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Corporate social responsibility and financial performance in the banking industry: a comparative study of Australia and Vietnam

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Abstract

While investigating the financial implications of corporate social responsibility (CSR) is important for all kinds of enterprises, such an examination is crucial for firms operating in the banking industry given their essential role in boosting economic development in any nation. Therefore, this study aims to examine the relationship between CSR and financial performance in a sample of banks in Australia and Vietnam. Content analysis was employed to evaluate CSR information and multivariate regressions were used to assess the financial effects of CSR practices. The research findings show a significantly positive association between CSR and financial performance. Moreover, this positive relationship is more pronounced among Vietnamese banks than among their Australian counterparts. Our empirical evidence remains unchanged in a battery of robustness tests. Consequently, these findings have practical implications for commercial bank managers, policymakers, and investors.

Keywords: Corporate social responsibility, Financial performance, Banking industry, Australia, Vietnam

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1. Introduction

Corporate social responsibility (CSR) is a concept that reflects corporate integration of social and environmental issues in their business activities and their interaction with their stakeholders voluntarily (Kitzmueller and Shimshack, 2012). In constantly changing business environments, CSR has become a global phenomenon that draws great attention from businesses, policymakers, and investors. Parallel to such burgeoning interest, researchers have attempted to evaluate the financial impacts of CSR. However, the CSR-financial performance (FP) relationship is still debatable due to a lack of agreement in both theoretical lens and empirical findings. Proponents of stakeholder theory (Freeman, 1984) assert that CSR increases FP because CSR leads to stakeholder satisfaction, improves intangible assets, enhances competitive advantages, and mitigates firm risk (Clarkson, 1995; Surroca *et al.*, 2010; Jo and Na, 2012). In contrast, supporters of agency theory (Friedman, 1970) consider CSR activities as irrational use of corporate slack resources which should have been invested in more profitable projects, thereby deteriorating firms' profitability (Devinney, 2009; Liao *et al.*, 2018).

Moreover, the CSR literature has mainly focused on non-financial firms without adequate attention to financial firms despite the essential role of the financial sector in a country's economic development (Esteban-Sanchez, 2017). Although some CSR scholars began to empirically examine the financial effects of CSR engagement, their results so far have been inconclusive. For instance, within the limited body of CSR literature in the banking sector, the association between CSR and FP is reported to be insignificant by Soana (2011), positive by Wu and Shen (2013) and Bui (2021), or negative by Nguyen (2018). Esteban-Sanchez et al. (2017) find varying financial impacts of different CSR components. The paucity of CSR studies in the banking sector could be attributed to the fact that banks are commonly perceived as causing little direct influence on the natural environment and society. The banking industry is considered one of the first to adopt CSR (Esteban-Sanchez et al., 2017). CSR practices gaining ground within the banking industry include employee development, community relations, and green credit. In addition, banks indirectly impact CSR engagement by firms operating in other sectors because of the banks' lending and investment policies (Branco and Rodrigues, 2006). Given the vital role of the banking industry in promoting sustainable development, the underexplored relationship between CSR and bank profitability deserves further investigation.

Employing a research sample of 13 listed commercial banks in Vietnam and 10 listed commercial banks in Australia, this study examines the impact of CSR on FP in commercial banks and compares this relationship between Australia and Vietnam. Australia and Vietnam are the focus of this study because these countries represent different economic development, politics, and culture that might be expected to moderate the CSR-FP relationship. Australia has a developed Western-style capitalist economy with a GDP of 1.33 trillion in 2020 USD (Data Bank - World Bank, 2021). Common law is practiced in this country and Australian culture is characterized by a high level of individualism. In the case of Vietnam, the country is known as one of the most dynamic emerging economies in Asia, whose GDP per capita

increased 2.7 times over the period 2002-2020 (World Bank, 2021). The Vietnamese stock market has experienced substantial growth. There are more than 700 firms listed on the Vietnamese stock market and the market capitalization was about 69% of the country's GDP in 2020 (Trading Economics, 2021). However, the market is managed by a relatively weak governance mechanism (Nguyen *et al.*, 2017). Vietnam follows the civil law system and has a collectivist culture. While CSR is still a relatively new concept in Vietnam (Nguyen and Trinh, 2020), Australia has a long history of CSR practices (Higgins *et al.*, 2015). These differences motivate us to implement this empirical analysis.

The paper is organized as follows. The next section critically reviews the relevant literature and develops hypotheses. Section 3 explains our research design. Empirical results and discussion are presented in section 4. The final section concludes the paper.

