




“How environmental and social responsibility bolster financial stability in the banking sector: Evidence from Vietnam”

AUTHORS	Ngoc Mai Tran  Manh Ha Tran 
ARTICLE INFO	Ngoc Mai Tran and Manh Ha Tran (2025). How environmental and social responsibility bolster financial stability in the banking sector: Evidence from Vietnam. <i>Banks and Bank Systems</i> , 20(3), 1-12. doi: 10.21511/bbs.20(3).2025.01
DOI	http://dx.doi.org/10.21511/bbs.20(3).2025.01
RELEASED ON	Tuesday, 08 July 2025
RECEIVED ON	Wednesday, 12 February 2025
ACCEPTED ON	Friday, 27 June 2025
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Banks and Bank Systems"
ISSN PRINT	1816-7403
ISSN ONLINE	1991-7074
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

43



NUMBER OF FIGURES

0



NUMBER OF TABLES

6

© The author(s) 2025. This publication is an open access article.


BUSINESS PERSPECTIVES


LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 12th of February, 2025

Accepted on: 27th of June, 2025

Published on: 8th of July, 2025

© Ngoc Mai Tran, Manh Ha Tran, 2025

Ngoc Mai Tran, Ph.D., Faculty of
Finance, Banking Academy of Vietnam,
Vietnam. (Corresponding author)

Manh Ha Tran, Ph.D., Academic Affairs
Department, Banking Academy of
Vietnam, Vietnam.

Ngoc Mai Tran (Vietnam), Manh Ha Tran (Vietnam)

HOW ENVIRONMENTAL AND SOCIAL RESPONSIBILITY BOLSTER FINANCIAL STABILITY IN THE BANKING SECTOR: EVIDENCE FROM VIETNAM

Abstract

The implementation of corporate social responsibility (CSR) has evolved significantly in recent years, shifting from philanthropic objectives to strategic integration in Vietnam. The Government has determined the transition toward a green economy, highlighting the role of the banking industry in promoting green credit. However, adopting CSR requires a comprehensive understanding of its impact and whether it is merely a compliance cost or a strategic tool for enhancing financial stability. This study, therefore, examines the impact of CSR on the financial stability of listed commercial banks in Vietnam. Using an aggregate CSR index and its two specific dimensions, environmental and social, constructed through content analysis, the study evaluates their impact on the financial stability measured by the Z-score index. Ordinary least squares, fixed and random effect regression, feasible general least squares regression, and system generalized method of moments are applied to the sample of 19 banks over the period from 2013 to 2022. The findings demonstrate a positive relationship between social and environmental initiatives and financial stability, with the environmental pillar showing a particularly strong effect. Specifically, a 1 percent increase in CSR and environmental indices results in increases of 2.361 and 1.327 units in the Z-score, respectively. Eco-friendly practices in banking enhance financial stability, while the social dimension shows a more nuanced impact. The findings of this study provide implications for bank managers and government authorities in developing and promoting CSR practices.

Keywords

sustainable finance, financial stability, banking sector, emerging market

JEL Classification

M14, G32, G21

INTRODUCTION

The financial market in Vietnam is bank-dominated rather than capital market-based, with banks' total assets accounting for approximately 183% of GDP and about 92% of total financial institutions' assets (World Bank, 2014). Commercial banks are the primary source of finance for businesses, including large, small, and medium enterprises, performing their critical roles in funding working capital, investment, and long-term expansion. In the context of national green growth and sustainable development, the importance of the banking industry has become even more pronounced. Several decrees and directives have been implemented to support this strategy, such as Decision No. 1658/QD-TTg on the National Strategy for Green Growth for the 2021–2030 period, Directive No. 03/CT-NHNN for promoting sustainable practices in banking, and Decision No. 1408/QD-NHHH requiring banks to implement and support environmental sustainability, social equality and a green economy. Banks are expected to play a pivotal role in the transition toward a greener and sustainable economy, not only be-



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.



Conflict of interest statement:

Author(s) reported no conflict of interest

cause of their size but also due to their indirect impact through credit allocation. Banks can prioritize sustainable projects, direct businesses toward greener practices, and accelerate greater responsibility among the business community. This creates dual roles for banks, as both the agents and active entity, and the need for examining the impact of CSR – external activities – on internal financial stability.

