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Corporate social responsibility by listed commercial banks in Vietnam: practice and financial performance

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Article Info	ABSTRACT
	This study examines the impacts of financial performance (FP) on corporate social responsibility (CSR). The article investigates whether FP, as measured by return on assets (ROA) and net interest margin (NIM), influences the likelihood of CSR disclosure, drawing on stakeholder theory and legitimacy theory. The analysis employs binary logistic regression models and an unbalanced panel dataset comprising 26 listed banks between 2014 and 2024. If the bank discloses its CSR practices in its annual or sustainability report, the code for CSR disclosure is 1; otherwise, it is 0. The results show that, while NIM shows a negative relationship, ROA significantly improves CSR. Furthermore, there is a positive correlation between bank size (TA), equity to asset (EA), and CSR; a negative relationship of loan to deposit ratio (LDR) with CSR, and no significant statistical correlation was observed between debt to equity (DTE) and CSR. The study adds to the body of knowledge on CSR in developing nations and offers recommendations for sustainability and bank governance.

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1. INTRODUCTION

The idea of corporate social responsibility (CSR), has drawn a lot of attention in the banking industry in recent decades. This is because it is a strategic element of risk management and long-term value creation, in addition to being a tool for improving corporate image [1]. Expectations from stakeholders, regulators, and investors regarding banks' social responsibilities have changed as a result of the 2008 financial crisis and the increased emphasis on sustainable development and environmental, social, and governance (ESG) practices around the world [2]. Commercial banks have a significant impact on the economy through capital mobilization, risk allocation, and financial intermediation, in contrast to businesses in traditional industries. As a result, their dedication to CSR is coming under increasing scrutiny [3].

Practical research on CSR has garnered increasing interest among scholars, particularly in the banking sector, where CSR activities hold heightened significance due to the unique characteristics and pivotal role of the banking industry. However, accurately measuring CSR within a specific industry and across different sectors in the economic system presents certain challenges [4]. CSR activities in the banking sector not only influence the internal operations but also impact various stakeholders, including customers, investors, and shareholders. By providing credit services to both individuals and businesses, the banking sector has improved society and had a significant influence on the long-term growth of business and production. Therefore, in addition to pursuing economic objectives, banks must also advance social and environmental causes; only then will the banking sector's operations be more thorough and

compassionate [5]. Banks in India will deny credit to companies whose operations negatively impact the environment [6]. Alternatively, China announced a framework for social and environmental disclosure for the banking and finance sector in Japan [7]. While CSR is only encouraged in many economies, it has become mandatory in some countries. In particular, there are no regulations on the use of CSR and ESG from the government or any of the relevant agencies; integration is merely advised.

The connection between financial performance (FP) and CSR has drawn a lot of attention lately. Gaining a clearer insight into the connection between CSR and FP is of substantial value for corporate managers, who must decide how to allocate resources toward socially responsible activities, and for shareholders, who must determine how to respond to such allocations. Profitability remains the ultimate goal of enterprises. While many studies have explored the impact of CSR on FP, this study investigates the reverse direction: how FP influences CSR practices. Despite the fact that CSR in non-financial sectors has been the subject of much research, there aren't many empirical studies that concentrate on banks, particularly in the Vietnamese context. According to earlier research, a company's FP has a significant impact on its CSR disclosure [8]. A bank's willingness or capacity to fund and disclose CSR initiatives may be influenced by profitability metrics like return on assets (ROA) and net interest margin (NIM). Furthermore, the likelihood of CSR engagement is influenced by additional internal factors like firm size, capital adequacy, and liquidity position [9].

Based on legitimacy theory [10] and stakeholder theory [11], this study creates a conceptual framework that suggests FP as a major factor influencing the possibility that commercial banks will disclose CSR. Specifically, NIM and ROA are used as stand-ins for bank performance. Both metrics are frequently employed in banking research to show operational effectiveness and profitability [12], [13]. The study specifically looks into how FP, as measured by ROA and NIM, affects the probability of CSR disclosure. The outcome of the bank's overall business operations is efficiency. Business results are assessed by keeping and growing the bank's size (total assets (TA)) [14], managing lending activities with a capital mobilization strategy, as measured by the loan to deposit ratio (LDR), or demonstrating business safety by managing equity capital with asset indicators, as measured by the equity to asset ratio (EA). They are examples of control variables that take into consideration institutional and financial factors that could have an impact on CSR practices. In particular, after adjusting for bank size (TA), LDR, and EA, it looks at how FP, measured by ROA and NIM, affects the likelihood of CSR disclosure.