2. Literature review and hypothesis development

CSR has gained popularity in the corporate world, nonetheless criticisms and debates continue regarding whether it is appropriate for firms to devote their scarce resources to improving societal well-being. Previous reviews and meta-analyses in the CSR-FP literature indicate an equivocal relationship. For example, Margolis and Walsh (2003) review 127 empirical studies published between 1972 and 2002 and reveal that the results of these studies are mostly inconclusive. A review by Peloza (2009) identifies 128 academic papers on the CSR-FP relationship from 1972 to 2008 and reports that 59% of these studies show a positive relationship, 27% a mixed relationship, and 14% a negative relationship. Lu *et al.* (2014) review 84 empirical studies on the CSR-FP nexus published between 2002 and 2011 and conclude that this linkage is a line of inquiry that remains inconclusive.

Consistent with these reviews and meta-analyses, more recent empirical work provides ambiguous findings on the relationship between CSR and FP. Using a sample of the largest 3,000 US-listed firms over 2003-2009, Di Giuli and Kostovetsky (2014) document that an increase in CSR is associated with declines in FP measured by stock returns and return on assets (ROA). Focusing on the Fortune 500 firms in the 1996-2006 period, Masulis and Reza (2015) investigate CSR practices in the form of corporate philanthropy as an important manifestation of discretionary corporate expenditures. They report two main findings. First, as corporate charitable contributions increase, shareholders' valuation of corporate cash holdings reduces. Second, corporate philanthropy is positively (negatively) related to executive charity preferences (executive shareholdings and the quality of corporate governance). They interpret their findings as supportive of agency theory, which considers corporate philanthropy as a misuse of firm resources that destroys firm value. Similarly, Kruger (2015) also shows that investors in the U.S. respond negatively to positive CSR events which can reflect agency problems. Based on a sample of 67 top international contractors, Liao et al. (2018) seek to clarify the financial effect of CSR in the 2009-2014 period. Their results show a negative relationship between CSR and FP. In contrast, several empirical studies report a positive impact of CSR on FP. Gregory et al. (2014) examine the influence of CSR on firm value in U.S. firms over the period 1992-2009 and document that

better CSR results in higher firm value, mainly through the positive effect of CSR on long-term growth. Also, using a sample of U.S. firms from 1993-2009, Harjoto and Jo (2015) report a positive link between CSR and firm value. This result is consistent with Gregory *et al.* (2014). However, when disaggregating CSR into legal CSR (i.e., CSR required by law) and normative CSR (i.e., voluntary CSR), Harjoto and Jo (2015) find a differential impact on firm value. Specifically, legal CSR contemporaneously increases firm value, while the positive effect of normative CSR is only realized after a one-year lag. Other evidence of the positive association between CSR and firm value for U.S. firms during 1998-2011 is documented by Harjoto and Laksmana (2018), who identify the impact of CSR on risk-taking as a mechanism through which CSR influences firm value.

Despite a large body of CSR research, little is known about the financial implications of CSR engagement in the banking industry. Soana (2011) presents one of the first studies to investigate the correlation between CSR and FP using a cross-sectional sample of both international and Italian banks. This author finds that there is no significant association between CSR and FP. Wu and Shen (2013) go beyond a correlation analysis by utilizing regression models that directly explore the banking sector's CSR-FP association. Using an international sample of banks from 2003 to 2009, their results indicate that CSR positively relates to bank profitability measured by ROA, return on equity (ROE), net interest and non-interest income. Focusing on the U.S. banks, Cornett et al. (2016) examine the CSR-FP linkage over the 2003-2013 period. Their findings show that socially responsible banks have better FP. Based on a sample of international banks over the 2005-2010 period in 22 countries, Esteban-Sanchez et al. (2017) analyze financial impacts of CSR components, namely employee relationships, corporate governance, product responsibility, and community relations. Particularly, they report that banks with better employee relationships and corporate governance are financially rewarded. However, the financial benefit of corporate governance is negatively moderated during the crisis. Their study does not document any significant relationship between product responsibility and FP. Regarding community relations, Esteban-Sanchez et al. (2017) show that better relations with community are associated with higher FP.

More recently, several scholars have conducted content analysis to investigate the financial effects of CSR. For example, Platonova *et al.* (2018) examine the CSR-FP relationship for Islamic banks in the Gulf Cooperation Council countries between 2000 and 2014. The result reveals a positive relationship between CSR and FP. Nonetheless, their further analysis testing the financial effects of different CSR dimensions show an insignificant relationship except for two CSR components, namely "mission and visions" and "products and services". Siueia *et al.* (2019) conducted a comparative study in Mozambique and the Republic of South Africa to assess the impact of CSR on bank performance. Their research sample consists of top 10 banks in each market and covers the 2012-2016 period. These authors find that CSR positively affects bank profitability. Moreover, this positive relationship is more pronounced in the Republic of South Africa's banks than in Mozambique.

