/j.jhtm.2018.10.005>
- Zhang, Y., & Yang, F. (2021). Corporate Social Responsibility Disclosure: Responding to investors' criticism on social media. *International journal of environmental research and public health*, 18(14), 7396. <https://doi.org/10.3390%2Fijerph18147396>