



## **The Relation between CSR and Financial Performance under Crisis: The Mediating Effect of Foreign Investment**

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### **ABSTRACT**

Prior scholars put a lot of effort into exploring the relationship between CSR and financial performance by utilizing financial statistics. However, it is a lack of empirical study about the whole financial environment and discussing its impact on foreign investment. This study analyzes data before and after the 2008 crisis to determine whether: (1) companies that implemented CSR successfully attracted more foreign investment and maintained superior performance during the financial crisis and (2) the CSR and financial performance of companies were influenced by the mediating effect of foreign investment. The results illustrated: (1) the foreign ownership ratio was positively correlated to the quality of the CSR system, (2) CSR exhibited higher financial performance during the crisis; and (3) mediating effect of foreign investment existed between CSR and financial performance, especially during the crisis.

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*Keywords:* CSR, Financial Performance, Foreign Investment, Mediating Effect, Crisis

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## 1. Introduction

The global economic crisis strongly influences companies in Taiwan that rely on export, thus affecting business profitability and endangering multiple companies. Relevant studies have discussed how corporate social responsibility (CSR) influences companies during the crisis, focusing on how companies are protected by their established reputation and image or how their reputation and image significantly affect investor satisfaction and loyalty in that investors and debtors have more confidence in companies that engage in CSR, and enabling companies to effectively lower finance costs and obtain funding (Harjoto and Jo, 2011; Schnietz and Epstein, 2005; Sun and Cui, 2014). Other studies have also examined how CSR decreases the risks for the company in unfavorable economic environments (Bouslah *et al.*, 2016) or focused on how corporate social responsibilities can limit opportunistic behavior (Benabao and Tirole, 2010) to prevent market volatility during the crisis. However, empirical studies on financial performance during the crises have yielded different results. Companies with higher CSR ratings exhibited significantly higher performance (Lins *et al.*, 2017; Simionescu and Dumitrescu, 2014). The significant positive correlation between corporate social performance and performance exists only at the beginning of an economic crisis. (Ducassy, 2013). Oh and Park (2005) found that the effect of CSR on performance did not increase after a global financial crisis. However, the result, which was unable to prove the relevance of the negative relation, is significant because it indicates whether higher-than-average CSR expenditures result in lower performance remains uncertain (Schreck, 2011). This study discusses whether CSR influences the performance of Taiwanese companies, especially during the crises.

From 1996 to 2010, the foreign shareholdings ratio in Taiwan increased from 7.27% to 24.21%, indicating a rise in foreign investment and its importance in the Taiwan investment market. Companies with excellent CSR and higher corporate governance standards exhibit significantly higher foreign shareholding ratios (Bae and Goyal, 2010; Suzuki *et al.*, 2010). As a result of asymmetric information and monitoring costs, foreign investors may lower the capital investment of Taiwan companies; in addition, the nature of corporate governance in the home countries of international investors affects their portfolio choices abroad (Kim *et al.*, 2011). However, Chapple and Moon (2005) indicated that the implementation of CSR in Asian countries had been influenced by western society. Globalization has enhanced the development of CSR in Asian companies. Studies have discussed the critical influence of foreign investment in decision-making, which further influences financial performance (Aggarwal *et al.*, 2011; Huang and Zhu, 2015; Li *et al.*, 2011; Nguyen, 2012). However, few studies have discussed the significance of CSR as perceived by foreign investors and its associated influence on financial performance. Furthermore, few studies have analyzed the mediating effect of foreign investment in CSR and financial performance. Accordingly, this study discusses whether companies engaging in CSR can improve the financial performance due to foreign investments and examines related factors. Additionally, this study analyzes data before and after the crisis in 2008 to determine whether: (1) companies that implemented CSR successfully attracted more foreign investment and maintained superior performance during the crisis and (2) the CSR and financial performance of companies were influenced by the mediating effect of foreign investment. In summary, this study discusses the mediating effect of foreign investments on the relation between CSR and a company's financial performance.

This study conducts sample matching with propensity scores, uses hierarchical regression to determine whether CSR influences performance, and analyzes the mediating effect of foreign investments. Additionally, this study uses the “Excellence in Corporate Social Responsibility Award” by Common Wealth Magazine as a prediction variable. It uses official data of listed companies in Taiwan acquired from the Taiwan Economic Journal (TEJ) from October 1, 2007, to September 31, 2009, as samples. The study period is divided into before and after the crisis,

during which the quarterly financial statements of the listed company were collected. First, whether CSR investment influences financial performance is discussed using regression models and propensity score matching. Next, the CSR rating of each company is used to separate the samples into different levels and discuss whether CSR investments positively influence financial performance. Finally, we analyze the mediating effect of the foreign shareholdings ratio on the relation between CSR and financial performance.

Empirical results revealed that during the crisis, companies that implemented CSR exhibited higher financial performance than companies that did not implement CSR. Furthermore, testing the mediating effect showed that the foreign shareholdings ratio partially mediated the relationship between CSR and financial performance. Although some studies have also indicated the contribution of foreign investment on business values, this is the only study to assume that professional investment institutions make foreign investments. These institutions consist of analysts familiar with stock market tools and can receive immediate and high-quality market information. Therefore, CSR irrelevant to the company's strategy is considered a "waste of resources" and discourages foreign investments in the company; only CSR strategies suited for the company can reveal its value during periods of economic recession. This study uses data from listed companies in Taiwan. The other components of this study are as follows: the second chapter is a literature review, the next chapter details the sample and research method, the fourth chapter provides the research results and analysis, and the final chapter presents the conclusion.

## 2. Literature review

From the perspective of CSR, companies should accept responsibility for shareholders and account for stakeholders in each aspect, including employees, customers, upstream and downstream vendors, social groups, and the environment. However, when companies implement CSR activities, they must consider the interest of the shareholders. Shareholders are the owners of the company, and they value the financial performance of a company. Therefore, when companies implement CSR, the influence of CSR on financial performance should be considered. A positive relationship between CSR and financial performance has been revealed through meta-analyses on them (Barnett and Salomon, 2012; Orlitzky *et al.*, 2003). However, this result differs from empirical studies, which may be attributable to differences in the measurement methods used to evaluate CSR and financial performance (Galant and Cadez, 2017). Griffin and Mahon (1997) analyzed 51 CSR and financial performance studies and found more than 80 different financial performance evaluation methods before suggesting using the same financial performance methods. Therefore, this study references the methods of relevant studies that have used the basis of accounting for measuring financial behaviors and reported positive relationship results between CSR and financial performance. Other studies have used Tobin's Q ratio as the proxy variable for firm value, revealing a positive relationship between CSR and firm value (Cahan *et al.*, 2016; Gao and Zhang, 2015; Jo and Harjoto, 2011). This study thus employs financial performance indicators, namely return on equity (ROE), return on assets (ROA), earnings per share (EPS), and Tobin's Q, and uses foreign investment as the mediator to discuss the influence of CSR on financial performance during the crisis.