CSR practices in Vietnam are still in a nascent stage (Nguyen and Nguyen, 2021), hence our understanding of firm outcomes of CSR engagement is quite limited. Within Vietnam's banking industry, initial evidence suggests that CSR matters for financial inclusion (Vo et al., 2021) and reduces risk in financially constrained banks but increases risk in unconstrained banks (Nguyen and Nguyen, 2021). Nguyen (2018) explores the relationship between CSR and Vietnamese banks' performance from 2011 to 2016 and reports that CSR is negatively related to banks' performance. In contrast, Bui (2021) examines the CSR-FP linkage in Vietnamese commercial banks from 2012 to 2019 and finds that CSR is positively associated with FP. Given these inconclusive findings, the CSR-bank performance relationship is an empirical question to be further examined. Our study also extends the CSR literature by investigating the CSR-FP relationship in two markets characterized by different socioeconomic development to understand whether this association varies across countries.

As mentioned in the previous section, the relationship between CSR and FP remains debatable from different theoretical perspectives. Nevertheless, we expect that banks can do financially well by adhering to CSR practices because CSR may help improve the bank's reputation and increase employee commitment and customer loyalty (Zhu *et al.*, 2014; Jones *et al.*, 2014), which are important to boost bank profitability. We, therefore, propose the following hypothesis:

H1: There is a positive relationship between CSR performance and FP in the banking industry.

Some CSR researchers suggest that CSR is a useful way to signal a firm's quality, although the signaling effect is contingent on institutional environments (Montiel et al., 2012; Su et al., 2016). In developed countries like Australia, stakeholders can quickly access multiple sources of transparent information to assess a firm's quality; hence, the signaling role of CSR information as a good firm becomes attenuated (Sanders and Boivie, 2004). In contrast, CSR disclosure in developing countries like Vietnam may be a valuable source of information for stakeholders to evaluate firms given the higher level of information asymmetry in developing countries than in developed ones (Montiel et al., 2012). Consistent with this argument, Su et al. (2016) empirically find that the positive association between CSR and FP is weaker in more developed capital markets than in less developed markets. However, Siueia et al. (2019) report the opposite evidence that the positive relationship between CSR and bank performance is more pronounced in the Republic of South Africa (a more developed country) than in Mozambique (a less developed country). Generally speaking, the strength of the CSR-FP relationship varies across countries. Because of the different institutional factors in Australia and Vietnam, the second hypothesis is proposed as follows:

H2: The strength of the relationship between CSR and FP is different between Australian banks and Vietnamese counterparts.

3. Research design

3.1 Sample and data

This study employs panel data of listed banks in Australia and Vietnam covering the 2015-2020 period. This period is chosen because banks' interest in CSR disclosure has been increasing since 2015 with the issuance of Circular 155/2015/TT-BTC. In particular, this circular provides guidance on reporting firms' information, including corporate responsibility, in their annual reports to increase transparency and adapt to the fast-changing business environment. Banks with missing data during this period are excluded from the sample, resulting in our final sample of 10 Australian and 13 Vietnamese listed banks, as shown in Table 1. Overall, 138 annual reports of these banks have been carefully examined to derive the data of interest.

Table 1. List of banks in the research sample

Australia		Vietnam	
Bank	Ticker	Bank	Ticker
Auswide Bank Limited	ABA	Asia Commercial Joint Stock Bank	ACB
Australia and New Zealand Banking Group Limited	ANZ	Sai Gon Thuong Tin Commercial Joint Stock Bank	STB
BNK Banking Corporation Limited	BBC	Vietnam Joint Stock Commercial Bank of Industry and Trade	CTG
Bendigo and Adelaide Bank Limited	BEN	Joint Stock Commercial Bank for Foreign Trade of Vietnam	VCB
Bank of Queensland Limited	BOQ	Saigon Hanoi Commercial Joint Stock Bank	SHB
Commonwealth Bank of Australia	CBA	Vietnam Commercial Joint Stock Export Import Bank	EIB
Kina Securities Limited	KSL	National Citizen Commercial Joint Stock Bank	NVB
MyState Limited	MYS	Military Commercial Joint Stock Bank	MBB
National Australia Bank Limited	NAB	Joint Stock Commercial Bank for Investment and Development of Vietnam	BID
Westpac Banking Corporation	WBC	Vietnam Prosperity Joint Stock Commercial Bank	VPB
		Vietnam Technology and Commercial Joint Stock Bank	TCB
		Tien Phong Commercial Joint Stock Bank	TPB
		Ho Chi Minh City Development Joint Stock Commercial Bank	HDB