Despite growing regulatory support and societal expectations, the banking industry's adoption of CSR practices is still in its infancy in emerging markets like Vietnam. Circular No. 17/2022/TT-NHNN is one of the frameworks and guidelines that the State Bank of Vietnam (SBV) has introduced to promote sustainable finance. Its goal is to incorporate social and environmental risk management into the operations of credit institutions. Nonetheless, there are still significant differences in the frequency, format, and content of CSR disclosures across Vietnamese commercial banks. While many major banks still do not make formal disclosures, some have begun to publish integrated or sustainability reports that align with international standards such as the Global Reporting Initiative (GRI) [15]. This study contributes to the existing literature by presenting empirical data on the financial factors influencing CSR disclosure in an emerging market's banking industry using binary logistic regression models. It is anticipated that the results will provide useful guidance for bank managers, regulators, and legislators in advancing openness and ethical banking in Vietnam.

2. LITERATURE REVIEW AND THEORETICAL BASIS

From an academic perspective, several approaches have been proposed to measure CSR. The first method is the reputation index, which is based on the dimensions of social performance. This approach was initially developed by the Council of Economic Priorities (CEP) during the late 1960s. The second method is content analysis, in which CSR is assessed through disclosures in corporate documents, particularly annual reports [16]. Subsequent studies have pointed out that defining and measuring CSR remains challenging due to the lack of standardization and inconsistent compliance across firms. Some researchers have attempted to address this by comparing companies that perform exceptionally well in CSR with those demonstrating poor implementation [17]. A multifaceted concept, CSR incorporates social, economic, and environmental concerns into business operations and governance [18], [19]. Although CSR has historically been linked to the manufacturing and extractive industries, its importance in the banking sector has grown substantially in recent years. As guardians of the public's trust and financial intermediaries, banks have embraced CSR practices more and more in order to manage stakeholder expectations, strengthen reputational capital, and support sustainable development goals [2], [13].

Stakeholder theory and legitimacy theory are two prominent theoretical stances that largely frame current research on CSR. According to stakeholder theory [11], companies have a broad spectrum of

stakeholders to answer to, including employees, consumers, regulators, the general public, and shareholders. According to this framework, profitable banks and other financially successful businesses are better able to devote excess resources to meeting stakeholder expectations through programs like CSR disclosure. Such involvement strengthens stakeholder trust and relational capital in addition to fulfilling ethical duties. Legitimacy theory [10], which supports this viewpoint, asserts that companies use CSR disclosures as a tactical tool to build, preserve, or restore their reputation. CSR reporting functions as a type of symbolic communication that conveys organizational integrity and responsiveness to changing societal norms in industries like banking, where institutional credibility and societal trust are crucial. In emerging markets, where regulatory frameworks may be inadequate or inconsistently implemented, this becomes especially important. When combined, these theoretical underpinnings imply that a bank's institutional visibility and financial strength increase its incentive and ability to reveal CSR information, particularly in situations where such disclosure is not required but is nevertheless influenced by stakeholder pressure and legitimacy concerns.

Although the results have been mixed, a sizable amount of empirical research has examined the relationship between CSR and FP [20]. A number of studies were carried out in various banking-related contexts. Some of these studies revealed a bidirectional relationship between CSR and FP, with both directions of impact being statistically significant. This encouraged the development of CSR activities and raised FP. Several other studies revealed a positive relationship between FP and CSR [4], [21]–[23]. The study's findings have demonstrated that the adoption of CSR is a trend that is unavoidable for the long-term growth of banking and financial institutions. The "slack resources" hypothesis, which contends that financially stable companies can invest in CSR, is supported by a number of studies [12], [24] discovered a positive correlation between profitability and CSR engagement in the banking industry, indicating that higher-performing banks employ CSR as a strategic and reputational tool, a few studies have shown that FP negatively impacts CSR. The research in [25], [26] suggests that in the short-term, banks are more concerned with efficiency than with achieving long-term sustainable goals.