Corporate social responsibility is a holistic concept used to express any actions businesses undertake beyond profit generation to contribute to sustainable development (OECD). Corporate social responsibility (CSR) has gained increasing attention from corporate managers, investors, and regulatory authorities (Brooks & Oikonomou, 2018; Xu & Lee, 2019). Numerous studies have been conducted to examine the impact of CSR on firm value (Servaes & Tamayo, 2013; Mishra, 2017; Tsang et al., 2020), financial performance (Bolton, 2013; Hategan et al., 2018), firm risk and cost of capital (Weber et al., 2010; El Ghoul et al., 2011; Bonacorsi, 2024). Most studies focus on non-financial firms in developed countries, which yields conflicting results. In contrast, the role of CSR in developing economies such as Vietnam, especially in the financial sector and financial resilience, remains underexplored.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

CSR has emerged as a key determinant of corporate sustainability. Its relationship with banks has been widely discussed from both theoretical and empirical perspectives. From a theoretical perspective, the impact of CSR has been documented under two main theories, namely shareholder theory (Friedman, 1970) and stakeholder theory (Freeman, 1984). Shareholder theory states that the objective of any business is to maximize wealth for its owners. Therefore, CSR activities are considered non-essential as they impose additional costs on businesses, transferring funds that should be used to invest in profitable projects to CSR activities, which leads to lower efficiency and a higher risk level. On the other hand, stakeholder theory argues that CSR involvement brings about positive impacts by satisfying the well-being and benefits of key stakeholders, reducing transaction costs, and generating financial benefits for firms. It is hypothesized that firms with a high level of CSR involvement will improve their financial performance and stability. To balance the conflicting perspectives of shareholder and stakeholder theories, Jensen (2010) discusses the pros and cons of each theory and proposes a new framework called the enlightened value maximization theory, which is identical to the enlightened stakeholder theory. Jensen (2010) emphasizes that firms cannot maximize firm value in isolation.

The priority is the maximization of firm value through the integration of stakeholder interests, ensuring the needs of employees, customers, suppliers, the environment, and communities are met as a better strategy (Jensen, 2010).

From an empirical perspective, several studies have examined the impact of CSR and ESG on firm risk. The impact can be expressed through two main mechanisms (Boubaker et al., 2020). The first mechanism is the direct positive impact of CSR activities themselves. An increase in CSR activities reduces firm risk through enhanced reputation and a lower risk level (Jo & Na, 2012; Herremans et al., 1993). Firms with strong CSR can benefit from lower idiosyncratic and systematic risks (Mishra & Modi, 2013; Albuquerque et al., 2019) and avoid negative information (Kim et al., 2014). The second mechanism focuses on the indirect impact of CSR on financial health: improved financial conditions. CSR lowers the cost of equity and cost of capital due to brand loyalty, enhanced reputation, and lower default risk (Choi et al., 2014). CSR-focused firms are perceived as stable corporations, with lower firm risk and, therefore, a lower total cost of capital (El Ghoul et al., 2011). Jiraporn et al. (2014) estimate that CSR activities yield an approximately 4.5% increase in credit rating, which can be converted into financial benefits.

Building on existing CSR literature in the corporate sector, research on the banking sector, though relatively limited, has provided valuable insights into the unique impact of CSR on

financial institutions. Brogi and Lagasio (2019) examine the impact of environmental, social, and governance (ESG) factors on the financial performance of large U.S. banks to clarify the differences between financial and non-financial companies. In particular, banks' businesses are more sensitive to reputation and customer confidence; thus, sustainable and ethical actions may have a more significant impact on financial health (Forcadell & Aracil, 2017; Brogi & Lagasio, 2019). Similarly, Jin et al. (2017) report a positive association between social capital and bank stability in the United States of America. Banks located in high-social-capital regions exhibit better performance, improved financing conditions, and lower risk-taking (Hasan et al., 2017). In the European context, Di Tommaso and Thornton (2020) conclude that banks with a high ESG index take on less risk. Hojer and Mataigne (2024) emphasize the excessive risk-taking characteristics of banks, reinforcing the need for effective CSR practices. The authors also highlight the differences between European and Swiss banks. For European banks, CSR reduces risk, whereas for Swiss banks, the impact follows a U-shaped pattern. Hojer and Mataigne (2024) and Di Tommaso and Thornton (2020) also highlight that the relationship between CSR and firm risk varies by country and its specific characteristics. Taken together, despite evidence of variation across contexts, most prior studies consistently highlight the potential positive impact of CSR on the financial stability of banks.

Apart from the impact of overall CSR, previous studies recommend examining specific CSR dimensions due to their distinct impacts (Scholtens, 2008; Chollet & Sandwidi, 2018; Neitzert & Petras, 2022). The environmental pillar includes actions related to environmental policy, environmental management, and environmental considerations in business operations. In the banking industry, it encompasses sustainable investment and lending activities that support environmentally friendly projects. Commitment and implementation toward the environment reduce the perceived risk in the financial market (Sharfman & Fernando, 2008). Selective lending toward environmentally sustainable projects can generate stable cash flows and reduce bank risk (Nandy & Lodh, 2012).

The social pillar is considered to have the same impact. It encompasses different aspects of human resources, customer relations, and community engagement (Siueia et al., 2019). Given that the banking sector is highly dependent on reputation and customer relationships, social and environmental engagement can reduce financial instability (Neitzert & Petras, 2022). However, Scholtens (2008) examines the interaction between social performance and financial performance, including both return and risk level, and concludes that financial performance influences social performance rather than the reverse (Scholtens, 2008). In contrast, Forgione et al. (2020) indicate a negative influence of social and environmental actions on the banking industry across 27 countries. The authors support the shareholder theory and argue that the impact of CSR depends on institutional contexts. Neitzert and Petras (2022) confirm this finding for a sample of 582 banks worldwide and suggest that only environmental activities serve as risk mitigation. Environmental engagement not only reduces a bank's risk but also the risk of its customers, while the impact of the social pillar is ambiguous.