### 2.1 CSR and Foreign Shareholdings Ratio

Asymmetric information and monitoring costs perceived by foreign investors may result in lower capital investment in companies. Companies with higher CSR and corporate governance exhibit significantly higher foreign shareholding ratios (Bae and Goyal, 2010; Suzuki *et al.*, 2010). Therefore, CSR investment activities have a signaling effect on companies; companies with higher CSR ratings are more willing to disclose their CSR reports to the market (Dhaliwal, Li *et al.*, 2011). Additionally, this disclosure can help lower asymmetric communication between investors and the company (Chen *et al.*, 2009; Cheng *et al.*, 2014; El Ghouli *et al.*,

2011). Kim *et al.* (2011) demonstrated that the nature of corporate governance in the home countries of international investors affects their portfolio choices abroad. Furthermore, many global institutional investors have promised to invest in CSR and improve regional CSR (Mun and Jung, 2018). Suzuki *et al.* (2010) revealed that the foreign shareholding ratio positively correlates with CSR. Accordingly, this study hypothesizes that companies with higher CSR performance ratings are viewed more favorably by foreign investors, resulting in a higher foreign shareholding ratio in their shareholding structure:

**Hypothesis 1:** Companies that implemented CSR exhibit higher foreign shareholding ratio.

## **2.2 Foreign Shareholding Ratio and Financial Performance**

The efficient monitoring hypothesis established by Pound (1998) states that because institutional investors have professional investment knowledge and teams, they can monitor company's management more efficiently and thus effectively increase business value. Numerous studies have also revealed that foreign investors can influence business operations; for example, foreign investment in Japanese companies resulted in critical changes in risk-taking behavior (Nguyen, 2012). Substantial foreign investment means the provision of capital, resources, and human resources training (Li *et al.*, 2011). Additionally, the connection established through cross-border company mergers can lower information asymmetry regarding transaction costs and goals between the investor and target companies (Ferreira *et al.*, 2010). Companies with higher foreign shareholding ratios exhibit improved business values and financial performance (Aggarwal *et al.*, 2011; Ferreira and Matos, 2008; Manova *et al.*, 2015; Nakano and Nguyen, 2013). Accordingly, this study infers that the foreign shareholding ratio exhibits a positive relation with financial performance and thus proposes the following hypothesis:

**Hypothesis 2:** Companies with higher foreign shareholding ratio display higher financial performance.

## **2.3 Influence of the Crisis on Financial Performance with Higher CSR Ratings**

Research has revealed a positive relationship between financial performance and CSR (Cochran and Wood, 1984; Griffin and Mahon, 1997; Jo and Harjoto, 2011; Orlitzky *et al.*, 2003). The capital market was affected, and economic development slowed during the crisis, prompting the question of whether CSR is necessary or hinders financial performance. Empirical studies on financial performance during the crisis have reported inconsistent results. Companies with higher CSR ratings exhibit significantly higher financial performance (Lins *et al.*, 2017; Simionescu and Dumitrescu, 2014) only at the beginning of an economic crisis. After this period, the significant positive correlation between CSR and financial performance no longer exists (Ducassy, 2013). Oh and Park (2005) reported that the effect of CSR on financial performance did not become more prominent after the global financial crisis but could not prove the relevance of the negative correlation. Giannarakis and Theotokas (2011) indicated that before the financial crisis, companies increased their CSR ratings to prevent losses in the event of a financial crisis. Accordingly, this study assumes that companies that implemented CSR exhibit higher financial performance than those that did not implement CSR during the crisis. Thus, CSR effectively promotes companies' ability to endure the crisis's effects. Therefore, this study proposes the following hypothesis:

**Hypothesis 3a:** Companies that implemented CSR exhibited higher financial performance during the crisis.

**Hypothesis 3b:** Companies that implemented CSR exhibited higher financial performance before the crisis.

## 2.4 Mediating effect of Foreign Shareholding Ratio

The previous study results and hypothesis development indicate the influence of (1) CSR on financial performance, (2) CSR on foreign shareholding ratio, and (3) foreign shareholding ratio on financial performance. However, whether CSR influences financial performance through the mediating effect of the foreign shareholding ratio remains unanswered. This study uses the foreign shareholding ratio as the mediating variable to discuss the relationship between CSR and financial performance (i.e., whether foreign investment is a factor contributing to the influence of CSR on financial performance). Relevant studies have focused on the impact of foreign ownership on the relationship between CSR and business values (Kim *et al.*, 2018) and the moderating effect of institutional investors in discouraging the adverse use of CSR (Choi *et al.*, 2013). However, no studies have analyzed the mediating effects of foreign investment to discuss the influence of CSR on financial performance. This study simplifies the identification process of a company's CSR strategy and implementation by assuming that foreign investments originate from professional investment institutions. The implementation of CSR further contributed to the financial performance of companies during the crisis. Therefore, this study discusses whether foreign investments mediated the relationship between CSR and financial performance before and during the financial crisis and proposes the following hypothesis:

**Hypothesis 4a:** During the crisis, foreign shareholding ratio has a mediating effect on the relationship between CSR and financial performance.

**Hypothesis 4b:** Before the crisis, foreign shareholding ratio has a mediating effect on the relationship between CSR and financial performance.

## 3. Data and Methodology

### 3.1 Sampling and Data Source

This study discusses whether foreign investments exhibited mediating effects on the relationship between CSR and financial performance before and during the crisis. Therefore, companies listed in the "Excellence in Corporate Social Responsibility Award" by Common Wealth Magazine in 2008 were selected as samples of companies that implemented CSR. Because the financial structure of the financial companies differs from that of companies in other industries, companies in the financial sector are excluded from this study. The pairing method selects the control group for analysis and comparisons. Data of items from each company were collected from the TEJ. This study collected data dating from October 1, 2007, to September 31, 2009. The study employed each company's disclosed quarterly financial statements and used propensity score matching to create pairs. After excluding companies with incomplete data, 132 samples remained in the CSR group. Sample data was collected and separated into two groups, namely before and after the crisis on October 1, 2008. A total of 264 observation values were collected and used for regression analysis.

