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RESEARCH ARTICLE

Corporate Social Responsibility and Market-Adjusted Stock Returns: An Asian Perspective

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Abstract: This study investigates the short-run and long-run effects of corporate social responsibility (CSR) on firms' financial performance through market-adjusted stock returns from one year to three years holding periods. We analyze the year 2015 CSR data of 958 publicly-listed companies from 11 countries in Asia. This study also reflects on the disaggregated effects of three pillars of CSR, namely: environment, social, and governance. We conjecture that the trade-off does not exist between building corporate citizenship and financial performance, in light of increasing attention of CSR among Asian countries. We also examine the phenomenon in the contexts of country and sector levels. Our main findings reveal that CSR has a cumulative effect, which reinforces better financial performance in the future. This study also shows mixed evidence regarding the disaggregated effect of CSR pillars. Moreover, we find that the impact of CSR and its pillars on market-adjusted stock returns vary per country and per sector. We argue that our results are caused by regulatory compliance, priorities, demand from stakeholders, cultural factors, and macroeconomics considerations. The effect of CSR on market-adjusted stock returns varies over time and create a positive and negative result depending on the period of analysis because this strategy is a long-term process. Lastly, insights into the importance of building corporate citizenship on sustainability and firm performance are elaborated.

Keywords: Asian markets, corporate finance, corporate social responsibility, market-adjusted stock return,

The ultimate goal of any business enterprise is to maximize firm value. Firm's behavior plays an important role in achieving this objective, and its impact on society has increasing attention over the past few decades. Corporate Social Responsibility (CSR) is the allusion of firm behavior and one of the major issues in the business environment. It deals with the relationship between firms and stakeholders and has increasingly recognized moral implications on investments (Cheung, Tan, Ahn, & Zhang, 2010). CSR is corporate citizenship based on the demand for environmental protection, social engagements, and emphasis on corporate governance (Wang, 2011). Its significant effect on financial performance has an overriding relevance on businesses, society, and nation-building (Lin, Chang, & Dang, 2015). Moreover, it induces well-functioning markets and financial stability in economics and finance perspective (Lins, Servaes, & Tamayo, 2017).

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CSR has become a fast-growing contributor of long-lasting enterprises in the recent decade. Recently, CSR is measured and reported through rankings of independent companies, serving as the corporate social performance of business firms from the initiated good corporate citizenship to its stakeholders. Its mandate has been a subject of contradicting views from past literature and leave issues on the benefits of social investment and its attached costs for the company. The independent consideration of CSR and corporate financial performance provides strong evidence and theoretical background in the literature to establish a relation between the two constructs. Prior studies provide evidence suggesting a positive effect (Moskowitz,1972; Cheung et al., 2010; Wang, 2011; Flammer, 2013; Von Arx & Ziegler, 2014; Lins et al., 2017), negative findings (Vance, 1975; McWilliams & Siegel, 2000; Brammer, Brooks, & Pavelin, 2006; Becchetti & Ciciretti, 2009; Choi, Kwak, & Choe, 2010; Vujicic, 2015; Lin & Amin, 2016), and neutral relation (Alexander & Buchholz, 1978).

The inconsistency in the relevant literature mentioned above creates a good opportunity to systematically investigate the relationship between CSR and corporate financial performance with detailed considerations and measurements. Most of the previous studies utilized accounting-based and market-based measures, which adds to the inconclusive findings in analyzing the phenomenon. Moreover, existing research on these issues is mainly dealing with the Western context and few studies reflecting on the individual country in Asia. Asian markets have a different approach to implementing CSR activities compare to Western markets. Cheung et al. (2010) discussed that, in comparison to listed firms in Western markets, firms in Asia are more illiquid. In addition, the separation of management and ownership is seldom and composed mostly of non-transparent high family-owned firms. Furthermore, CSR is increasingly recognized in Asia. For instance, Asia had a 12% share all over the world in 2005, and it increased to 21% in 2009 based on Credit Lyonnais Securities Asia CSR Reports (CLSA CG Watch, 2010). In addition, Asia had 514 listed companies engaged in CSR activities in 2007, and it increased to 1,145 companies in 2017 based on the ESG Data of Thomson Reuters (Thomson Reuters, 2017). In such vein, the engagement of business firms in Asian markets on socially responsible activities becomes a strategy which integrates environmental, social, and governance (ESG) factors in the decision-making process (Jun, 2016).