Given this theoretical support and empirical evidence above, this study aims to assess the impact of CSR on financial stability in Vietnam's banking industry to provide further empirical evidence in an emerging country context. It aims to clarify the inconclusive results between CSR and financial risk in previous studies (Barnett, 2007; García-Benau, 2021; Hojer & Mataigne, 2024) and provides timely empirical evidence on how government-led CSR promotion affects banks' financial stability. Three hypotheses to test the relationship between CSR and bank stability are formulated as follows:

- H1: Aggregate CSR improves banks' financial stability.*
- H2: The environmental dimension of CSR has a statistically significant effect on a bank's stability.*
- H3: The social dimension of CSR has a statistically significant effect on a bank's stability.*

2. METHODS

The study uses a quantitative approach to examine the CSR-stability relationship of listed banks on the Vietnam stock exchange. In this methodology, the sample and data collection are first demonstrated, then the construction of key variables is described. Next is the model specification and estimation technique.

As for the sample, there are a total of 45 banks, but some were merged with others or acquired by the State Bank of Vietnam, and some are fully foreign-owned banks; thus, there are 19 listed banks in the sample (Table A1 of Appendix A). Data for these banks are collected from FIINPRO, a financial database provider in Vietnam, for a period of 9 years from 2013 to 2022. The year 2013 is chosen as the starting year to avoid the impact of the global financial crisis and to capture the effects during the post-restructuring phase in the banking industry, marked by the issuance of Decision 254/QD-TTg in 2012.

2.1. Measures of a bank's CSR

While data on financial variables are collected from FIINPRO, data on banks' CSR are not available there. A literature review shows a popular method of collecting CSR information: sourcing from rating agencies such as the MSCI ESG or Refinitiv ESG databases. However, due to the unavailability of data for Vietnamese banks from these sources during the entire period of 2013–2022, this study follows Siueia et al. (2019), using content analysis to construct CSR variables. This method has several advantages: it is repeatable and flexible, allowing researchers to summarize the intrinsic value of the information without bias (Cascio & Aguinis, 2008). Content analysis allows the assessment of CSR strategies and related activities, which fall into different categories and reflect different motivations. This method provides a snapshot for understanding the CSR information and has been successfully applied in management studies (Cascio & Aguinis, 2008; Tate et al., 2010).

Following Albuquerque et al. (2019) and Tran et al. (2025), CSR is measured using information on the environment (called E_index) and social contribution (S_index). Governance information (G) is

considered irrelevant because it is associated with corporate structure, which relates more to corporate management rather than corporate social activities (Li et al., 2023). For banks, S_index represents social commitment, including workplace, human resources, customer support, product, and community responsibility. E_index stands for environmental initiatives such as environmental policy and management, environmental lending support, emissions, and recycling (Li et al., 2023). These 22 criteria are measured following Siueia et al. (2019), assigning a value of 1 if banks are found to be associated with these requirements and 0 otherwise.

The formulas for calculating S_index, E_index, and the overall CSR index are as follows:

$$S_index_{it} = \frac{\sum_1^{16} K_{it}}{16}, \quad (1)$$

$$E_index_{it} = \frac{\sum_1^6 K_{it}}{6}, \quad (2)$$

$$CSR_{it} = \frac{\sum_1^{22} K_{it}}{22}. \quad (3)$$

In which S_index is the average of marks given for 16 criteria related to social dimensions, with each criterion having a value of 1 if it satisfies the requirements; E_index is calculated based on a set of 6 requirements; and CSR index is the aggregate score that combines performance across social and environmental criteria. The higher the index, the greater the social and environmental activities involved, and the higher the CSR index.

2.2. Measures of a bank's stability

The study follows Ramzan et al. (2021) by using the Z-score as a measure of financial stability. The higher the Z-score value, the greater the bank's stability and the lower its financial distress level. The Z-score is calculated as follows:

$$Z_score_{it} = \frac{ROA + \text{capital to asset ratio}}{\text{Standard deviation of ROA}}. \quad (4)$$

The Z-score compares capitalization and returns with the return's volatility. The higher the bank's

Z-score values, the greater the buffer the bank has, meaning that the bank is less likely to experience financial distress.