### 3.2 Sample Matching Method

Rosenbaum and Rubin (1983) proposed the propensity score matching method to solve multidimensional problems. In the first stage, the probit model is employed to calculate each critical characteristic function and estimate the probability of a company implementing CSR (i.e., the propensity score of CSR). During the second stage, the propensity score of each sample is used for matching samples with the closest propensity scores. Furthermore, characteristic variables are selected concerning the crucial characteristics used in Shen and Chang (2008). Because the size variable exhibits a positive relationship with the CSR variable (Fombrun and Shanley, 1990; Udayasankar, 2008), the natural logarithm of total assets on net sales is adopted as the size factor variable. Because financial performance is likely to exhibit a positive

relationship with CSR (Li *et al.*, 2009; Saleh *et al.*, 2010), net income after tax and operating income are selected as financial factors variables. Because management capability positively impacts CSR (Stanwick and Stanwick, 1998), total asset turnover is chosen as the management factor variable. This study established companies listed in the “Excellence in Corporate Social Responsibility Award” by CommonWealth Magazine in 2008 as samples of companies that implemented CSR before employing the propensity score matching method to conduct sample matching. Whether companies that implemented CSR exhibited higher financial performance because of the mediating effect of higher foreign shareholding ratio before and after the crisis is then discussed. Additionally, the domestic institutional shareholding ratio is used as a reference for analysis and discussion. Because of the low possibility that the CSR group and the control group exhibit similar estimated propensity scores, this study employed the nearest-neighbor matching method using the following equation:

$$C(P_i) = \min |PS_i - PS_j|$$

where  $C(P_i)$  represents the set of company that implement CSR,  $PS_i$  represents the propensity scores of company that implement CSR, and  $PS_j$  represents the propensity scores of the company in the control group. Companies from the control group with propensity scores most similar to those from the CSR group are matched to identify matching companies. After matching, the paired samples are compared. This study uses the independent sample t-test to determine differences between the characteristic variables of both groups. The following null hypothesis is tested to evaluate whether differences exist between the usual variables of the two group samples.

$$H_0 : \bar{X}_i - \bar{Y}_i = 0$$

where  $\bar{X}_i$  and  $\bar{Y}_i$  denote the average characteristic variable (i) for the CSR and control groups, respectively, The test results are listed in Table 1. The results indicate that most characteristic variables did not exhibit significant differences, demonstrating that the propensity score matching method effectively decreased the difference between samples.

**Table 1. Post-matching Characteristic Variable Difference Test**

	TAT	SIZE	ONI	NI	SA
<i>t</i> -Statistics	0.633 (0.529)	1.613 (0.112)	1.578 (0.120)	1.540 (0.130)	1.955* (0.058)

Note.

1. TAT denotes the total asset turnover; SIZE denotes the natural log of total assets; ONI denotes the operating net income; NI denotes net income after tax; SA denotes the net sales.
2. (·) denotes p-value.
3. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

### 3.3 Variables

Previous studies have revealed a positive relation between the implementation of CSR and company financial performance (Cochran and Wood, 1984; Erhemjamts *et al.*, 2013; Griffin and Mahon, 1997; Nidumolu *et al.*, 2009; Rodgers *et al.*, 2013). Therefore, this study uses companies that implement CSR and are listed in the “Excellence in Corporate Social Responsibility Award” by Common Wealth Magazine as a predictor. Performance variables, including EPS, ROA, and ROE, are employed as dependent variables to discuss the influence of CSR, foreign ownership, and market risks on financial performance. EPS is obtained by dividing net income after tax (NI) by the number of outstanding shares and serves as a profitability indicator of a company. A higher EPS indicates a higher profit potential. ROA is calculated by dividing NI by the total assets, accurately calculating the actual rate of return from investments, and representing the company's financial performance. ROE is obtained by

dividing NI by the weighted average of shareholder equity and is used to evaluate the profitability of the company and the ability to create profit for shareholders.

The foreign shareholding ratio is the mediating effect of the relation between CSR and financial performance. This study employs the domestic shareholding ratio and foreign shareholding ratio for analysis and comparison. The company size, debt ratio, and market risk are also set as control variables (Claessens *et al.*, 2002; Hillman and Keim, 2001; McWilliams and Siegel, 2000; Schreck, 2011; Waddock and Graves, 1997). Company size (SIZE) is the natural logarithm of closing total assets. Debt ratio (DR) is calculated by dividing total liabilities by total assets and is used to evaluate the degree of financial leverage of the company. A higher DR indicates higher liabilities. BETA is the evaluation indicator for market risk, representing the sensitivity of asset returns to the market. Greater absolute values of BETA correspond to greater market sensitivity and risks. The BETA risk equation of the capital asset pricing model is as follows:

$$R_i = R_f + Beta \times (R_m - R_f)$$

where  $R_i$  is the return on securities,  $R_f$  is the risk-free rate of return;  $R_m$  is the market return.

### 3.4 Models

This study follows the process of analyzing mediating effects introduced by Baron and Kenny (1986). The following four conditions must be fulfilled to confirm that the foreign shareholding ratio has a mediating effect on the relationship between CSR and financial performance. (1) CSR significantly affects foreign shareholding ratio; (2) foreign shareholding ratio significantly affects financial performance; (3) CSR significantly affects financial performance; (4) after adding CSR and foreign shareholding ratio to the regression model, foreign shareholding ratio significantly affects financial performance, but the effect of CSR on financial performance exhibits either marginally significant or non-significant. Fulfilling the four conditions above verifies the mediating effect of the foreign shareholding ratio on the relation between CSR and financial performance. To verify the four conditions, this study develops the following models:

$$FSR_i = \alpha_0 + \alpha_1 CSR_i + \alpha_2 BETA_i + \alpha_3 DR_i + \alpha_4 SIZE_i + \varepsilon_i$$

$$P_i = \beta_0 + \beta_1 FSR_i + \beta_2 BETA_i + \beta_3 DR_i + \beta_4 SIZE_i + \varepsilon_i$$

$$P_i = \gamma_0 + \gamma_1 CSR_i + \gamma_2 BETA_i + \gamma_3 DR_i + \gamma_4 SIZE_i + \varepsilon_i$$

$$P_i = \delta_0 + \delta_1 CSR_i + \delta_2 FSR_i + \delta_3 BETA_i + \delta_4 DR_i + \delta_5 SIZE_i + \varepsilon_i$$

where  $P_i$  and  $FSR_i$  represent financial performance and foreign shareholding ratio, respectively. This study employs four financial performance indicators: EPS, ROA, ROE, and Tobin's Q. Market risk (BETA), Debt ratio (DR), and the natural log of total assets (SIZE) are used as control variables to discuss the mediating effect of foreign shareholding ratio on the relation between CSR and financial performance. Additionally, to compare the influence between the foreign shareholding ratio and domestic shareholding ratio, this study substituted the foreign shareholding ratio in model with the domestic shareholding ratio.