Source: Authors' compilation

3.2 Regression models and variables

3.2.1 Model specification

Hypothesis H1 examines the impact of CSR on banks' financial performance. Following the relevant literature (e.g., Platonova *et al.*, 2018; Siueia *et al.*, 2019), the current study uses Model 1 below to test the first hypothesis:

$$FP_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 Size_{it} + \beta_3 Cap_{it} + \beta_4 Loan_{it} + \beta_5 Deb_{it} + \epsilon_{it}$$
 (1)

where FP_{it} is the financial performance of banks, CSR_{it} represents the CSR index, $Size_{it}$ is the banks' size, Cap_{it} denotes the banks' capital ratio, $Loan_{it}$ is the banks' loan ratio, $Debt_{it}$ stands for the debt ratio, ϵ it is the error term, β_0 is the intercept, and β_1 , β_2 , β_3 , β_4 , β_5 are regression coefficients. If $\beta_1 > 0$ and is statistically significant, hypothesis H1 is supported. Otherwise, it is rejected.

The study also proposes Model 2 to test Hypothesis H2, which argues that the magnitude of financial effects of CSR in Vietnamese banks is different from that in Australian peers:

$$FP_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 CSR_{it} *Ctrydum + \beta_3 Size_{it} + \beta_4 Cap_{it} + \beta_5 Loan_{it} + \beta_6 Debt_{it} + \epsilon_{it}$$
(2)

where Ctrydum is a dummy variable that equals 1 if a bank is located in Vietnam and 0 if it operates in Australia. The key coefficients used to verify H2 are that of the interaction term $CSR_{it}*Ctrydum$. If β_2 is statistically different from 0, hypothesis H2 is supported. Otherwise, it is rejected.

3.2.2 CSR variable

Despite the proliferation of CSR studies, the literature lacks consensus on CSR measurement. For example, Gamerschlag et al. (2011) measure CSR based on two aspects, namely environmental and social components. Siueia et al. (2019) use four dimensions, including environment, human resources, products and consumers, and community involvement, to measure banks' CSR. Vilanova et al. (2009) measure CSR construct using five dimensions: vision, community relations, workplace, marketplace, and accountability. In fact, great efforts have been made to measure CSR; however, given the multidimensional nature of CSR, there would be no single best solution to CSR measurement (Turker, 2009). As the current study focuses on the banking sector, we follow Siueia et al. (2019) and conduct a content analysis of the annual reports of the sampled banks to measure CSR. Accordingly, the above-mentioned four categories of CSR are considered to construct a single CSR index. Items used to form CSR categories are delineated in Table 2. Given that this study does not target a specific group of users of banks' annual reports but attempts to reach all users, an unweighted index is suitable for this purpose (Cooke, 1989). Accordingly, a score of 1 is assigned for a CSR item presented in the annual reports and 0 otherwise. This scoring approach is widely used in CSR studies (e.g., Platonova et al., 2018; Siueia et al., 2019; Bidari and Djajadikerta, 2020). The total scores of each bank are then added up, not weighted. The maximum score for the environment (6 items), human resources (9 items), products and consumers (3 items), and community involvement (5 items) is 6, 9, 3, and 5, respectively. The total maximum score a

bank can gain in a particular year is 23. The CSR index is the ratio of a bank's aggregate score over the total maximum score it can achieve and is computed as follows:

$$CSR_{it} = \frac{\sum_{i=1}^{n} K_{i,j,t}}{N}$$

where $K_{i,j,t}$ indicates item K_l to K_n for category j at time t; N is the total maximum score a bank can achieve.

Table 2. Categories of CSR

Categories	Items
Environment	Environmental policies or company concern for the environment
	Environment management, systems, and audit
	Lending policies
	Conservation of natural resources and recycling activities
	Sustainability
	Conservation of energy in the conduct of business operations
Human resources	Employee health and safety
	Employment of minorities and women
	Employee training
	Employee assistance/benefits
	Employee remuneration
	Employee profiles
	Employee share purchase schemes
	Employee morale
	Industrial relations
Products and consumers	Product quality
	Consumer complaints/satisfaction
	Provision for disabled, aged, and difficult-to-reach consumers
Community involvement	Charitable donations and activities
	Support for education
	Support for the arts and culture
	Support for public health
	Sponsoring sporting or recreational projects

Source: Authors' compilation

3.2.3 Financial performance

Consistent with the literature in the banking industry (e.g., Wu and Shen, 2013; Cornett *et al.*, 2016), this study applies accounting-based measures as proxies of FP. Particularly, the return on equity ratio and the return on assets ratio are used in our main and robustness tests, respectively. We employ EBIT to measure the return to control for different tax regimes in the two countries.