To measure the impact of a bank’s CSR on the financial stability, this study follows Ramzan et al. (2021) using the benchmark regressions as follows:

$$Z_score_{it} = \alpha_0 + \beta_1 CSR_{it} + \beta_2 Size_{it} + \beta_3 Cap_{it} + \beta_4 Loanr_{it} + \mu_{it}, \tag{5}$$

$$Z_score_{it} = \alpha_0 + \beta_1 S_index_{it} + \beta_2 E_index_{it} + \beta_3 ta_{it} + \beta_4 Cap_{it} + \beta_5 Loanr_{it} + \mu_{it}. \tag{6}$$

The dependent variable is the Z_score as specified above; the explanatory variables are CSR, S_index, E_index, and control variables representing firm size (ta), capital ratio (Cap), and loan ratio (Loanr). Firm size is a logarithmic transformation of total assets, while the capital ratio measures the proportion of equity to total assets, and the loan ratio is measured by the total loans-to-total assets ratio. Pooled regression, fixed effect, and random effects regressions are applied to equations (5) and (6); heteroskedasticity and autocorrelation tests are used to demonstrate the preference for Feasible Generalized Least Squares regression (FGLS) over other regression techniques.

Moreover, studies on bank risks usually reveal a time-persistent trend (Kasman & Carvallo, 2014; Joudar et al., 2023). The use of lagged dependent variables, such as Z_score, is therefore necessary to reflect the dynamic relationship. This leads to the construction of equation (7) as follows:

$$Z_score_{it} = \alpha_0 + \beta_0 Z_score_{it-1} + \beta_1 S_index_{it} + \beta_2 E_index_{it} + \beta_3 ta_{it} + \beta_4 Cap_{it} + \beta_5 Loanr_{it} + \mu_{it}. \tag{7}$$

Generalized Method of Moments (GMM) estimation is used to account for the dynamics of financial stability. When accounting for this dynamic impact, OLS, fixed and random effects regressions are not appropriate; thus, system GMM with level regression and differencing transformation can make the estimation more efficient and accurate.

3. RESULTS AND DISCUSSION

3.1. Descriptive statistics

Descriptive statistics are presented in Table 1, showing mean, standard deviation, minimum, and maximum values. The Z_score value is 16.069 on average, meaning that the listed banks in the sample are generally stable and well-capitalized. The highest value is 43.643, while the lowest is 2.069; the standard deviation is 7.311, showing a noticeable variation across the sample. Some banks may have a high Z_score, indicating greater stability, while others suffer from low values, reflecting mixed resilience levels. The S_index has a mean value of 0.66, varying from 0.188 to 0.875, while the E_index has a mean of 0.477, ranging from 0 to 1. The standard deviations of S_index and E_index are 0.2 and 0.423, respectively, meaning that E_index has a lower average value but experiences greater variability. The aggregate CSR index has a mean value of 0.61, ranging from 0.136 to 0.909. The maximum value of the CSR index is 0.909, meaning that some banks have nearly fully met the criteria for CSR. These banks are highly committed to CSR objectives. Cap has a mean of 8.574, ranging from 3.007 to 22.05, showing that capital takes up about 8.5% of total assets. Loanr is averaged at 0.593, consistent with the common range of 50-70%, showing their reliance on lending activities.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
z score	168	16.069	7.311	2.069	43.643
csr	168	.61	.228	.136	.909
e index	168	.477	.422	0	1
s index	168	.66	.188	.188	.875
ta	168	19.232	.856	17.185	21.332
cap	168	8.574	3.007	3.717	22.05
loanr	168	.593	.132	.225	.977

3.2. Correlation

For pairwise correlation, there is a positive correlation between z_score and e_index, s_index and csr. s_index is positively associated with the z_score, but not significantly. Low correlations between the variables suggest that multicollinearity is not a problem in our models. High correlation ratios between csr and e_index and s_index

Table 2. Pairwise correlations

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) z_score	1.000	–	–	–	–	–	–
(2) csr	0.213 (0.006)	1.000	–	–	–	–	–
(3) e_index	0.255 (0.001)	0.887 (0.000)	1.000	–	–	–	–
(4) s_index	0.141 (0.069)	0.921 (0.000)	0.636 (0.000)	1.000	–	–	–
(5) ta	0.288 (0.000)	0.563 (0.000)	0.527 (0.000)	0.494 (0.000)	1.000	–	–
(6) cap	0.153 (0.048)	0.245 (0.001)	0.179 (0.020)	0.258 (0.001)	–0.044 (0.570)	1.000	–
(7) loanratio	0.271 (0.000)	0.421 (0.000)	0.401 (0.000)	0.365 (0.000)	0.488 (0.000)	0.173 (0.025)	1.000

are not a problem because they are not used in the same models. e_index and s_index are used to replace csr when examining the specific dimensions of CSR.

3.3. Regression results and discussions

As mentioned in the methodology, pooled regression, fixed, and random effect regressions are employed to account for the impact of banks' CSR on their financial stability. To choose the appropriate model, the LM and Hausman tests are used. The Wald test shows that Feasible Generalized Least Squares Regression (FGLS) is preferred over fixed or random effect models due to the problem of heteroskedasticity. Overall, regression results show that CSR has a positive impact on financial stability. The results support Hypothesis 1 that banks

involved in more CSR have better financial health. This is consistent with the findings of Forcadell and Aracil (2017), Hasan et al. (2017), and Brogi and Lagasio (2019), which state that CSR improves reputation and financial performance and provides better financial conditions for businesses, thus lowering the risk and improving their financial stability.