The study of firms from Asian markets leads to a cross-border analysis of CSR and financial performance relationship relevant to the culture. Chapple and Moon (2005) mentioned that CSR varies from different countries in Asia, which explained by penetration, extent, and profile as indicated by CSR ratings and issues. In addition, they explained that CSR could be perceived better through national factors such as public policy profiles and national business systems. The application of CSR includes typical charitable activities, voluntary works, and business models, which are influenced by the diverse culture of different countries in Asia (Sharma, 2013). For instance, Sharma (2013) mentioned that CSR in Taiwan is known with its "CSR supply chain," Thailand has "sufficient economy," whereas Indonesia is known for its "*gotong royong CSR.*"

To address these important issues, we developed an empirical study to fill the gaps in the literature. This study investigates the effects of CSR on market-adjusted stock returns as a proxy of financial performance. We contemplate on CSR and stock returns from one year to 3 years holding periods. We conjecture that a firm's engagement on corporate citizenship generates a positive outcome on the combination of accounting and market-based measures of financial performance in the short-run and the long-run. This study also reflects on the three pillars of CSR (environment, social, and governance) to disintegrate the effect of the composite value of CSR into each pillar. Specifically, we examine the phenomenon in the contexts of country and sector levels. Renneboog, Ter Horst, and Zhang (2008) explained that reflecting on the effect of CSR of each country can reduce possible noise that could affect the results caused by differences in regulatory backgrounds, cultural factors, and macroeconomics tendencies. The study examines the important issue regarding empirical testing of Asian markets, based on firms from 11 countries in Asia (Japan, Taiwan, South Korea, India, China, Hong Kong, Malaysia, Singapore, Indonesia, Thailand, and the Philippines). Moreover, this study differentiates the effects among sectors (such as financial, industrial, consumer services, technology, basic materials, consumer goods, utilities, health care, resources, and telecommunications services) based on the sector codes from Thomson Reuters ESG database. This conjecture is relevant and important

in investigating the effect of CSR in the sector level because its component may vary from one sector to another (Soana, 2011).

The remainder of the paper is organized as follows: Section 2 briefly discusses and reviews the empirical literature regarding the relation of CSR on financial performance. It also presents the formulated hypotheses. Section 3 expounds the methodology applied in this study. Section 4 presents the empirical results and discussions. Lastly, Section 5 concludes the paper and recommends further studies.

Literature Review and Hypotheses Development

Based on stakeholder's perspective, CSR activities build citizenship culture that considers stakeholders' satisfaction, resulting in a positive outcome to the enterprise (McWilliams, Siegel, & Wright, 2006). Freeman (1984) explained that the implementations of company policies should satisfy not just shareholders but also include workers, customers, suppliers, and community organizations. The firms' CSR engagement is also associated with the sensitivity over the strong demand and greater scrutiny of risk of actions of stakeholders (Brower & Mahajan, 2013). A firm's engagement in CSR activities promotes the relationship between firms and stakeholders (Russo & Perrini, 2010; Tu & Huang, 2015). Hence, a positive outcome is associated with the firms' financial performance.

Under myopia avoidance hypothesis, firms with socially responsible practices create a sustainable relationship with stakeholders and profitability. Myopia avoidance is explained in the CSR literature and financial performance (Wang, 2011; Flammer, 2013; Von Arx & Ziegler, 2014). This notion is also supported by the resource-based view (Barney, 1991). Under the resource-based theory, an acceptable CSR performance provides a more positive financial performance (Arsoy, Arabaci, & Çiftçioğlu, 2012). CSR, as a firm's channel of valuable resources, generates positive outcome such as better brand image and corporate reputation, resulting to an improved competitive advantage and better financial performance (Orlitzky, Schmidt, & Rynes, 2003; Brown & Forster, 2013).

The impact of CSR activities on firm performance is a remarkable concern among scholars from the literature of business ethics and financial management. Previous studies explain the phenomenon and the conduciveness of CSR as a determinant of a firm's financial performance. However, these studies have resulted in inconclusive views in past studies. Early years of the study on this issue provide positive and significant findings between CSR and stock returns after rating the social responsibility credentials of 14 firms based on opinion (Moskowitz, 1972). However, Vance (1975) argued that CSR has negative relation with corporate performance (measured through stock market valuations), based on the analysis of the perceived degree of social responsibility of students and businesspeople from the 50 leading firms in the U.S.A. Moreover, an insignificant relationship was reflected in the study of Alexander and Buchholz (1978) regarding the effect of CSR on stock market performance. They explained that this finding is attributed to stock market efficiency in which all new information related to a firm's performance is automatically reflected in the stock price.