The universality of this relationship has been contested by other researchers. Profitability does not always translate into CSR practices in markets with weak institutional enforcement or immature stakeholder activism, according to [27], [28]. Rather than considering CSR as a strategic asset, businesses may prioritize short-term financial metrics. Thus, in the Vietnamese banking industry, where voluntary reporting and quick institutional change coexist, this study reexamines the relationship between FP and CSR.

In banking studies, ROA and NIM are frequently used as stand-ins for FP [29]. On a scale, ROA evaluates the bank's capacity to turn a profit. NIM, on the other hand, is a measure of the bank's performance in credit operations that characterizes how effectively the bank uses earning assets to produce interest income (the difference between interest income and interest expenses). This metric demonstrates the capacity to control asset structure, interest rate risk, and capital expenditures. According to Pham and Tran [30], stakeholder demand and regulatory expectations are the reasons behind the notable positive impact of ROA on CSR disclosures among commercial banks in Vietnam. Similarly, Ha and Khuong [31] found that banks with higher NIM were more likely to disclose CSR activities, as higher margins provided greater financial flexibility for non-core investments.

Studies usually account for the institutional and structural features of banks in order to isolate the impact of FP on CSR. To separate the effects of FP, a number of control variables are included in addition to ROA and NIM. Due to increased public scrutiny and regulatory pressure, TA is anticipated to positively impact CSR disclosure [32]. Depending on risk tolerance and financial flexibility, the LDR, which gauges liquidity and credit risk, can have varying effects on CSR. As a way to boost legitimacy and stakeholder confidence, CSR engagement may be encouraged by the EA, which measures capital strength and financial resilience [12]. The inclusion of these control variables guarantees a more reliable and accurate estimation of the relationship between FP and CSR disclosure, even though they are not the main focus of this study.

Numerous recent studies on sustainable development have demonstrated the close relationship between CSR and ESG, which are both based on regional and international standards, specifically: the GRI, is a widely used framework for businesses and organizations to conduct sustainable development reports. The three topic-specific groups of standards (economic, environmental, and social) are linked to six principles [15] or Bloomberg's ethical investment research service (EIRS) ranking index [21]. These standards are the basis for building CSR and ESG in banks [33]. In developing nations like Vietnam, institutional changes, global integration, and mounting regulatory pressure all influence banking CSR practices in addition to market dynamics. However, there are notable variations in the type and level of CSR disclosures across banks, necessitating an investigation into the factors that influence these disclosures, particularly those related to finances. Vietnam offers a distinctive empirical context for researching CSR disclosures. Regulatory guidelines like the Vietnam corporate governance code of best practices (2019) and Circular No. 155/2015/TT-BTC have promoted greater transparency and sustainability orientation among listed firms and banks, even though CSR reporting is still optional. Disparities in ownership structure, foreign

participation, and governance quality are reflected in the diversity of disclosure practices [34]. In order to meet investor expectations and stay out of trouble with the government, state-owned or internationally exposed banks typically reveal more CSR information. These factors provide an interesting setting for examining whether financial health is a significant factor in determining CSR involvement.

The increasing significance of CSR in the banking industry has prompted scholars to investigate the primary motivators for CSR disclosure. The decision to disclose CSR activities is frequently influenced by internal firm characteristics, most notably FP, in emerging markets like Vietnam, where regulatory frameworks for CSR are still in their infancy. According to stakeholder theory [11], businesses are accountable to a broader group of stakeholders, including employees, consumers, regulators, the general public, and shareholders. Businesses are more likely to have the ability and motivation to satisfy stakeholder expectations through CSR initiatives when they produce high financial returns. This reasoning is further supported by legitimacy theory [10], which suggests that businesses utilize CSR disclosures as a means of demonstrating ethical behavior and legitimizing their operations, particularly in sectors like banking, where public trust is crucial.

One important indicator of overall profitability is ROA. More resources are typically available for CSR initiatives and reporting procedures at companies with higher ROA. Previous research has demonstrated that CSR disclosure and profitability are positively correlated [12]. In order to improve their stakeholder relations and corporate image, profitable banks may choose to voluntarily reveal their CSR initiatives. In light of this justification, we put forth the following theory.