Wald test for regression (5) with the csr variable:

- Modified Wald test for groupwise heteroskedasticity in fixed-effect regression model;
- $H_0: \sigma^2(i) = \sigma^2$ for all i ;
- $\chi^2(17) = 134.61$;
- $\text{Prob} > \chi^2 = 0.0000$.

Table 3. Benchmark regression results for equation (5) with the CSR variable

Variable	(1) – OLS	(2) – FE	(3) – RE	(4) – FGLS
	z_score	z_score	z_score	z_score
csr	.665 (3.101)	5.013*** (1.69)	4.823*** (1.689)	2.361* (1.366)
ta	2.348*** (.869)	.242 (1.022)	.657 (.933)	1.556** (.736)
cap	.268 (.198)	1.244*** (.087)	1.219*** (.088)	1.125*** (.125)
loanr	12.422** (4.981)	4.902* (2.74)	5.694** (2.691)	8.012*** (2.635)
_cons	–34.242** (15.659)	–2.609 (19.515)	– –	–27.631* (14.245)
Observations	168	168	168	168

Note: *** $p < .01$, ** $p < .05$, * $p < .1$. Standard errors are in parentheses.

When it comes to the specific dimensions *e_index* and *s_index*, the coefficients related to *e_index* are positive and statistically significant in all models (Table 4, columns 1-4). This indicates that environmental performance positively influences financial stability. The coefficient of 1.327 in the FLGS model in column (4) of Table 4 means that a 1% increase in *e_index* increases the *z_score* by 1.327 units. The coefficient of *s_index* variable is positive but not statistically significant in the fixed effect (FE), random effect (RE), and FGLS models, meaning that it is impossible to confirm a reliable impact.

Wald test for regression (6) with *e_index* and *s_index* variables:

- Modified Wald test for groupwise heteroskedasticity;
- in fixed effect regression model;
- $H_0: \sigma(i)^2 = \sigma^2$ for all i ;
- $\chi^2(17) = 221.32$;
- $\text{Prob} > \chi^2 = 0.0000$.

When comparing the impact of the environmental pillar with the social pillar, the positive and statistically significant result is that the environmental pillar has a positive impact on the financial stability of commercial banks in Vietnam, while the social pillar does not. The finding is consis-

tent with stakeholder theory, which posits that investment in the environment fosters relationships with stakeholders, improves reputation and customer loyalty, and thus strengthens financial resilience. This is important in the services industry, especially in the banking sector, which heavily relies on trust (Forcadell & Aracil, 2017; Brogi & Lagasio, 2019). Environmental initiatives not only influence banks directly but also have an impact on banks' customers through lending criteria and requirements. Eco-friendly products decrease the ecological cost for bank customers. Lending requirements with environmental considerations encourage the selection of environmentally sustainable projects, which often carry lower default risk. This, in turn, reduces the credit risk associated with banks, contributing to their financial stability (Neitzert & Petras, 2022). However, social engagement does not have a statistically significant impact because it does not directly affect the lending criteria and practices, leaving the credit risk channel ineffective (Neitzert & Petras, 2022). In other words, the study confirms Hypothesis 2, while Hypothesis 3 is rejected.

To confirm the robustness of this relationship, a dynamic panel regression has been employed. System GMM is used to examine the relationship between *e_index*, *s_index*, and *z_score* in equation (7). Column (1) in Table 5 represents the impact of *e_index* and *s_index* alone, while column (2) accounts for the controlled variables. The Hansen test values are 0.245 and 0.263, not statistically significant, indicating the validity

Table 4. Benchmark regression results for equation (6) with *s_index* and *e_index*

Variable	(1) OLS	(2) FE	(3) RE	(4) FGLS
	<i>z_score</i>	<i>z_score</i>	<i>z_score</i>	<i>z_score</i>
<i>s_index</i>	-9.382** (3.927)	3.249 (2.033)	2.669 (2.039)	.064 (1.687)
<i>e_index</i>	5.475*** (1.931)	1.498** (.705)	1.59** (.713)	1.327** (.612)
<i>ta</i>	2.607*** (.851)	.284 (1.039)	.748 (.945)	1.665** (.695)
<i>cap</i>	.358* (.195)	1.243*** (.087)	1.216*** (.088)	1.109*** (.13)
<i>loanr</i>	12.393** (4.853)	5.013* (2.786)	5.939** (2.734)	8.51*** (2.683)
<i>_cons</i>	-34.874** (15.26)	-3.203 (19.731)	-15.34 (19.371)	-28.714** (13.379)
Observations	168	168	168	168

Note: Standard errors are in parentheses. *** $p < .01$, ** $p < .05$, * $p < .1$.