Most of the prior studies provide positive findings. Cheung et al. (2010) addressed the question of whether CSR matters in Asian emerging markets and conjectured that firms are rewarded from the improvement of CSR practices. Choi et al. (2010) discussed that stakeholder-weighted CSR measure has a positive and significant association on corporate financial performance in Korea. They mentioned that the traditional business climate in Korea is mostly concerned with economic value and less concerned with the fair distribution of wealth, environmental protection, community relations, and others. Different incidents happened in Korea, which changed the traditional means to an increasing concern for the environment and corporate governance transparency. Wang (2011) conjectured similar findings and explained that firms with good corporate citizenship show growth on stockholder's wealth in the short-run and long-run stock returns relative to market indices, stock valuation, and growth of the stock.

Lin and Amin (2016) explained that CSR activities are beneficial and have a positive effect on firms' performance in Taiwan and Indonesia. They discussed that Indonesia has CSR mandatory reporting, particularly to firms engaged in natural resources. This engagement is considered a strategy implemented at different means, which causes an increase in expenditures on social responsibility. The result in Taiwan is due to its popularity in the Asian market, where there is a huge industry of technology with a

strong demand for a sustainable investment from the government in the form of CSR. In addition, Lins et al. (2017) examined the effect of CSR intensity as a proxy of social capital investment on stock returns during the 2008–2009 financial crisis and revealed that firms with high investment in social capital have four to seven percentage increase in stock returns than firms with low social capital investment.

On the other hand, other scholars provide negative findings from the past literature. McWilliams and Siegel (2000) explained that the expenditure on CSR activities is harmful to overall firms' profitability. CSR generates competitive disadvantages in a competitive market due to cash outflow from business firms, which leads to a negative impact on firm performance (Berens, Van Riel, & Van Rekom, 2007). Moreover, these activities deflect the company's objective from profit maximization (Wagner, Lutz, & Weitz, 2009) and may not be covered by the benefits generated (Groza, Pronschinske, & Walker, 2011), which negatively affect a firm's financial performance. Furthermore, Chen, Hung, and Lee (2017) employed the CSR Index of Taiwanese companies and conjectured that activities related to CSR decrease firms' value due to the increase in costs resulting to a negative impact on the stock returns.

Although an inconclusive finding is presented from past literature, these studies imparted enough findings on the direct and positive relationship between CSR and corporate financial performance. We conjecture that the aggregated CSR ratings are positively and significantly associated with market-adjusted stock returns in Asia in the short-run and the long-run. Hence, we develop the first hypothesis as follows:

H_1: CSR composite ratings have a positive and significant effect on market-adjusted stock returns.

Other studies provide evidence regarding the specific pillars of CSR on firm performance. Flammer (2013) examined the role of CSR in terms of environmental awareness of shareholders on stock prices. Her study revealed that companies reported to be behaving responsibly toward the environment and experience a significant stock price increase, whereas firms that behave irresponsibly face a significant decrease. Moreover, Von Arx and Ziegler (2014) examined the effect of CSR on corporate financial performance in the U.S.A. and Europe and disentangled firm and sector-specific impacts. Their study revealed that environmental and social activities of firms compared with other firms in a particular industry are valued by financial markets in both regions. The effect of CSR on financial performance is more vigorous in the U.S. than in Europe due to its longer implementation of CSR ethical components (Von Arx & Ziegler, 2014).

Furthermore, Singh, Sethuraman, and Lam (2017) explained that CSR towards workplace and employee concern has a significant positive effect on firm performance. They conjectured that positive workplace practices and taking care of employees create value for the company. However, their study revealed that CSR towards corporate governance has a weak positive effect on firm performance in Hong Kong and China. They conjectured that the credibility of corporate governance mechanisms of the firms covered in the study might not offer any differentiating ability to any particular firm. In addition, the effect of CSR towards the community shows an insignificant effect because these firms might be reporting their CSR practices according to their levels and types of stakeholder engagement, in compliance to the regulations justified by the companies. On the other hand, Singh et al. (2017) revealed that the effect of CSR towards the environment shows a negative effect on the financial performance of firms from Hong Kong and China because environmental activities are treated as additional costs rather than potential beneficial programs for companies.