## 4. Empirical Results

### 4.1 Descriptive Statistics and Correlation Matrix

Table 2 displays the descriptive statistical of variables in this study. Panel A represents the difference between companies that implemented CSR and those that did not during the crisis. The financial performance (i.e., EPS, ROA, ROE, and Tobin's Q) exhibited significant differences, indicating that companies that implemented CSR showed higher financial

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performance than companies that did not during the crisis. Additionally, a greater size of a company implementing CSR reflected a lower market risk. Finally, this study reveals that the foreign shareholding ratio of companies that implemented CSR is significantly higher than those did not. Panel B presents the descriptive statistical analysis before the crisis. This study reveals that aside from the significant difference between the ROA and ROE of both panels (A and B), the other variables of the two panels did not exhibit significant differences.

**Table 2 Descriptive Statistical**

Panel A : During financial crisis						
Variables		Mean	Stdev.	Min.	Max	Difference
EPS	with CSR	0.605	1.576	-3.780	10.990	0.420***
	without CSR	0.185	0.710	-2.020	1.920	(0.006)
ROA	with CSR	2.166	4.231	-12.770	12.490	1.821***
	without CSR	0.345	4.567	-16.010	5.960	(0.001)
ROE	with CSR	2.825	2.917	-5.130	10.030	1.310***
	without CSR	1.515	2.397	-5.550	7.010	(<0.001)
Tobin's Q	with CSR	1.482	0.704	0.439	4.938	0.305***
	without CSR	1.177	0.495	0.650	3.075	(<0.001)
FSR	with CSR	29.565	18.584	1.036	73.647	10.760***
	without CSR	18.805	18.606	0.636	68.458	(<0.001)
DSR	with CSR	2.119	1.556	0.006	7.050	-0.970**
	without CSR	3.089	4.337	0.000	18.908	(0.017)
BETA	with CSR	0.923	0.346	-0.015	1.722	-0.147***
	without CSR	1.070	0.260	0.327	1.683	(<0.001)
DR	with CSR	34.373	16.027	9.760	70.200	-2.576
	without CSR	36.949	15.726	3.930	71.780	(0.189)
SIZE	with CSR	17.958	1.356	15.336	20.160	0.528***
	without CSR	17.430	1.167	15.376	19.706	(0.001)
Panel B : Before financial crisis						
Variables		Mean	Stdev.	Min.	Max	Difference
EPS	with CSR	1.025	1.065	-1.300	6.740	0.244**
	without CSR	0.781	0.799	-0.640	4.410	(0.036)
ROA	with CSR	3.834	2.213	-0.290	10.310	0.369
	without CSR	3.465	2.285	-0.390	11.290	(0.184)
ROE	with CSR	3.956	2.955	-12.330	12.080	0.501
	without CSR	3.455	2.949	-6.240	12.430	(0.169)
Tobin's Q	with CSR	1.752	0.815	0.457	4.621	0.281***
	without CSR	1.471	0.700	0.547	3.953	(0.003)
FSR	with CSR	33.712	18.635	0.136	74.973	12.372***
	without CSR	21.340	20.559	0.495	68.455	(<0.001)
DSR	with CSR	1.849	1.968	0.006	12.360	-2.126***
	without CSR	3.975	6.474	0.014	28.970	(<0.001)
BETA	with CSR	0.907	0.276	0.259	1.660	-0.111***
	without CSR	1.018	0.244	0.225	1.466	(0.006)
DR	with CSR	35.277	15.849	9.400	76.410	-1.751
	without CSR	37.028	15.475	4.400	73.240	(0.365)
SIZE	with CSR	17.975	1.357	15.282	20.216	0.515***
	without CSR	17.460	1.189	15.202	19.851	(0.001)

Note.

1. FSR denotes the foreign shareholding ratio; DSR denotes the domestic shareholding ratio; BETA denotes the market risk; DR denotes the debt ratio; SIZE denotes the log of total asset.
2. (·) denotes p-value.
3. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.



Table 3 is the correlation matrix of this study; aside from three financial performance variables (i.e., EPS, ROA, and ROE) exhibiting high correlation values with each other, the other correlation coefficients did not achieve a high correlation level of 0.7. Therefore, this research model demonstrated that high collinearity was not observed for the variables in this study.

**Table 3 Correlation Matrix**

	EPS	ROA	ROE	Q	CSR	FSR	DSR	BETA	DR	SIZE
EPS	-	0.623*** (<0.001)	0.727*** (<0.001)	0.601*** (<0.001)	0.129** (0.036)	0.186*** (0.002)	0.293*** (<0.001)	-0.050 (0.420)	-0.127** (0.039)	0.174*** (0.005)
ROA	0.746*** (<0.001)	-	0.737*** (<0.001)	0.678*** (<0.001)	0.082 (0.184)	0.184*** (0.003)	0.479*** (<0.001)	0.020 (0.752)	-0.255*** (<0.001)	0.071 (0.250)
ROE	0.712*** (<0.001)	0.836*** (<0.001)	-	0.551*** (<0.001)	0.085 (0.169)	0.166*** (0.007)	0.443*** (<0.001)	-0.044 (0.473)	0.023 (0.709)	0.001 (0.987)
Q	0.674*** (<0.001)	0.586*** (<0.001)	0.679*** (<0.001)	-	0.183*** (0.003)	0.226*** (<0.001)	0.439*** (<0.001)	0.008 (0.896)	-0.229*** (<0.001)	-0.095 (0.122)
CSR	0.170*** (0.006)	0.203*** (0.001)	0.239*** (<0.001)	0.244*** (<0.001)	-	0.302*** (<0.001)	-0.218*** (<0.001)	-0.211*** (0.001)	-0.056 (0.365)	0.198*** (0.001)
FSR	0.197*** (0.001)	0.178*** (0.004)	0.230*** (<0.001)	0.288*** (<0.001)	0.279*** (<0.001)	-	-	-0.004 (0.948)	0.038 (0.542)	0.623*** (<0.001)
DSR	0.167*** (0.007)	0.245*** (<0.001)	0.240*** (<0.001)	0.344*** (<0.001)	-0.148** (0.016)	-0.102* (0.098)	-	0.290*** (<0.001)	-0.120* (0.051)	-0.329*** (<0.001)
BETA	-0.175*** (0.004)	-0.212*** (0.001)	-0.220*** (<0.001)	-0.181*** (0.003)	-0.235*** (<0.001)	-0.018 (0.771)	0.216*** (<0.001)	-	-0.107* (0.082)	-0.018 (0.766)
DR	-0.096 (0.119)	-0.083 (0.180)	-0.217*** (<0.001)	-0.168*** (0.006)	-0.081 (0.189)	0.097 (0.118)	-0.079 (0.200)	-0.018 (0.771)	-	0.065 (0.293)
SIZE	-0.053 (0.395)	-0.200*** (0.001)	-0.124** (0.044)	-0.020 (0.744)	0.205*** (0.001)	0.656*** (<0.001)	-0.239*** (<0.001)	0.216*** (<0.001)	0.139** (0.024)	-