Table 5. Dynamic regression

Variable	(1)	(2)
	z_score	z_score
L.z_score	.899*** (.115)	.786*** (.166)
s_index	.329 (3.914)	-7.558** (3.596)
e_index	2.026*** (.68)	2.07** (.833)
ta	–	–.298 (1.074)
cap	–	.749** (.334)
loanr	–	12.179 (12.313)
_cons	.449 (3.824)	–.384 (18.994)
Observations	168	168
AR(1) test (p-value)	0.011	0.053
AR(2) test (p-value)	0.521	0.407
Hansen test	0.245	0.263

Note: Robust standard errors are in parentheses. *** $p < .01$, ** $p < .05$, * $p < .1$.

of the instruments used in this study. AR(1) and AR(2) in both columns (1) and (2) confirm the absence of second-order correlation and the model's consistency. For the lagged value of z_score, the positive and statistically significant coefficients suggest the persistence of financial stability over time. In other words, financial health in

the previous year greatly influences the current year's stability. The positive and statistically significant coefficients related to e_index in both regressions are consistent with the findings above confirm Hypothesis 2, which posits that environmental responsibility has a positive impact on bank stability.

CONCLUSIONS

This study aims to explore the relationship between CSR and the financial stability of commercial banks in Vietnam. The aggregate CSR index, together with its sub-sections, namely the environmental and social pillars, is employed to evaluate its impact on financial stability measured by the Z-score. The result reveals that CSR is not only beneficial to society but also helps banks remain stable. Its impact can be transmitted through two channels: first, CSR engagements generate a positive impact on customer loyalty and bank reputation, thus improving financial performance and stability. Secondly, it generates an indirect impact through actions toward sustainability, such as better cost of capital and better risk management through stricter lending requirements. This is particularly evident in the positive relationship between the environmental pillar and financial stability. Banks that prioritize eco-friendly projects experience lower credit risk through lending requirements associated with green financing and favorable treatment, which in turn lowers default risks.

The findings provide important implications for commercial banks from the perspectives of managers, regulators, and investors. For commercial bank managers, the results highlight the importance of enhancing CSR in their management strategy. CSR should be considered as a competitive advantage rather than a compliance requirement. For regulatory authorities, the positive impact of CSR in general as well as the environmental pillar in particular raises the need for CSR and environmental encouraging policies. A stricter requirement for CSR reporting can be considered to provide an overall picture of the

banks' environmental and social performance. For investors, the study implies that banks associated with a high degree of CSR, especially environmental initiatives, tend to have better financial stability. When formulating investment strategies, investors should consider the long-term benefits of CSR, in line with the enlightened stakeholder theory, to yield stable returns and sustainable investments.

AUTHOR CONTRIBUTIONS

Conceptualization: Ngoc Mai Tran, Manh Ha Tran.

Data curation: Ngoc Mai Tran.

Formal analysis: Ngoc Mai Tran.

Funding acquisition: Manh Ha Tran.

Investigation: Ngoc Mai Tran, Manh Ha Tran.

Methodology: Ngoc Mai Tran.

Project administration: Manh Ha Tran.

Resources: Ngoc Mai Tran.

Software: Ngoc Mai Tran.

Supervision: Manh Ha Tran.

Validation: Ngoc Mai Tran.

Visualization: Manh Ha Tran.

Writing – original draft: Ngoc Mai Tran.

Writing – review & editing: Manh Ha Tran.

ACKNOWLEDGMENT

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

REFERENCES

- Albuquerque, R., Koskinen, Y., & Zhang, C. (2019). Corporate social responsibility and firm risk: Theory and empirical evidence. *Management Science*, 65(10), 4451-4469. <https://doi.org/10.1287/mnsc.2018.3043>
- Barnett, M. L. (2007). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Academy of Management Review*, 32(3), 794-816. <https://doi.org/10.5465/amr.2007.25275520>
- Bolton, B. J. (2013). *Corporate social responsibility and bank performance*. SSRN. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2277912
- Bonacorsi, L., Cerasi, V., Galfrascoli, P., & Manera, M. (2024). ESG Factors and Firms' Credit Risk. *Journal of Climate Finance*, 6, 100032. <https://doi.org/10.1016/j.jclimf.2024.100032>
- Boubaker, S., Cellier, A., Manita, R., & Saeed, A. (2020). Does corporate social responsibility reduce financial distress risk? *Economic Modelling*, 91, 835-851. <https://doi.org/10.1016/j.econmod.2020.05.012>
- Brogi, M., & Lagasio, V. (2019). Environmental, social, and governance and company profitability: Are financial intermediaries different? *Corporate Social Responsibility and Environmental Management*, 26(3), 576-587. <https://doi.org/10.1002/csr.1704>
- Brooks, C., & Oikonomou, I. (2018). The effects of environmental, social and governance disclosures and performance on firm value: A review of the literature in accounting and finance. *The British Accounting Review*, 50(1), 1-15. <https://doi.org/10.1016/j.bar.2017.11.005>
- Cascio, W. F., & Aguinis, H. (2008). Research in industrial and organizational psychology from 1963 to 2007: Changes, choices, and trends. *Journal of Applied Psychology*, 93(5), 1062. <https://doi.org/10.1037/0021-9010.93.5.1062>
- Chollet, P., & Sandwidi, B. W. (2018). CSR engagement and financial risk: A virtuous circle? International evidence. *Global Finance Journal*, 38, 65-81. <https://doi.org/10.1016/j.gfj.2018.03.004>
- Di Tommaso, C., & Thornton, J. (2020). Do ESG scores effect bank risk taking and value? Evidence from European banks. *Corporate Social Responsibility and Environmental Management*, 27(5), 2286-2298. <https://doi.org/10.1002/csr.1964>
- El Ghouli, S., Guedhami, O., Kwok, C. C., & Mishra, D. R. (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance*, 35(9), 2388-2406. <https://doi.org/10.1016/j.jbankfin.2011.02.007>