Brammer et al. (2006) analyzed the effect of CSR on stock returns and contemplated on CSR indicators such as environment, employment, and community activities. Their study revealed that CSR composite ratings, environment, and employee indicators have a significant negative effect, whereas community indicator has a weak positive effect on stock returns of U.K. quoted firms. In addition, Vujicic (2015) examined the aggregate effect of the total CSR rating and the disaggregate effect of social responsibility pillars such as community, environment, and employment on stock returns of U.S. firms. Her study conjectured that expenditure on CSR in business strategies is destructive to the profits of the firm and shareholder value.

This study examines the disaggregated effect of each CSR pillars, namely, environmental (ENV), social (SOC), and governance (GOV) on market-adjusted

stock returns in the short-run and the long-run. Hence, we developed the following hypotheses:

H_2. **Disaggregated effect hypotheses:**

H_{2a}. ENV ratings have a positive and significant effect on market-adjusted stock returns.

H_{2b}. SOC ratings have a positive and significant effect on market-adjusted stock returns.

H_{2c}. GOV ratings have a positive and significant effect on market-adjusted stock returns.

Methods

This study investigates the impact of CSR on market-adjusted stock returns in the Asian context. We reflected on firms listed in the Thomson Reuters ESG database from 11 countries. We gathered an initial sample of 1,060 firms with complete ESG data from the year 2015. This study reflects on a final sample of 958 firms after matching CSR data with other financial information from Thomson Reuters Eikon database. In addition, we examined the phenomenon in the contexts of country and sector levels. We contemplated on 388 firms from Japan, 96 firms from Taiwan, 93 firms from South Korea, 84 firms from India, 73 firms from China, 61 firms from Hong Kong, 48 firms from Malaysia, 36 firms from Singapore, 29 firms from Indonesia, 28 firms from Thailand, and 22 firms from Philippines.

We classified firms per sector according to the Thomson Reuters Business Classification (TRBC). These include financials, industrials, consumer services, technology, basic materials, consumer goods, utilities, health care, resources, and telecommunications services. The financial sector consisted of 203 firms from the banking services, insurance, investment banking and investment services, residential and commercial real estate investment trusts (REITs), real estate operations, diversified financial services, and investment trusts. The industrials sector consisted of 181 firms from aerospace and defense, machinery, equipment and components, commercial services and supplies, industrial conglomerates, commercial services and supplies, transportation, ground, transport infrastructure, air freight and courier services, construction and engineering, diversified trading and distributing, marine services, and airline services. The consumer services sector consisted of 155 firms from automobiles and auto parts, textiles and apparel, household goods, hotels and entertainment services, diversified retail, media and publishing, specialty retailers, homebuilding and construction supplies, and leisure products.

Furthermore, the technology sector is composed of 99 firms from computers and office equipment, semiconductors and semiconductor equipment, software and information technology services, communications equipment, computers, phones and household electronics, and electronic equipment and parts. Basic materials sector consisted of 95 firms from chemicals, paper and forest products, metals and mining, containers and packaging, and construction materials. Consumer goods sector consisted of 71 firms from personal and household products and services, food and tobacco, food and drug retailing, and beverages. The u sector is composed of 43 firms from electric utilities, multiline utilities, natural gas utilities, and water and other utilities. The health care sector is consisted of 39 firms from pharmaceuticals, biotechnology and medical research, healthcare equipment and supplies, and healthcare providers and services. The resources sector consisted of 38 firms from oil and gas, oil and gas-related equipment and services, coal, and renewable energy, whereas the telecommunications services sector is composed of 34 firms.

This study contemplates on the ESG ratings and each pillars' ratings as a proxy measure of a firm's CSR performance. We collected the data from S-Network FTP, an online database of ESG data from Thomson Reuters. The ESG composite rating is the combination of the average ratings of three pillars and ESG controversies. The ESG controversies are composed of disputes across the 10 categories from the environment, social, and governance pillars. Table 1 shows that categories with higher weights are items which contain different issues. For instance, management category is composed of multiple issues such as board composition, diversity, independence, committees, and compensation. Thomson Reuters (2019) explained these 10 categories used in the measurement of each pillar. Under the environmental pillar, resource use rating is composed of the business firms' capability and performance to conserve resources and improve supply chain management in

Table 1

Distribution of CSR Measures Per Category

Pillars	Categories	Pillars in rating	Weights
Environmental	Resource use	19	11%
	Emissions	22	12%
	Innovation	20	11%
Social	Workforce	29	16%
	Human Rights	8	4.5%
	Community	14	8%
	Product Responsibility	12	7.0%
Governance	Management	34	19%
	Shareholders	12	7%
	CSR Strategy	8	4.5%
Total		178	100%

Source: Thomson Reuters. (2019). ESG methodology. Retrieved from https://www.refinitiv.com/ content/dam/marketing/en_us/documents/methodology/esg-scores-methodology.pdf

an eco-efficient way. The emission reduction rating is composed of the commitment and firms' effectivity to lessen environmental emission on its production and operational processes. In addition, the innovation rating is composed of the capability of firms to lessen the costs related to environmental activities and new market opportunity creation.