Note.

1. The lower half and the upper half denote the correlation coefficients during and before the crisis, respectively.
2. FSR denotes the foreign shareholding ratio; DSR denotes the domestic shareholding ratio; BETA denotes the market risk; DR denotes the debt ratio; SIZE denotes the log of total asset.
3. (·) denotes p-value.
4. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

## 4.2 Empirical Research Analysis

This study sets the following four conditions to reveal whether foreign investments exhibited a mediating effect. (1) The independent variable affects the mediator significantly. (2) The mediator affects the dependent variable significantly. (3) The independent variable affects the dependent variables significantly. (4) After adding the independent variable and mediator into the regression model, the mediator affects the dependent variables significantly, and the effect of independent variable on dependent variable either decreases or becomes non-significant. Table 4 demonstrates the significant explanatory power of the CSR for the foreign shareholding ratio. The analysis results indicated that during and before the crisis, the coefficient of CSR with the foreign shareholding ratio was 0.163 (p-value=0.001) and 0.197 (p-value<0.001), respectively, demonstrating a positive relationship between CSR and the foreign shareholding ratio. Therefore, Hypothesis 1 is supported by empirical evidence, indicating that companies that implement CSR are more favored by foreign investors and exhibit a higher foreign shareholding ratio. The results of this part of the study are similar to those of other studies. During and before the financial crisis, the coefficient of CSR with the domestic shareholding ratio was -0.063 (p-value=0.310) and -0.110 (p-value=0.060), indicating that the domestic

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shareholding ratio was relatively uninfluenced by CSR activities.

**Table 4 The effect of CSR on Foreign Investment and Domestic Investment.**

Variable	During the crisis		Before the crisis	
	FSR	DSR	FSR	DSR
Control variable				
CSR	0.163*** (0.001)	-0.063 (0.310)	0.197*** (<0.001)	-0.110* (0.060)
Independent variable				
BETA	0.040 (0.404)	0.195*** (0.001)	0.050 (0.305)	0.252*** (<0.001)
DR	0.024 (0.607)	-0.056 (0.346)	0.016 (0.734)	-0.080 (0.156)
SIZE	0.620*** (<0.001)	-0.212*** (0.001)	0.584*** (<0.001)	-0.297*** (<0.001)
Adj-R <sup>2</sup>	0.445	0.093	0.415	0.192

Note:

1. FSR, DSR, BETA, DR, and SIZE denote the foreign shareholding ratio, domestic shareholding ratio, market risk, debt ratio, and the log of total asset respectively.
2. (·) denotes p-value.
3. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

Table 5 explores the effect of the foreign shareholding ratio on financial performance. The effect coefficients of the foreign shareholding ratio on EPS, ROA, ROE, and Tobin's Q during the crisis are 0.219 (p-value<0.001), 0.265 (p-value<0.001), 0.550 (p-value<0.001), and 0.531 (p-value<0.001), respectively. The effect coefficients of the foreign shareholding ratio on EPS, ROA, ROE, and Tobin's Q before the crisis are 0.127 (p-value=0.099), 0.227 (p-value=0.003), 0.271 (p-value=0.001), and 0.465 (p-value=0.001), respectively. The results revealed a positive relation between the foreign shareholding ratio and financial performance, both during and before the crisis, providing empirical evidence to support hypothesis 2. This proved that a higher foreign shareholding ratio resulted in better financial performance, similar to results reported in relevant studies. Additionally, the effect coefficients of the domestic shareholding ratio on EPS, ROA, ROE, and Tobin's Q during the crisis are 0.208 (p-value=0.001), 0.125 (p-value<0.001), 0.276 (p-value<0.001), and 0.412 (p-value<0.001), respectively. The effect coefficients of the domestic shareholding ratio on EPS, ROA, ROE, and Tobin's Q before the crisis is 0.438 (p-value<0.001), 0.593 (p-value<0.001), 0.566 (p-value<0.001), and 0.484 (p-value<0.001), respectively. Notably, the reverse phenomenon is observed in the predictability of the foreign shareholding ratio for financial performance during and before the crisis. One possible explanation is that compared with foreign investors, domestic institutions have the advantage of access to information, enabling more flexible investment decisions. However, these investment targets lack stability, resulting in lower financial performance during the crisis.

**Table 5 The Effect of Foreign and Domestic Investment on Performance**

Panel A : During financial crisis								
	EPS		ROA		ROE		Tobin's Q	
Mediator								
FSR	0.219*** (<0.001)		0.265*** (<0.001)		0.550*** (<0.001)		0.531*** (<0.001)	
DSR		0.208*** (0.001)		0.125*** (<0.001)		0.276*** (<0.001)		0.412*** (<0.001)
Control variable								
BETA	-0.055* (0.055)	-0.048* (0.099)	-0.098*** (<0.001)	-0.085*** (0.001)	-0.176*** (0.003)	-0.219*** (<0.001)	-0.219*** (<0.001)	-0.274*** (<0.001)
DR	-0.211*** (<0.001)	-0.312*** (<0.001)	-0.349*** (0.0008)	-0.426*** (<0.001)	-0.091 (0.122)	-0.078 (0.196)	-0.056 (0.298)	-0.040 (0.488)
SIZE	-0.113** (0.012)	0.064 (0.108)	-0.193*** (<0.001)	-0.053 (0.140)	-0.313*** (<0.001)	0.001 (0.966)	-0.556*** (<0.001)	-0.139** (0.020)
Adj-R <sup>2</sup>	0.108	0.077	0.269	0.236	0.267	0.161	0.209	0.201
Panel B : Before the crisis								
Mediator								
FSR	0.127* (0.099)		0.227*** (0.003)		0.271*** (0.001)		0.465*** (<0.001)	
DSR		0.438*** (<0.001)		0.593*** (<0.001)		0.566*** (<0.001)		0.484*** (<0.001)
Control variable								
BETA	-0.063 (0.299)	-0.183*** (0.002)	-0.009 (0.885)	-0.171*** (0.001)	-0.044 (0.468)	-0.199*** (<0.001)	-0.021 (0.709)	-0.151*** (0.008)
DR	-0.145** (0.017)	-0.115** (0.040)	-0.261*** (<0.001)	-0.220*** (<0.001)	0.019 (0.754)	0.058 (0.283)	-0.224*** (<0.001)	-0.192*** (0.001)
SIZE	0.103 (0.182)	0.322*** (<0.001)	-0.054 (0.477)	0.277*** (<0.001)	-0.170** (0.030)	0.180*** (0.002)	-0.371*** (<0.001)	0.074 (0.200)
Adj-R <sup>2</sup>	0.063	0.196	0.104	0.346	0.033	0.250	0.179	0.237