3.2.4 Control variables

Following Siueia *et al.* (2019), this paper includes some control variables that might have an effect on FP, such as banks' size, capital ratio, loan ratio, and debt ratio. The size of commercial banks is measured by the natural logarithm of total assets. While some previous studies argue that larger firms are more likely to gain better FP due to economies of scale (Bose *et al.*, 2017; Wang and Qian, 2011), other studies suggest a negative linkage between two variables because larger firms may have fewer growth opportunities (Jayachandran *et al.*, 2013; Gaio and Raposo, 2011). Hence, FP can be either positively or negatively related to firm size.

The capital ratio is calculated as equity capital over by total assets. On the one hand, higher-capitalized banks have the financial flexibility to seize business opportunities and tend to use less external funding, which results in higher profitability (Kosmidou, 2008). On the other hand, from the perspective of the risk-return trade-off, Berger (1995) suggests a negative correlation between capitalization and FP because a higher level of capitalization is associated with a lower risk for a bank. So we do not predict the influence of this variable on bank performance.

The loan ratio is measured by total loans over total assets and reflects a bank's liquidity. The higher the loan ratio, the lower the liquidity level is (Tan, 2016). Banks with a high level of loans are more likely to gain more interest revenue. Hence, a bank's profitability is positively correlated with its loan ratio. Nonetheless, banks with a high loan ratio may incur losses if they are forced to have a fire sale of its assets to meet liquidity needs (Chronopoulos *et al.*, 2015). Overall, there is no clear linkage between this ratio and bank profitability.

The debt ratio is measured by the long-term debt over total assets. As Barnett and Salomon (2012) argued, a large volume of debts limits managerial freedom and restricts access to new business opportunities, negatively impacting bank profitability. However, a high level of debt ratio may have a disciplinary effect and motivate bank managers to make decisions that focus on maximizing FP (Margaritis and Psillaki, 2010). Consequently, there is no prior expectation for the association between a bank's debt ratio and its profitability.

4. Results and discussion

4.1 Descriptive statistics and correlation matrix

Table 3 demonstrates some statistics for the variables of interest in the full sample and two sub-samples. The average bank in the sample has a mean value of ROE being 0.117. When looking at these numbers in two sub-samples, we notice that the mean value of ROE in Vietnamese banks is higher than that in Australian banks. On average, the CSR index in the full sample is 0.684, while this value is slightly higher in Australian banks than in Vietnamese counterparts. The size of an average bank is 9.851; nonetheless, Australian banks are slightly bigger than their Vietnamese peers. The mean values of capital ratio, loan ratio, and debt ratio are 0.132, 0.673, and 0.126, respectively. Generally speaking, these ratios of Australian banks are higher than those of Vietnamese banks.

Table 3. Descriptive statistics

		sample 38)		bsample 60)		bsample 78)
Variable	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
ROE	0.117	0.068	0.095	0.047	0.134	0.077
CSR	0.684	0.195	0.697	0.216	0.674	0.177
Size	9.851	2.122	10.261	3.035	9.535	0.851
Cap	0.132	0.102	0.236	0.066	0.052	0.018
Loan	0.673	0.124	0.745	0.122	0.615	0.091
Debt	0.126	0.082	0.152	0.088	0.105	0.071

Source: Authors' calculation

Table 4 shows the Pearson correlation matrix of all variables for the full sample. CSR index is positively and significantly correlated to ROE. This result preliminarily supports the prediction of a positive relationship between CSR and FP. We also document that ROE is positively correlated with bank size and debt ratio. For other control variables, we find correlation coefficients between ROE and the capital and loan ratios.

Moreover, the correlation matrix indicates that all the correlation values between ROE and explanatory variables and between explanatory variables are much lower than the threshold of 0.8 (Brooks, 2008), suggesting that multicollinearity does not appear to be a major concern in the current study. To further confirm this point, the VIF test is also conducted. Overall, all the VIF values are much lower than 10 (Hair *et al.*, 2010), which suggests that multicollinearity does not exist in our data.