12. Forcadell, F. J., & Aracil, E. (2017). European banks' reputation for corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 24(1), 1-14. <https://doi.org/10.1002/csr.1402>
13. Forgione, A. F., Laguir, I., & Stagliano, R. (2020). Effect of corporate social responsibility scores on bank efficiency: The moderating role of institutional context. *Corporate Social Responsibility and Environmental Management*, 27(5), 2094-2106. <https://doi.org/10.1002/csr.1950>
14. Freemann, R. E., & McVea, J. (1984). *A stakeholder approach to Strategic management*. Darden Graduate School of Business Administration University of Virginia. <http://dx.doi.org/10.2139/ssrn.263511>
15. Friedman, M. (1970). The Social Responsibility of Business Is to Increase Its Profits. In Zimmerli, W. C., Holzinger, M., & Richter, K. (Eds.), *Corporate Ethics and Corporate Governance* (pp. 122-126). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-70818-6_14
16. García-Benau, M. A., Gambetta, N., & Sierra-García, L. (2021). Financial risk management and sustainability. *Sustainability*, 13(15), 8300. <https://doi.org/10.3390/su13158300>
17. Hasan, I., Hoi, C. K., Wu, Q., & Zhang, H. (2017). Social capital and debt contracting: Evidence from bank loans and public bonds. *Journal of Financial and Quantitative Analysis*, 52(3), 1017-1047. <https://doi.org/10.1017/S0022109017000205>
18. Hategan, C. D., Sirghi, N., Curea-Pitorac, R. I., & Hategan, V. P. (2018). Doing well or doing good: The relationship between corporate social responsibility and profit in Romanian companies. *Sustainability*, 10(4), 1041. <https://doi.org/10.3390/su10041041>
19. Herremans, I. M., Akathaporn, P., & McInnes, M. (1993). An investigation of corporate social responsibility reputation and economic performance. *Accounting, Organizations and Society*, 18(7-8), 587-604. [https://doi.org/10.1016/0361-3682\(93\)90044-7](https://doi.org/10.1016/0361-3682(93)90044-7)
20. Hojer, A., & Mataigne, V. (2024). CSR in the banking industry: A longitudinal analysis of the impact on financial performance and risk-taking. *Finance Research Letters*, 64, 105497. <https://doi.org/10.1016/j.frl.2024.105497>
21. Jensen, M. C. (2010). Value maximization, stakeholder theory, and the corporate objective function. *Journal of Applied Corporate Finance*, 22(1), 32-42. <https://doi.org/10.1111/j.1745-6622.2010.00259.x>
22. Jin, J. Y., Kanagaretnam, K., Lobo, G. J., & Mathieu, R. (2017). Social capital and bank stability. *Journal of Financial Stability*, 32, 99-114. <https://doi.org/10.1016/j.jfs.2017.08.001>
23. Jiraporn, P., Jiraporn, N., Boeprasert, A., & Chang, K. (2014). Does corporate social responsibility (CSR) improve credit ratings? Evidence from geographic identification. *Financial Management*, 43(3), 505-531. <https://doi.org/10.1111/fima.12044>
24. Jo, H., & Na, H. (2012). Does CSR reduce firm risk? Evidence from controversial industry sectors. *Journal of Business Ethics*, 110, 441-456. <https://doi.org/10.1007/s10551-012-1492-2>
25. Joudar, F., Msatfa, Z., Metwalli, O., Mouabid, M., & Dinar, B. (2023). Islamic financial stability factors: Econometric evidence. *Economies*, 11(3), 79. <https://doi.org/10.3390/economies11030079>
26. Kasman, A., & Carvallo, O. (2014). Financial stability, competition and efficiency in Latin American and Caribbean banking. *Journal of Applied Economics*, 17(2), 301-324. [https://doi.org/10.1016/S1514-0326\(14\)60014-3](https://doi.org/10.1016/S1514-0326(14)60014-3)
27. Kim, Y., Li, H., & Li, S. (2014). Corporate social responsibility and stock price crash risk. *Journal of Banking & Finance*, 43, 1-13. <https://doi.org/10.1016/j.jbankfin.2014.02.013>
28. Li, T., Trinh, V. Q., & Elnahass, M. (2023). Drivers of global banking stability in times of crisis: the role of corporate social responsibility. *British Journal of Management*, 34(2), 595-622. <https://doi.org/10.1111/1467-8551.12631>
29. Mishra, D. R. (2017). Post-innovation CSR performance and firm value. *Journal of Business Ethics*, 140, 285-306. <https://doi.org/10.1007/s10551-015-2676-3>
30. Mishra, S., & Modi, S. B. (2013). Positive and negative corporate social responsibility, financial leverage, and idiosyncratic risk. *Journal of Business Ethics*, 117, 431-448. <https://doi.org/10.1007/s10551-012-1526-9>
31. Nandy, M., & Lodh, S. (2012). Do banks value the eco-friendliness of firms in their corporate lending decision? Some empirical evidence. *International Review of Financial Analysis*, 25, 83-93. <https://doi.org/10.1016/j.irfa.2012.06.008>
32. Neitzert, F., & Petras, M. (2022). Corporate social responsibility and bank risk. *Journal of Business Economics*, 92(3), 397-428. <https://doi.org/10.1007/s11573-021-01069-2>
33. Ramzan, M., Amin, M., & Abbas, M. (2021). How does corporate social responsibility affect financial performance, financial stability, and financial inclusion in the banking sector? Evidence from Pakistan. *Research in International Business and Finance*, 55, 101314. <https://doi.org/10.1016/j.ribaf.2020.101314>
34. Scholtens, B. (2008). A note on the interaction between corporate social responsibility and financial performance. *Ecological Economics*, 68(1-2), 46-55. <https://doi.org/10.1016/j.ecolecon.2008.01.024>
35. Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. *Management Science*, 59(5), 1045-1061. <https://doi.org/10.1287/mnsc.1120.1630>
36. Sharfman, M. P., & Fernando, C. S. (2008). Environmental risk management and the cost of capital. *Strategic Management*