H1: there is a positive connection between ROA and the likelihood of CSR disclosure in Vietnamese commercial banks.

A bank's primary capacity to generate revenue and its operational effectiveness in handling interest-based operations are both reflected in its NIM. A bank's capacity to invest in CSR and raise the transparency of such initiatives may be improved by a higher NIM, which indicates improved financial health and stronger earnings from core lending activities. As part of long-term reputation building, efficient banks are more likely to disclose non-financial information, according to earlier research [13], [35]. Thus, the second hypothesis is established.

H2: there is a positive relationship between NIM and the likelihood of CSR disclosure in Vietnamese commercial banks.

3. RESEARCH MODEL

3.1. Data collection and sample

To address the research gap, this study uses a panel dataset of 26 listed banks from 2014 to 2024 to examine the impact of FP on CSR in Vietnamese commercial banks. In order to investigate the factors that influence CSR disclosure among Vietnamese commercial banks from 2014 to 2024, this study uses panel data and a quantitative research design. An unbalanced panel of 26 Vietnamese commercial banks covering the years 2014 to 2024 makes up the dataset. The study gathers information from Vietnamese commercial banks' annual reports. This is the official source of data, which has been examined by a separate auditing firm. The community can receive information through this official channel [36]. The most widely used and significant instrument for revealing CSR data is the annual report. The degree of disclosure in annual reports, which serves as the foundation for evaluating the volume and caliber of CSR activities, is gauged by the disclosure index [28]. According to earlier research, CSR disclosure is regarded as a binary dependent variable, with a value of "1" if a bank discloses CSR-related information in its annual report or sustainability report and "0" otherwise [12]. This operationalization aligns with earlier empirical research conducted in the banking sector [12], [30]. Seven factors are taken into consideration and used to calculate CSR: i) contributions to the health and education sectors; ii) natural disaster relief efforts; iii) other donations; iv) employee activities; v) environmental issues; vi) products and services, and vii) statements. Based on the research of [37] and the current state of listed banks in Vietnam, these factors have been synthesized.

3.2. Empirical model specification

Because the dependent variable in this study is binary, a logistic regression model is used to estimate the likelihood that a bank will disclose CSR information. This model has the formal specification as in (1).

$$CSR_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 NIM_{it} + \beta_3 TA_{it} + \beta_4 LDR_{it} + \beta_5 EA_{it} + \beta_5 EA_{it} + \in_{it} \qquad (1)$$

Where:
− CSR is a binary dependent variable in this model that indicates whether bank i discloses CSR information. If CSR is disclosed, the value is 1, and if not, it is 0.

− The ROA of bank *i* is a metric used to assess overall profitability.
− The NIM is a measure of the bank's operational effectiveness and lending revenue.
− TA serves as a stand-in for TA and represents the natural logarithm of TA.
− The LDR measures the bank's exposure to credit risk and liquidity position.
− The EA measures the bank's level of capital adequacy and financial resilience.
− The time period is denoted by *t*, and the specific bank is indicated by the subscript *i*.

The model accounts for firm-specific factors that could affect CSR engagement in addition to FP, such as bank size (TA), LDR, and EA. Each bank's capital strength, liquidity position, and institutional visibility are captured by these variables, which have all been found in previous research to be significant predictors of CSR disclosure behavior [32], [35]. For the regression model, three widely used methods are pooled ordinary least squares (OLS), fixed effects model (FEM), and random effects model (REM). However, the OLS model does not account for the unique characteristics of each bank, a limitation that FEM and REM overcome. Therefore, this study employs both FEM and REM, and after conducting a Hausman test, the appropriate model is selected. Figure 1 shows the research model.
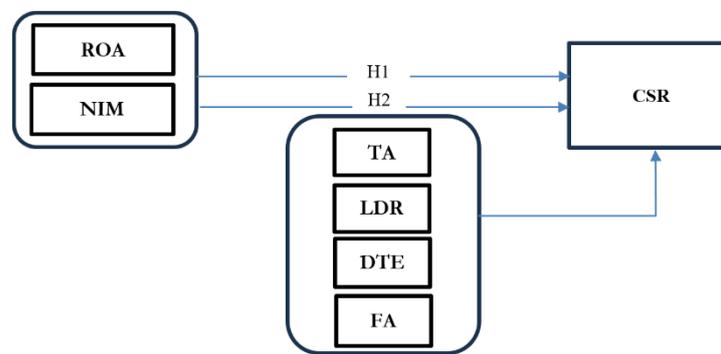