Table 4. Correlation matrix

	ROE	CSR	SIZE	CAP	LOAN	DEBT
ROE	1					
CSR	0.534***	1				
SIZE	0.228**	0.528***	1			
CAP	-0.196*	0.163	0.356***	1		
LOAN	-0.175*	0.168*	0.163	0.494***	1	
DEBT	0.326***	0.498***	0.482***	0.526***	0.252**	1

Source: Authors' calculation

4.2 Empirical results

This section performs multivariate regression with robust standard errors to analyze the relationship between CSR and FP and reports the results in Table 5. Given the panel structure of our data set, all standard errors are clustered by a bank (Petersen, 2009). Year-fixed effects are included in all regressions. In Column 1, we run a multivariate regression for the full sample

and control for country fixed effects. A positive and significant coefficient on CSR provides evidence of a positive relationship between CSR and banks' FP. This result indicates that hypothesis H1 is accepted. The result is consistent with previous research, such as Platonova et al. (2018) and Siueia et al. (2019). This finding suggests that banks that actively engage in CSR practices can increase financial benefits. Regarding control variables, the regression coefficient on banks' capital ratio is negative and statistically significant, consistent with Tregenna (2009). The LOAN variable has a negative and significant coefficient, which is also in line with previous studies (e.g., Chronopoulos et al., 2015). The DEBT variable presents a positive and significant coefficient, consistent with the argument about the disciplinary role of using leverage (Margaritis and Psillaki, 2010). Columns 2 and 3 rerun regressions for the two sub-samples. Consistently, a positive association between CSR and ROE is documented in Australian and Vietnamese banks. Moreover, the CSR coefficient in Column 3 is greater than that in Column 2, suggesting that the financial rewards of adopting CSR practices in Vietnamese banks are more pronounced than in Australian peers.

Table 5. Testing the CSR-FP relationship

	(1)	(2)	(3)
	Full	\mathbf{AU}	VN
VARIABLES	ROE	ROE	ROE
CSR	0.153***	0.095***	0.180***
	(5.22)	(3.50)	(3.57)
SIZE	-0.000	0.001	0.031***
	(-0.16)	(0.17)	(2.84)
CAP	-0.275**	0.205	0.651**
	(-2.48)	(0.58)	(2.04)
LOAN	-0.095*	-0.161**	-0.067
	(-1.75)	(-2.31)	(-0.89)
DEBT	0.297***	-0.055	0.443***
	(3.29)	(-0.18)	(4.91)
Constant	0.075	0.100	-0.320***
	(1.41)	(1.08)	(-3.56)
Year effects	Yes	Yes	Yes
Country effects	Yes	No	No
Observations	138	60	78
Adjusted R-squared	0.414	0.423	0.540

Notes: Robust t-statistics in parentheses. *,**, and *** indicate statistical significance at 10%, 5%, and 1%, respectively.

To further validate the evidence that the positive association between CSR and FP is different between Australian and Vietnamese banks, the interaction variable enters the regression in Table 6. Our result shows that the coefficient on the interaction term CSRit*CtryDum is positive and statistically significant. Hence, hypothesis H2 is accepted. More specifically, our findings suggest that the positive association between CSR and FP is stronger in Vietnamese banks relative to Australian ones. This evidence is consistent with El Ghoul *et al.* (2017) and Su *et al.* (2016), who report that CSR and FP are more positively associated in developing markets than in developed ones. For control variables, the coefficients are qualitatively similar to those presented in Table 5.

Table 6. Testing the CSR-FP relationship between two subsamples

	Full
VARIABLES	ROE
CSR	0.153***
	(5.22)
SIZE	-0.000
	(-0.16)
CAP	-0.275**
	(-2.48)
LOAN	-0.095*
	(-1.75)
DEBT	0.297***
	(3.29)
Constant	0.075
	(1.41)
Year effects	Yes
Country effects	Yes
Observations	138
Adjusted R-squared	0.414

Notes: Robust t-statistics in parentheses. *,**, and *** indicate statistical significance at 10%, 5%, and 1%, respectively.

Source: Author's calculation

4.3 Robustness tests

This section examines whether the main findings reported above are robust to using individual CSR dimensions, a different measure of FP, a different estimation technique, and a different model specification. Overall, these robustness tests confirm that CSR is positively associated with FP and that the positive CSR-FP relationship is more pronounced in Vietnamese banks than in Australian counterparts.

As mentioned earlier, our CSR index is based on four components: environment (ENV), human resources (HM), products and consumers (PROD), and community relations (COM). Table 7 examines whether our evidence on the positive CSR-FP relationship is sensitive to employing such individual CSR dimensions as the independent variable. Estimated coefficients on these CSR dimensions presented in Table 7 are positive and significant except for the ENV coefficient. The insignificant association between ENV and ROE possibly implies the general view that environmental impacts in the banking industry are less relevant than in manufacturing industries. Moreover, the results shown in Table 7 support our main evidence reported in Table 5.