Note.

1. FSR, DSR, BETA, DR, and SIZE denote the foreign shareholding ratio, domestic shareholding ratio, market risk, debt ratio, and the log of total asset respectively.
2. (·) denotes p-value.
3. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

Table 6 shows the effect of CSR on financial performance. In Penal A, after adding the foreign shareholding and domestic shareholding ratio, the impact of CSR on financial performance either decreases or becomes non-significant during the crisis. In Model 1, the effect coefficients of CSR on EPS, ROA, ROE, and Tobin's Q during the crisis are 0.147 (p-value=0.022), 0.211 (p-value=0.001), 0.215 (p-value<0.001), and 0.211 (p-value=0.001), respectively. The effect coefficients of CSR on these performance variables before the crisis are 0.079(p-value=0.213), 0.053(p-value=0.309), 0.085(p-value=0.192), and 0.201 ((p-value=0.001). These results indicate that companies that implemented CSR exhibited better financial performance during the crisis, suggesting that CSR positively affects financial performance significantly. Therefore, Hypothesis 3a and the third condition are supported by empirical evidence, indicating that CSR assisted companies in improving their financial performances during the crisis. However, CSR only positively affected Tobin's Q before the crisis significantly before the crisis. Hypothesis 3b is only partially supported.

The Relation between CSR and Financial Performance under Crisis: The Mediating Effect of Foreign Investment

**Table 6** The Mediating Effect of Foreign and Domestic Investment.

Panel A : During financial crisis												
Variable	EPS			ROA			ROE			Tobin's Q		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
CSR	0.147** (0.022)	0.084 (0.180)	0.160** (0.011)	0.211*** (0.001)	0.127** (0.027)	0.229*** (<0.001)	0.215*** (<0.001)	0.130** (0.022)	0.233*** (<0.001)	0.211*** (0.001)	0.130** (0.028)	0.238*** (<0.001)
FOR		0.387*** (<0.001)			0.512*** (<0.001)			0.517*** (<0.001)			0.497*** (<0.001)	
DOM			0.218*** (0.001)			0.282*** (<0.001)			0.291*** (<0.001)			0.427*** (<0.001)
BETA	-0.142** (0.023)	-0.157*** (0.009)	-0.184*** (0.003)	-0.170*** (0.005)	-0.190*** (0.001)	-0.225*** (<0.001)	-0.173*** (0.004)	-0.193*** (<0.001)	-0.230*** (<0.001)	-0.132** (0.030)	-0.152*** (0.007)	-0.215*** (<0.001)
DR	-0.072 (0.238)	-0.081 (0.167)	-0.060 (0.318)	-0.030 (0.606)	-0.042 (0.434)	-0.015 (0.798)	-0.178*** (0.003)	-0.190*** (<0.001)	-0.161*** (0.004)	-0.143** (0.017)	-0.155*** (0.006)	-0.119** (0.029)
SIZE	-0.077 (0.218)	-0.317*** (<0.001)	-0.031 (0.622)	-0.244*** (<0.001)	-0.562*** (<0.001)	-0.184*** (0.002)	-0.148** (0.013)	-0.470*** (<0.001)	-0.087 (0.136)	-0.048 (0.436)	-0.356*** (<0.001)	0.043 (0.450)
Adj-R <sup>2</sup>	0.046	0.126	0.086	0.117	0.259	0.186	0.133	0.279	0.207	0.087	0.221	0.249

  

Panel B : Before financial crisis												
Variable	EPS			ROA			ROE			Tobin's Q		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
CSR	0.079 (0.213)	0.057 (0.380)	0.129** (0.027)	0.053 (0.309)	0.009 (0.886)	0.120** (0.022)	0.085 (0.192)	0.033 (0.612)	0.149*** (0.008)	0.201*** (0.001)	0.116* (0.055)	0.257*** (<0.001)
FOR		0.110 (0.165)			0.224*** (0.004)			0.261*** (0.001)			0.431*** (<0.001)	
DOM			0.454*** (<0.001)			0.608*** (<0.001)			0.585*** (<0.001)			0.516*** (<0.001)
BETA	-0.045 (0.470)	-0.051 (0.417)	-0.159*** (0.007)	0.005 (0.940)	-0.007 (0.914)	-0.149*** (0.005)	-0.024 (0.708)	-0.037 (0.556)	-0.172*** (0.003)	0.026 (0.671)	0.004 (0.940)	-0.104*** (0.061)
DR	-0.138** (0.024)	-0.140** (0.022)	-0.102* (0.068)	-0.257*** (<0.001)	-0.260*** (<0.001)	-0.208*** (<0.001)	0.026 (0.673)	0.022 (0.718)	0.073 (0.174)	-0.207*** (0.001)	-0.214*** (<0.001)	-0.166*** (0.002)
SIZE	0.166*** (0.007)	0.102 (0.186)	0.301*** (<0.001)	0.077 (0.209)	-0.054 (0.476)	0.258*** (<0.001)	-0.018 (0.776)	-0.171** (0.029)	0.156*** (0.007)	-0.121** (0.046)	-0.373*** (<0.001)	0.032 (0.564)
Adj-R <sup>2</sup>	0.044	0.048	0.208	0.061	0.087	0.357	0.001	0.030	0.267	0.082	0.188	0.294

Note:

1. FSR, DSR, BETA, DR, and SIZE denote the foreign shareholding ratio, domestic shareholding ratio, market risk, debt ratio, and the log of total asset respectively.
2. (·) denotes p-value and \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

In Model 2, we use EPS as the dependent variable. After adding the foreign shareholding ratio (DSR) as the mediator variable, the effect of CSR on financial performance was no longer significant. Furthermore, the coefficient of the foreign shareholding ratio with financial performance is 0.387 (p-value<0.001), indicating that companies with higher foreign shareholding ratios enjoyed higher financial performance during the crisis. After adding the foreign shareholding ratio, the effect of CSR on EPS is non-significant. Moreover, the impact of CSR on ROA, ROE, and Tobin's Q dropped from 0.211 (p-value=0.001), 0.215 (p-value<0.001), and 0.211 (p-value=0.001) to 0.127 (p-value=0.027), 0.130 (p-value=0.022), and 0.130 (p-value=0.028), respectively. Additionally, the effect of the foreign shareholding ratio on ROA, ROE, and Tobin's Q is 0.512 (p-value<0.001), 0.517 (p-value<0.001), and 0.497 (p-value<0.001), respectively. Condition four (i.e., after adding CSR and foreign shareholding ratio in the regression model, the foreign shareholding ratio will affect financial performance, and the effect of CSR on financial performance will either decrease or become non-significant) is supported by empirical evidence. In Model 3, after adding the domestic shareholding ratio (DSR), the effect of CSR on EPS, ROA, ROE, and Tobin's Q is 0.160 (p-value=0.011), 0.229 (p-value<0.001), 0.233 (p-value<0.001), and 0.238 (p-value<0.001), respectively. Despite the domestic shareholding ratio exhibiting a significant positive influence on financial performance at the 1% level, the inclusion of the domestic shareholding ratio also increases the effect of CSR on financial performance. Therefore, it is not fulfilling the condition that the impact of CSR on financial performance will either decrease or become non-significant.

In Penal B, the only financial performance variable that exhibited a significant positive relation with CSR was Tobin's Q (0.201, p-value=0.001) before the crisis. Therefore, this study further discusses the regression analysis when Tobin's Q is set as the dependent variable. After including the foreign shareholding ratio in Model 2, the effect of the foreign shareholding ratio on Tobin's Q is 0.431 (p-value<0.001); the impact of CSR on Tobin's Q decreased from 0.201 (p-value=0.001) to 0.116 (p-value=0.055), indicating that condition four was only satisfied when the foreign shareholding ratio was applied as the mediator. After adding both CSR and foreign shareholding ratio in the regression model, the effect of the foreign shareholding ratio is positive significantly on financial performance, and the impact of CSR on financial performance decreased, providing empirical evidence to support condition four. In Model 3, when the domestic shareholding ratio is included, the effect of CSR on Tobin's Q increases from 0.201 (p-value=0.001) to 0.257 (p-value<0.001), not fulfilling the condition of decreasing the impact of CSR on financial performance.

### 4.3 Mediating Effect of the Foreign and Domestic shareholding ratios

Table 7 explores the mediator effect of foreign and domestic shareholding ratios. In Penal A, we show the result of testing the mediating effect during the crisis. CSR has a significant positive influence on the foreign shareholding ratio (0.163, p-value=0.001). The foreign shareholding ratio (0.219, p-value<0.001) and CSR (0.147, <0.05) both had a significant positive influence on EPS. After adding the foreign shareholding ratio and CSR in a regression, the effect of the foreign shareholding ratio on EPS is significantly positive (0.387, <0.01). However, the impact of CSR on EPS is non-significant (0.084, p-value=0.180). This indicates that the foreign shareholding ratio completely mediates EPS. Similarly, for the other three financial performance variables, the foreign shareholding ratio also has a complete mediating effect, providing empirical support for Hypothesis 4a (i.e., during the crisis, the foreign shareholding ratio has a mediating effect on the relation between CSR and financial performance). The possible reasons for this result include that (1) the foreign shareholding ratio provides stability during the crisis and (2) the company implements CSR strategies recognized by foreign investors, further influencing financial performance.

**Table 7 Summary of the Mediating Effect of Foreign and Domestic investment**

Panel A : During financial crisis									
Mediating effect condition	(1) The effect of CSR on foreign and domestic investment		(2) The effect of mediator on the dependent variables		(3) The effect of independent variable on the dependent variables	(4) After adding the mediator, the effect of mediator on dependent is significant and the effect of independent variable on the dependent variable decreases or becomes non-significant.			Mediating effect
Variable	FOR	DOM	FOR	DOM	CSR	CSR	FOR	DOM	
EPS			0.219*** ( $<0.001$ )	0.208*** (0.001)	0.147** (0.022)	0.084 (0.180)	0.387*** ( $<0.001$ )		Completely
						0.160** (0.011)		0.218*** (0.001)	No
ROA			0.265*** ( $<0.001$ )	0.125*** ( $<0.001$ )	0.211*** (0.001)	0.127** (0.027)	0.512*** ( $<0.001$ )		Partial
	0.163*** (0.001)	-0.063 (0.310)				0.229*** ( $<0.001$ )		0.282*** ( $<0.001$ )	No
ROE			0.550*** ( $<0.001$ )	0.276*** ( $<0.001$ )	0.215*** ( $<0.001$ )	0.130** (0.022)	0.517*** ( $<0.001$ )		Partial
						0.233*** ( $<0.001$ )		0.291*** ( $<0.001$ )	No
Tobin's Q			0.531*** ( $<0.001$ )	0.412*** ( $<0.001$ )	0.211*** (0.001)	0.130** (0.028)	0.497*** ( $<0.001$ )		Partial
						0.238*** ( $<0.001$ )		0.427*** ( $<0.001$ )	No

Note:

1. FSR, DSR, BETA, DR, and SIZE denote the foreign shareholding ratio, domestic shareholding ratio, market risk, debt ratio, and the log of total asset respectively.
2. (·) denotes p-value.
3. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