Figure 1. Research model

3.3. Variables and measurement

Table 1 shows that the dependent variable in this research model, CSR, is a binary variable that represents the probability that banks will disclose their CSR. The two primary independent variables that represent the bank's FP are ROA and NIM. Included as control variables are TA, LDR, and EA, which are frequently used in banking research to take into consideration the effects of capital adequacy, liquidity, and bank size, respectively. Based on theoretical reasoning and previous empirical literature, the symbols "+" or "±" in the "expected sign" column indicate the predicted direction of each variable's impact on CSR disclosure.

Table 1. Variables definitions

Variable	Symbol	Measurement/description	Expected sign	Source
i) Dependent variables				
CSR disclosure	CSR	Dummy variable: 1 = Bank discloses CSR info in annual/sustainability reports; 0 = otherwise	−	[12], [30]
ii) Independent variables				
Return on assets	ROA	Net income/TA (%)	+	[12], [30]
Net interest margin	NIM	(Interest income – Interest expense)/learning assets (%)	+	[31]
iii) Control variables				
Bank size	TA	Natural logarithm of TA	+	[32]
Loan to deposit	LDR	Total loans/total deposits (%)	±	[35]
Debt to equity	DTE	Total loans/total deposits (%)	±	[35]
Equity to asset	EA	Total equity/TA (%)	+	[12]

4.   RESULTS

Descriptive statistics of the variables are shown in Table 2. The findings indicate that CSR scores vary between 0 and 7, with an average of 4. 6. The average bank size (TA) is 8. 2, with a standard deviation of 0. 49. The average ROA is 0. 03, ranging from a low of -0. 0478 to a high of 0. 79 (Table 2). The correlation coefficient is higher between total CSR and TA (0. 441), indicating a strong relationship, and weakest with LDR (0. 0349), as shown in Table 3.

Table 2. Descriptive statistics of the variables used

Variables	Obs	Medium	Sd	Min	Max
CSR	286	4.653846	1.667786	0	7
TA	286	8.259631	0.4963164	7.199298	9.521
DTE	286	0.9408338	0.5082066	0.0933161	9.450047
LDR	286	0.9121636	0.1599119	0.3632857	1.428194
EA	286	0.086575	0.0310153	0.0318024	0.2202968
ROA	286	0.0316283	0.0992586	-0.0478	0.79
NIM	286	0.0309026	0.013235	-0.0189	0.0933

Source: author's calculations from financial reports (2014-2024) using Stata 17

Table 3. Correlation matrix

Variables	TotalCSR	TA	DTE	LDR	EA	ROA	NIM
TotalCSR	1						
TA	0.441	1					
DTE	0.0453	-0.0158	1				
LDR	0.0393	0.3557	-0.018	1			
EA	-0.0797	-0.2486	-0.1162	0.2388	1		
ROA	-0.0437	-0.2913	-0.0278	0.0291	0.2099	1	
NIM	0.0518	0.3623	-0.0508	0.5356	0.3244	0.0594	1

Source: author's calculations from financial reports (2005-2019) using Stata 17

4.1. Multicollinearity test

The research uses variance inflation factor (VIF) to test multicollinearity. This is a crucial diagnostic tool used in regression analysis to assess multicollinearity, which occurs when independent variables in a model are highly correlated with each other. A high VIF indicates that a variable is highly predictable from the others, suggesting potential redundancy and the possibility of unstable regression coefficients. The test results show that the VIF values are all under 10, indicating no multicollinearity in the model in Table 4.

Table 4. Multicollinearity test

Variable	VIF	1/VIF
NIM	2.34	0.42698
TA	1.96	0.510552
LDR	1.57	0.635271
EA	1.5	0.665428
ROA	1.21	0.827308
DTE	1.04	0.959886
Mean VIF	1.57	

Source: 2005-2019 financial statements and calculations by the author using Stata 17

4.2. OLS regression model results

Tables 5 to 7 display the regression results for the three models: OLS, FEM, and REM. Specifically, Table 5 shows the regression results of the OLS model. It is widely used due to its simplicity and efficiency in estimating linear relationships. However, the OLS model is not suitable for panel data, especially when the model exhibits autocorrelation and heteroskedasticity. Therefore, the study continues to run REM and FEM models.