This study reflects on the market-adjusted stock return as a measure of firm performance (Ritter & Welch, 2002). We conjectured that it is a good measurement of firms' financial performance because it combines accounting and market-based measures. It also reveals the difference between the performance of an individual stock and market index performance at a particular holding period. We utilized market indices to benchmark stock market performance of a particular stock such as Nikkei 225 for firms from Japan, TSEC weighted index for firms from Taiwan, Korea Stock Exchange KOSPI Index for firms from South Korea, SENSEX for firms from India, Shanghai Shenzhen CSI 300 Index for firms from China, HANG SENG Index for firms from Hong Kong, FTSE Bursa Malaysia KLCI for firms from Malaysia, STI Index for firms from Singapore, Jakarta Stock Price Index (JCI) for firms from Indonesia, SET Index for firms from Thailand, and PSEi Index for firms from the Philippines. The formula for market-adjusted stock return is presented as follow:

$$MAR = (P_1 - P_0)/P_0 - (M_1 - M_0)/M_0 \quad (1)$$

where MAR is the market-adjusted stock return, P_0 is the initial stock price, P_1 is the ending stock price, M_0 is the initial price of the market index, and M_1 is the ending price of the market index. This study utilized the initial stock price of the year 2015 and ending stock price of the year 2015 for one year holding period, the initial stock price of the year 2015 and ending stock price of the year 2016 for the two years holding period, and initial stock price of the year 2015 and ending stock price of the year 2017 for the three years holding period.

This study employs multivariate cross-sectional regression models based on Brammer et al. (2006). However, we modified the first four models because the present study examines the short-run impact of CSR rating on stock returns. In addition, we controlled firm characteristics based on Fama-French factors (market capitalization, CAPM beta, and market-to-book value) and market momentum (Carhart, 1997) to address the other plausible alternative explanation in the causal relation of CSR on stock returns. Market

capitalization measures the size of a company based on the firms' current market price and outstanding shares. Beta measures the risks associated with stock in the overall market. The market-to-book ratio is used to assess the availability of the company's net assets in relation to the market price of its stocks. Momentum refers to previous stock returns, which reports the propensity of the stock price to continue rising if it is going up and continue declining if it is going down. Fama and French (1992) discussed that larger firms were able to obtain higher CSR ratings due to their accessibility to more resources, but smaller firms, on average, earn higher stock returns than larger firms. However, these unusual returns could also be a result of a firm's overexposure to large market movements. Carhart (1997) mentioned that the effect of strong performance over periods up to one year to business firms is continuous in the short-term.

Hence, to examine the relation of CSR on market-adjusted stock returns, we estimated the following model:

$$MAR_{i,t} = \alpha_0 + \beta_1 CSR_{i,t} + \beta_2 MC_{i,t} + \beta_3 BET_{i,t} + \beta_4 MBV_{i,t} + \varepsilon_{i,t} \quad (2)$$

We run a separate cross-sectional regression of the stock returns on each integral pillar to examine the short-run impact. This procedure enables us to disaggregate the effects of the various aspects of CSR ratings on returns and ascertain pillars differences. The regression equation is characterized by the expression below:

$$MAR_{i,t} = \alpha^1_0 + \beta^1_1 ENV_{i,t} + \beta^1_2 MC_{i,t} + \beta^1_3 BET_{i,t} + \beta^1_4 MBV_{i,t} + \varepsilon^1_{i,t} \quad (3)$$

$$MAR_{i,t} = \alpha^2_0 + \beta^2_1 SOC_{i,t} + \beta^2_2 MC_{i,t} + \beta^2_3 BET_{i,t} + \beta^2_4 MBV_{i,t} + \varepsilon^2_{i,t} \quad (4)$$

$$MAR_{i,t} = \alpha^3_0 + \beta^3_1 GOV_{i,t} + \beta^3_2 MC_{i,t} + \beta^3_3 BET_{i,t} + \beta^3_4 MBV_{i,t} + \varepsilon^3_{i,t} \quad (5)$$

where $MAR_{i,t}$ is the market-adjusted stock returns i for one year holding period, $CSR_{i,t}$ is the CSR composite rating, $ENV_{i,t}$ is the environment indicator, $SOC_{i,t}$ is the social indicator, $GOV_{i,t}$ is the governance indicator, and $\varepsilon_{i,t}$ is the residual. These equations consider the year 2015 data of stock returns and CSR ratings.