Table 7. Testing the relationship between individual CSR dimensions and FP

	FULL	FULL	FULL	FULL
VARIABLES	ROE	ROE	ROE	ROE
ENV	0.005			
	(0.27)			
HM		0.114***		
		(3.77)		
PROD			0.102***	
			(5.74)	
COM				0.074***
				(4.88)
SIZE	0.005*	0.002	0.005**	0.005**
	(1.90)	(0.76)	(2.36)	(2.58)
CAP	-0.403***	-0.337***	-0.344***	-0.472***
	(-2.84)	(-2.79)	(-3.18)	(-3.93)
LOAN	-0.079	-0.073	-0.054	-0.102*
	(-1.28)	(-1.24)	(-0.97)	(-1.74)
DEBT	0.451***	0.375***	0.329***	0.417***
	(4.73)	(4.26)	(3.97)	(4.95)
Constant	0.113*	0.046	0.030	0.115*
	(1.74)	(0.80)	(0.54)	(1.97)
Year effects	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes
Observations	138	138	138	138
Adjusted R-squared	0.298	0.368	0.436	0.405

Notes: Robust t-statistics in parentheses. *, **, and *** indicate statistical significance at 10%, 5%, and 1%, respectively.

Table 8. Testing the relationship between individual CSR dimensions and FP between two subsamples

	(1)	(2)	(3)	(4)
VARIABLES	ROE	ROE	ROE	ROE
ENV	-0.055**			
	(-2.57)			
HM		0.056*		
		(1.88)		
PROD			0.067***	
			(2.87)	
COM				0.054***
				(2.85)
ENV*CTRYDUM	0.083***			
	(2.63)			
HM*CTRYDUM		0.121**		
		(2.20)		
PROD*CTRYDUM			0.057	
			(1.48)	
COM*CTRYDUM				0.038
				(1.25)
CTRYDUM	-0.062**	-0.092***	-0.043*	-0.061**
	(-2.02)	(-2.74)	(-1.70)	(-2.36)
SIZE	0.010***	0.004	0.005**	0.005**
	(3.46)	(1.37)	(2.56)	(2.57)
CAP	-0.374***	-0.260*	-0.273**	-0.437***
	(-2.63)	(-1.91)	(-2.17)	(-3.56)
LOAN	-0.084	-0.082	-0.061	-0.098
	(-1.51)	(-1.41)	(-1.11)	(-1.62)
DEBT	0.436***	0.342***	0.304***	0.421***
	(4.60)	(3.68)	(3.46)	(4.92)
Constant	0.102*	0.077	0.048	0.119**
	(1.68)	(1.41)	(0.86)	(1.98)
Year effects	Yes	Yes	Yes	Yes
Observations	138	138	138	138
Adjusted R-squared	0.332	0.383	0.441	0.407

Notes: Robust t-statistics in parentheses. *, **, and *** indicate statistical significance at 10%, 5%, and 1%, respectively.

In Table 8, we continue to test whether the relationship between CSR dimensions and FP is still stronger in Vietnamese banks than in Australian banks. Our coefficients of interest are those of the interaction variables in Columns 1, 2, 3, and 4. As demonstrated in Table 8, only two interaction terms (i.e., ENV*CTRYDUM and HM*CTRYDUM) have a positive and significant coefficient, while the coefficients on the other two interaction variables are insignificant. These results indicate that financial gains from engaging in environmental responsibility (ENV) and human resource practices (HM) are more pronounced in Vietnamese banks than in Australian counterparts, consistent with our main result reported in Table 6. We do not document any differences in the associations between FP and the other two CSR dimensions across the two markets.

Next, we use the return on assets ratio as an alternative proxy for FP and adopt the same explanatory variables observed in Tables 5 and 6. Our results (untabulated) are in line with the findings obtained when utilizing ROE as the dependent variable, thereby providing further support for hypotheses H1 and H2.

Table 9. Testing the CSR-FP relationship using the fixed effects regression

	(1)	(2)
VARIABLES	ROE	ROE
CSR	0.178***	0.089**
	(4.730)	(2.340)
CSR*CTRYDUM		0.148**
		(2.680)
SIZE	0.046**	0.065***
	(2.769)	(4.213)
CAP	-0.222*	-0.207**
	(-1.890)	(-2.429)
LOAN	0.023	-0.032
	(0.211)	(-0.320)
DEBT	0.131	0.070
	(1.367)	(0.757)
Constant	-0.459**	-0.582***
	(-2.794)	(-4.128)
Year effects	Yes	Yes
Observations	138	138
Adjusted R-squared	0.613	0.658

Notes: Robust t-statistics in parentheses. *,**, and *** indicate statistical significance at 10%, 5%, and 1%, respectively.