Table 5. Results of regression model for OLS

TotalCSR	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
TA	-0.20055	0.5692401	-0.35	0.725	-1.321646	0.9205457
DTE	0.0143538	0.1675536	0.09	0.932	-0.3156365	0.344344
LDR	0.2424746	0.9491221	0.26	0.799	-1.626784	2.111733
EA	15.31613	5.084217	3.01	0.003	5.302966	25.32929
ROA	0.1027491	1.179797	0.09	0.931	-2.220815	2.426313
NIM	-5.560597	16.83175	-0.33	0.741	-38.71006	27.58886
_cons	4.443973	4.256126	1.04	0.297	-3.938298	12.82624

Firstly, the study estimates the FEM, which controls for unobservable, time-invariant characteristics by allowing each entity to have its own intercept. Therefore, the model focuses on within-entity variation over time. The FEM results reported in Table 6 indicate that only EA has a positive and statistically significant effect on CSR at the 1% level (p =0.003).

Table 6. Results of regression model for FEM

TotalCSR	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
TA	-0.20055	0.5692401	-0.35	0.725	-1.321646	0.9205457
DTE	0.0143538	0.1675536	0.09	0.932	-0.3156365	0.344344
LDR	0.2424746	0.9491221	0.26	0.799	-1.626784	2.111733
EA	15.31613	5.084217	3.01	0.003	5.302966	25.32929
ROA	0.1027491	1.179797	0.09	0.931	-2.220815	2.426313
NIM	-5.560597	16.83175	-0.33	0.741	-38.71006	27.58886
cons	4.443973	4.256126	1.04	0.297	-3.938298	12.82624

The next step is to conduct research using REM model, which assumes that unobserved individual effects are random and uncorrelated with the explanatory variables. The REM results reported in Table 7 show that TA and EA have positive and statistically significant effects on CSR. These effects are significant at the 1% and 5% levels, respectively ($p = 0.003$ and $p = 0.022$).

Table 7. Results of regression model for REM

TotalCSR	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
TA	1.50842	0.3326311	4.53	0.000	0.8564747	2.160365
DTE	0.1153934	0.1671708	0.69	0.490	-0.2122554	0.4430421
LDR	-1.169273	0.7737309	-1.51	0.131	-2.685757	0.347212
EA	9.567336	4.17835	2.29	0.022	1.377921	17.75675
ROA	1.22326	1.06808	1.15	0.252	-0.8701378	3.316658
NIM	-14.16444	12.62634	-1.12	0.262	-38.9116	10.58273
_cons	-7.455042	2.561172	-2.91	0.004	-12.47485	-2.435237

The Hausman test is then performed to select the appropriate model. The results show that the P-value of the Hausman test is less than 0.05, so the FEM is selected for further testing.

−   Autocorrelation test: modified Wald test for groupwise heteroskedasticity in fixed effect regression model.

$H0: sigma(i)^2 = sigma^2 \ for \ all \ i$
$Chi2\ (26) = 79992.79$
$Prob > chi2 = 0.0000$

The result indicates that the P-value of the test is 0.000, smaller than 0.05, suggesting the model exhibits autocorrelation.

−   Variance change test: wooldridge test for autocorrelation in panel data.

$H0: no \ first - order \ autocorrelation$
$F(1, \quad 25) = 15.225$
$Prob > F = 0.0006$

The result indicates that the P-value of the variance change test is 0.0006, smaller than 0.05, suggesting the model exhibits variance change.

Thus, the study adjusts the coefficients as follows. Table 8 shows that TA has a strong positive and statistically significant effect on Total CSR at the 1% level, indicating that bank size plays an important role in developing CSR. Meanwhile, LDR and NIM display significant negative impacts, suggesting that higher liquidity pressure and interest margins may constrain CSR. In contrast, EA and ROA show positive and statistically significant coefficients, implying that stronger equity and profitability support higher CSR performance. Finally, DTE is not statistically significant in this model. The study summarizes the data in Table 9 based on the aforementioned findings. This includes specifying the direction of impact, statistical significance, and P-value.