- Journal*, 29(6), 569-592. <https://doi.org/10.1002/smj.678>
37. Siueia, T. T., Wang, J., & Deladem, T. G. (2019). Corporate Social Responsibility and financial performance: A comparative study in the Sub-Saharan Africa banking sector. *Journal of Cleaner Production*, 226, 658-668. <https://doi.org/10.1016/j.jclepro.2019.04.027>
 38. Tate, W. L., Ellram, L. M., & Kirchhoff, J. F. (2010). Corporate social responsibility reports: a thematic analysis related to supply chain management. *Journal of Supply Chain Management*, 46(1), 19-44. <https://doi.org/10.1111/j.1745-493X.2009.03184.x>
 39. Tran, N. M., Do, T. M. A., & Bui, N. P. (2025). Do Environmental or Social Initiatives Benefit Banks More? Evidence from Vietnam's Banking Sector. *International Journal of Sustainable Development & Planning*, 20(3). <https://doi.org/10.18280/ijstdp.200331>
 40. Tsang, A., Hu, W., & Li, X. F. (2020). CSR and firm value: A comparative study of CSR performance measures. *China Accounting and Finance Review, Forthcoming*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3709340
 41. Weber, O., Scholz, R. W., & Michalik, G. (2010). Incorporating sustainability criteria into credit risk management. *Business Strategy and the Environment*, 19(1), 39-50. <https://doi.org/10.1002/bse.636>
 42. World Bank. (2014). *Financial sector assessment: Vietnam*. World Bank. Retrieved from <https://hdl.handle.net/10986/20583>
 43. Xu, L., & Lee, S. H. (2019). Tariffs and privatization policy in a bilateral trade with corporate social responsibility. *Economic Modelling*, 80, 339-351. <https://doi.org/10.1016/j.econmod.2018.11.020>

APPENDIX A

Table A1. List of banks in the study

Source: Author's compilation.

No.	Bank
1	Asia Commercial Joint Stock Bank
2	BacA Joint Stock Commercial Bank
3	Ho Chi Minh City Development Joint Stock Commercial Bank
4	Joint Stock Commercial Bank for Foreign Trade of Vietnam
5	Joint Stock Commercial Bank for Investment and Development of Vietnam
6	Lien Viet Post Joint Stock Commercial Bank
7	Military Commercial Joint Stock Bank
8	National Citizen Bank
9	Orient Commercial Joint Stock Bank
10	Saigon – Hanoi Commercial Joint Stock Bank
11	Saigon Thuong Tin Commercial Joint Stock Bank
12	South East Asia Joint Stock Commercial Bank
13	TienPhong Commercial Joint Stock Bank
14	Viet Nam Technological and Commercial Joint Stock Bank
15	Vietnam Commercial Joint Stock Bank for Private Enterprise
16	Vietnam Export Import Commercial Joint Stock Bank
17	Vietnam International Commercial Joint Stock Bank
18	Vietnam Joint Stock Commercial Bank of Industry and Trade
19	Vietnam Maritime Commercial Joint Stock Bank