**Table 7 Summary of the Mediating Effect of Foreign and Domestic investment (continue)**

Panel B : Before financial crisis									
Mediating effect condition	(1) The effect of CSR on foreign and domestic investment		(2) The effect of mediator on the dependent variables		(3) The effect of independent variable on the dependent variables	(4) After adding the mediator, the effect of mediator on dependent is significant and the effect of independent variable on the dependent variable decreases or becomes non-significant.			Mediating effect
Variable	FOR	DOM	FOR	DOM	CSR	CSR	FOR	DOM	
EPS			0.127*	0.438***	0.079	0.057	0.110		No
			(0.100)	(<0.001)	(0.213)	(0.380)	(0.165)		
ROA						0.129**		0.454***	No
						(0.027)		(<0.001)	
ROE			0.227***	0.593***	0.053	0.009	0.224***		No
			(0.003)	(<0.001)	(0.309)	(0.886)	(0.004)		
Tobin's Q	0.197***	-0.110*				0.120**		0.608***	No
	(<0.001)	(0.060)				(0.022)		(<0.001)	
Tobin's Q			0.271***	0.566***	0.085	0.033	0.261***		No
			(0.001)	(<0.001)	(0.192)	(0.612)	(0.001)		
Tobin's Q						0.149***		0.585***	No
						(0.008)		(<0.001)	
Tobin's Q			0.465***	0.484***	0.201***	0.116*	0.431***		Partial
			(<0.001)	(<0.001)	(0.001)	(0.055)	(<0.001)		
						0.257***		0.516***	No
						(<0.001)		(<0.001)	

Note:

1. FSR, DSR, BETA, DR, and SIZE denote the foreign shareholding ratio, domestic shareholding ratio, market risk, debt ratio, and the log of total asset respectively.
2. (·) denotes p-value.
3. \*, \*\*, \*\*\* denote the significance at the 10%, 5%, and 1% levels, respectively.

In Penal B, we show the result of testing the mediating effect that is before the crisis. CSR significantly influences the foreign shareholding ratio (0.197, p-value<0.001). A significant positive relation is observed between the foreign shareholding ratio and Tobin's Q (0.465, p-value<0.001) and between CSR and Tobin's Q (0.201, p-value<0.001). After adding the foreign shareholding ratio and CSR into a regression, the foreign shareholding ratio has a significant positive relation with Tobin's Q (0.431, p-value<0.001). The impact of CSR on Tobin's Q decreases from 0.201 (p-value<0.001) to 0.116 (p-value=0.055). Therefore, the foreign shareholding ratio has a partial mediating effect on the relation between CSR and Tobin's Q. However, the impact of CSR on EPS (0.079, p-value=0.213), ROA (0.053, p-value=0.309), and ROE (0.085, p-value=0.192) are all non-significant, indicating that CSR does not affect significantly on financial performance. Thus, Hypothesis 4b is partially supported. Relevant studies have mentioned that the crisis caused most companies to cancel or postpone their investment plans (Campello *et al.*, 2010). Therefore, because the crisis decreased the company's investment and led investors to select investing targets, companies that implement CSR prudently are more favored by foreign investors. The empirical results of this study reveal that companies that implement CSR were preferable by foreign investors and exhibited higher financial performance during the crisis.

## **5. Conclusions**

This study discusses the mediating effect of foreign investments and whether CSR influences financial performance. Studies have revealed that during the crisis in 2008, in which the capital market was affected and economic development slowed, CSR effectively assisted companies in reducing and recovering losses incurred (Bouslah *et al.*, 2016; Giannarakis and Theotokas, 2011; Harjoto and Jo, 2011; Lins *et al.*, 2017; Simionescu and Dumitrescu, 2014; Sun and Cui, 2014). Furthermore, the foreign shareholding ratio is positively correlated to the quality of the CSR system (Suzuki *et al.*, 2010). During a crisis, CSR can assist companies in maintaining favorable investment environments to attract foreign investments, reduce losses, and enjoy a better financial performance compared with those that do not implement CSR. Because relevant studies have focused on the influence of CSR on financial performance, this study employed the hierarchical regression model to discuss the impact of CSR on financial performance before and after the crisis in 2008. The mediator variable (i.e., foreign shareholding ratio) is then used to analyze the relationship between CSR and financial performance. By inspecting the foreign shareholding ratio, we determine whether CSR is the reason for higher financial performance. Companies that practice CSR can continue to attract foreign investments during the crisis and present higher financial performances. This study can provide a reference for companies and investors.

The empirical results indicated that CSR and financial performance had a positive relation during the crisis. This result is similar to those of other studies, which revealed that companies that implemented CSR exhibited higher financial performance (Giannarakis and Theotokas, 2011; Lins *et al.*, 2017; Simionescu and Dumitrescu, 2014) and that those with higher CSR were favored by foreign investors (Bae and Goyal, 2010; Suzuki *et al.*, 2010). Additionally, the domestic shareholding ratio and CSR do not have a positive relation because domestic institutional investors have more information than foreign investors. Thus, domestic institutional investors are not limited to investing in transparent companies implementing CSR activities. Because companies commonly describe CSR as a particular type of strategic investment (Jia and Zhang, 2013; Oh *et al.*, 2011), it is often ignored and unfavorable to domestic institutions seeking to create short-term profit. This results in the reverse phenomenon in the predictability of foreign and domestic shareholding ratios for their respective financial performance during and before the crisis. Moreover, the results verify those of studies on the possibilities of CSR limiting short-term opportunistic behaviors (Benabou and Tirole, 2010;



Cheng *et al.*, 2014), thereby reducing losses caused by a volatile business environment.

Finally, after setting the foreign shareholding ratio as the mediator variable, this study found that the foreign shareholding ratio had a mediating effect on the relation between CSR and financial performance, which has few reported in previous studies. This indicates that investments in CSR assisted companies in attracting foreign investors even during financial crises, which is reflected in financial performance. Part of the reason is that foreign investors highly value CSR, resulting in companies that implement CSR exhibiting a higher foreign shareholding ratio and demonstrating better financial performance. This implies that, to companies, implementing CSR is not just a cost or limitation. CSR strategies more suitable for the company can be a source of innovation and competitive advantage (Porter and Kramer, 2006). Therefore, strategic CSR activities are often maintained during a crisis, whereas tactical CSR activities are usually discontinued (Bansal *et al.*, 2015). This study assumes that foreign investments are made by professional investment institutions consisting of numerous analysts familiar with stock market tools and have access to immediate and high-quality market information. Therefore, if CSR is irrelevant to the company's strategy, it is considered a "waste of resources," which makes the company less favorable for foreign investment. In summary, the CSR value for a company is more aptly demonstrated during the crisis.

Because of the widespread influence of CSR (e.g., cost of capital, information transparency), future studies can focus on discussing how CSR affects financial performance and provides companies with incentives to implement CSR. This will improve the market investment environment and attract more financial investments, enabling companies to support societal development while implementing economic development. As a result, societal development will not be affected by the company's financial growth and will not cause the company to lose profit. The company can achieve sustainable operation, and the public can live in a safe and prosperous society.

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