Table 8. Results of regression model

TotalCSR	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
TA	1.992044	0.2409819	8.27	0.000	1.519729	2.46436
DTE	0.1888145	0.1716377	1.1	0.271	-0.1475893	0.5252183
LDR	-1.506785	0.6705062	-2.25	0.025	-2.820953	-0.1926172
EA	7.477381	3.377824	2.21	0.027	0.8569675	14.0978
ROA	1.880405	0.9465881	1.99	0.047	0.0251262	3.735683
NIM	-23.58536	9.881811	-2.39	0.017	-42.95335	-4.217366
_cons	-10.58726	1.950749	-5.43	0.000	-14.41065	-6.763858

Table 9. Summary of results

Variables	Total CSR model		
	Impact	Significance level (%)	P_value
ROA	+	5	0.047
NIM	-	5	0.017
TA	+	1	0.000
DTE	None	None	-
LDR	-	5	0.025
EA	+	5	0.027

4.3. Total CSR dependent variable model

The coefficient of the TA variable shows a positive effect on CSR with a P-value smaller than 1%. The result indicates that an increase in bank size will enhance CSR activities.

- The coefficient of the debt to equity (DTE) variable shows no impact on CSR.
- The coefficient of the LDR variable shows a negative effect on CSR with a significance level of 5%. This result suggests that if commercial banks do not control their LDR increases, CSR will decrease.
- The coefficient of the EA variable shows a positive effect on CSR with a significance level smaller than 5%. This shows that maintaining or increasing the EA ratio will increase the CSR activities of the commercial banks in the sample.
- The coefficient of the ROA variable shows a positive effect on CSR with a significance level of 5%. This result suggests that ROA helps to increase CSR activities.
- The coefficient of the NIM variable shows a negative effect on CSR with a significance level of 5%. This indicates that the margin between lending and borrowing activities tends to decrease CSR.

Additionally, Figure 2 analyzes the quality of social responsibility information disclosure for 26 banks from 2014 to 2024. The average CSR of the banks in the sample is shown in Figure 2. Although there have been numerous fluctuations in the CSR of Vietnamese commercial banks over the past 11 years, as the above diagram illustrates, no significant change has occurred. In particular, ROA has an effect on growing CSR practices, while NIM has a negative effect on commercial banks' use of CSR. This result is in line with the data from the regression model mentioned above. As a result, it is evident that shareholders, investors, employees, the community, and the environment have all benefited from the overall business results (as determined by the efficiency generated from TA); however, given the outcomes of lending and mobilization activities, there are no particular policies to support the expansion of CSR practices at Vietnamese commercial banks.
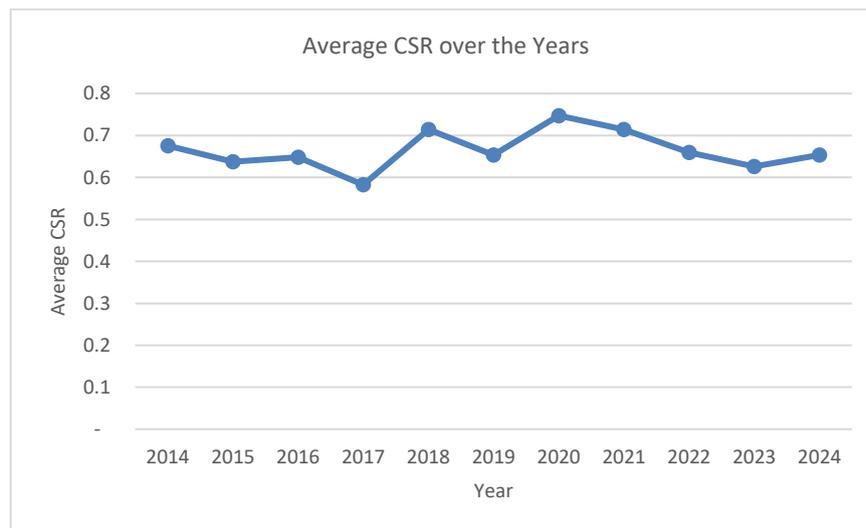

Figure 2. CSR

5.   DISCUSSION

First, the results show that company size has a positive relationship with CSR. Listed banks usually have strong financial capabilities and resources to invest in social and environmental activities. They also

need to maintain brand image and market reputation, which motivates them to engage in CSR activities to improve their corporate image and meet stakeholder expectations. This explains why larger banks tend to have more explicit and robust CSR initiatives. CSR practices depend on bank size, aligning with previous research. Waddock and Graves [24] suggested that larger companies have more resources to invest in CSR and face more pressure from the public, thus increasing their motivation to engage in social activities to protect their image. Similarly, Arora and Dharwadkar [38] on Indian companies stated that larger firms often use CSR to enhance their reputation and gain a competitive edge in the market.