We also employ an alternative regression technique to test the robustness of our main findings. For the panel data like the one in this study, random-effects and fixed-effects methods are commonly used for data analysis. The Hausman test ($\chi 2 = 28.05$; p<0.000) suggests that the fixed-effects model is more suitable than the random-effects model for this research data. Fixed-effects method is useful in producing unbiased estimates because it addresses the problem of omitted unobservable variables (Greene, 1997). Furthermore, the Pesaran's test is performed to verify whether cross-sectional dependence is present in our data. The test result shows that p-value is equal to 0.4841, which is higher than the threshold value of 0.05; hence, the data are free from cross-sectional dependence. Table 9 presents fixed-effects regression results, which are qualitatively similar to our main evidence above.

Table 10. Testing the CSR - FP relationship using system GMM

	(1)	(2)
VARIABLES	ROE	ROE
L.ROE	0.843***	0.814***
	(10.54)	(10.79)
CSR	0.074***	0.045**
	(3.42)	(2.46)
CSR*CTRYDUM		0.086**
		(2.42)
CTRYDUM		-0.042**
		(-2.29)
SIZE	0.005***	0.003**
	(3.13)	(2.57)
CAP	-0.020	0.062
	(-0.29)	(0.89)
LOAN	-0.033	-0.050
	(-0.78)	(-1.65)
DEBT	0.019	-0.063
	(0.29)	(-0.82)
Constant	0.041	0.049
	(0.99)	(1.48)
Year effects	Yes	Yes
AR(2)	0.533	0.468
Sargan test	0.97	0.93
Hansen test	1.00	1.00

Notes: Robust t-statistics in parentheses. *, **, and *** indicate statistical significance at 10%, 5%, and 1%, respectively.

The estimated relationship between CSR and FP may be biased if endogeneity is ignored. To mitigate this problem, we employ the system generalized method of moments (GMM) method because it is useful in tackling endogeneity and hence produces consistent parameter estimates (Dalwai *et al.*, 2021). As reported in Table 10, the results further support our findings that CSR is associated with better FP, and this positive relationship is more pronounced in Vietnamese banks.

To control for potentially omitted variables, we employ an alternative model specification by including different macroeconomic and institutional factors. Following the prior literature (e.g., Wu and Shen, 2013), GDP growth, inflation rate, and financial development are added to Models 1 and 2. GDP and inflation data is obtained from World Development Indicator while financial development is provided by the IMF. The results (untabulated) show consistency with our earlier evidence, reinforcing the validity of our findings.

5. Conclusion

The salience of CSR has attracted great interest. CSR activities have become an integral part of corporate strategy. Nonetheless, the question of whether a firm can receive a financial payoff from CSR engagement remains inconclusive. To clarify the CSR-FP linkage in the banking industry, this study examines this relationship in Australian and Vietnamese contexts. Our results show that CSR is positively related to the sampled banks' FP, which is in line with stakeholder theory. This evidence is consistent with previous studies such as Wu and Shen (2013), Platonova et al. (2018), and Siueia et al. (2019). Furthermore, this study also delves into the heterogeneity in CSR-FP between Vietnamese commercial banks and their Australian peers. The study shows that the positive relationship between CSR and bank performance in Vietnam, characterized by relatively weaker institutional environments, is more pronounced than in Australia, which has a stronger institutional context. This finding could be explained by the fact that in the presence of non-enabling institutions that are common in a developing country, CSR implementation helps firms in this market reduce transaction costs and increase access to finance, thereby enhancing FP. Our findings are robust to a wide range of robustness tests, using different measures of variables, an alternative regression technique, and additional control variables.

This study makes some important contributions. First, it adds additional insights to the CSR literature by providing empirical evidence of the financial benefits of CSR engagement in the banking sector, which is relatively underexplored. Second, it provides further evidence of the signaling effect of CSR in a market characterized by an opaque information environment, as in the case of Vietnam.

The findings of this study offer some significant implications. Bank managers should strategically engage in CSR practices to improve FP. Importantly, bank managers in developing countries can overcome institutional weaknesses by adhering to CSR. Stakeholders may perceive banks with socially responsible behavior as high-quality banks. Thus, CSR banks in developing countries are more likely to gain considerable support from stakeholders to maintain their competitive advantage and improve profitability. Moreover, given that not all CSR dimensions equally contribute to bank performance, bank managers should prioritize

the CSR activities in which their banks engage. Furthermore, more government support is helpful for banks to adopt CSR practices to a greater extent. For investors, our results provide evidence of CSR banks' FP that should be considered when making investment decisions.

The current study has some limitations. First, this study focuses on the banking industry; consequently, the research findings may not be applicable to other industries. Second, the research sample only covers listed banks; thus, the impact of CSR on FP still remains unresolved in banks that have not yet gone public. Finally, although efforts have been made in this study to examine the impact of different CSR components on FP, the prioritized order of CSR aspects was thoroughly analyzed. Our limitations would be potential avenues for future research.

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