Second, the results suggest that the leverage ratio has no significant impact on CSR. Although the leverage ratio may reflect the financial risk level of the bank, high-leverage banks do not necessarily reduce spending on CSR initiatives. This may suggest that highly leveraged banks can still maintain CSR activities if they have a sound financial strategy and are not under liquidity pressure. The results align with [14], who argued that companies with high debt ratios do not necessarily reduce CSR activities if they have effective capital strategies and are not under immediate liquidity pressure.

Third, regarding the negative impact of the LDR coefficient on CSR, the result indicates that if banks do not properly control the LDR, it will reduce CSR practices. This also serves as a warning for banks to carefully maintain this ratio. When loans exceed deposits, it not only creates risks for the banks but also negatively affects CSR activities. Banks must adjust the proportion of green credit in total lending to ensure the growth of CSR without increasing the LDR [39]. According to this finding, banks should adopt high-quality solutions like improving internal credit rating systems, enhancing the ability of appraisal staff, issuing effective lending policies, and, most importantly, developing internal operating procedures to reduce adverse environmental effects. This is because expanding the loan scale is not the primary factor that motivates banks to increase their CSR practices.

Finally, the main finding of this study is the influence of profitability on CSR. The results reveal a positive relationship between ROA and CSR, while NIM has a negative effect on CSR. This finding is arguably the most significant, showing that, regardless, profit is the ultimate goal in the banking business, balanced by CSR value. The higher the profit from assets, the higher the commitment to social responsibility. This aligns with the previous finding that increased bank size leads to greater CSR activities, where profit increases from asset growth drives the bank to act more responsibly.

Some studies have found a negative relationship between profitability, ROE, and CSR [25]. This suggests that managers might view CSR as a cost that reduces short-term profits, thus deprioritizing it when business performance is high. This implies that banks may focus more on maximizing short-term profits rather than pursuing sustainable development strategies. The negative effect of NIM on CSR suggests that, in terms of interest income and expense, they do not contribute to enhancing the community activities of listed banks. This suggests that CSR is driven more by the non-interest activities of banks, such as investments in digital services and minimizing environmental and social impacts, which are receiving increasing attention from listed banks.

6.   CONCLUSION

The study highlights that in the banking sector, financial factors like company size and profitability significantly affect CSR, while the leverage ratio DTE has no impact. This may reflect that large bank, with strong financial resources, can easily implement CSR initiatives to maintain their brand reputation and satisfy stakeholder expectations. However, banks need to focus on promoting environmental and social activities in credit financing, such as increasing green credit and supporting projects that positively impact the environment, in order to build a sustainable CSR strategy. Additionally, the research contributes to the understanding of the factors influencing CSR practices in Vietnam's banking sector and emphasizes that to promote effective CSR activities, banks must optimize their size and profitability while developing CSR strategies linked to green credit growth and expanding non-interest activities like digital banking. The study also opens up new avenues for further research, such as examining the relationship between business risks and CSR or assessing the impact of macroeconomic factors on CSR strategies in the banking sector.

AUTHOR CONTRIBUTIONS STATEMENT

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Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
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C : **C**onceptualization	I : **I**nvestigation	Vi : **Vi**sualization
M : **M**ethodology	R : **R**esources	Su : **Su**pervision
So : **So**ftware	D : **D**ata Curation	P : **P**roject administration
Va : **Va**lidation	O : Writing - **O**riginal Draft	Fu : **Fu**nding acquisition
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CONFLICT OF INTEREST STATEMENT
Authors state no conflict of interest.

DATA AVAILABILITY
The authors confirm that data supporting the findings of this study are available within the article.

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