In addition, to examine the impact of CSR on market-adjusted stock returns in the two years holding period, we estimated the following model:

$$MAR_{i,t+1} = \alpha^4_0 + \beta^4_1 CSR_{i,t-1} + \beta^4_2 MC_{i,t-1} + \beta^4_3 BET_{i,t-1} + \beta^4_4 MBV_{i,t-1} + \beta^4_5 MOM_{t-1} + \varepsilon^4_{i,t} \quad (6)$$

We run a separate cross-sectional regression of the stock returns on each integral pillar to examine the long-run impact in 2-year-holding period. The regression equation is characterized by the expression below:

$$MAR_{i,t+1} = \alpha^5_0 + \beta^5_1 ENV_{i,t-1} + \beta^5_2 MC_{i,t-1} + \beta^5_3 BET_{i,t-1} + \beta^5_4 MBV_{i,t-1} + \beta^5_5 MOM_{t-1} + \varepsilon^5_{i,t} \quad (7)$$

$$MAR_{i,t+1} = \alpha^7_0 + \beta^7_1 GOV_{i,t-1} + \beta^7_2 MC_{i,t-1} + \beta^7_3 BET_{i,t-1} + \beta^7_4 MBV_{i,t-1} + \beta^7_5 MOM_{t-1} + \varepsilon^7_{i,t} \quad (8)$$

where $MAR_{i,t+1}$ is the market-adjusted stock returns i for the two years holding period, $CSR_{i,t}$ is the CSR composite rating, $ENV_{i,t}$ is the environment indicator, $SOC_{i,t}$ is the social indicator, $GOV_{i,t}$ is the governance indicator, MOM_{t-1} is the 2015 market-adjusted stock returns, and $\varepsilon_{i,t}$ is the residual.

Lastly, to examine the impact of CSR on market-adjusted stock returns in the three years holding period, we estimate the following model:

$$MAR_{i,t+2} = \alpha^8_0 + \beta^8_1 CSR_{i,t-2} + \beta^8_2 MC_{i,t-2} + \beta^8_3 BET_{i,t-2} + \beta^8_4 MBV_{i,t-2} + \beta^8_5 MOM^1_{t-1} + \varepsilon^8_{i,t} \quad (10)$$

We run a separate cross-sectional regression of the stock returns on each integral pillar to examine the long-run impact in the three years holding period. The regression equation is characterized by these expressions:

$$MAR_{i,t+2} = \alpha^9_0 + \beta^9_1 ENV_{i,t-2} + \beta^9_2 MC_{i,t-2} + \beta^9_3 BET_{i,t-2} + \beta^9_4 MBV_{i,t-2} + \beta^9_5 MOM^1_{t-1} + \varepsilon^9_{i,t} \quad (11)$$

$$MAR_{i,t+2} = \alpha^{10}_0 + \beta^{10}_1 SOC_{i,t-2} + \beta^{10}_2 MC_{i,t-2} + \beta^{10}_3 BET_{i,t-2} + \beta^{10}_4 MBV_{i,t-2} + \beta^{10}_5 MOM^1_{t-1} + \varepsilon^{10}_{i,t} \quad (12)$$

$$MAR_{i,\,t+2} = \alpha^{11}_{0} + \beta^{11}_{1} GOV_{i,\,t-2} + \beta^{11}_{2} MC_{i,\,t-2} + \beta^{11}_{3} BET_{i,\,t-2} + \beta^{11}_{4} MBV_{i,\,t-2} + \beta^{11}_{5} MOM^{1}_{t-1} + \varepsilon^{11}_{i,t} \quad (13)$$

where $MAR_{i,\,t+2}$ is the market-adjusted stock returns i for the three years holding period, $CSR_{i,t}$ is the CSR composite rating, $ENV_{i,t}$ is the environment indicator, $SOC_{i,t}$ is the social indicator, $GOV_{i,t}$ is the governance indicator, MOM^{1}_{t-1} is the 2016 market-adjusted stock returns, and $\varepsilon_{i,t}$ is the residual.

Results

This section presents the data analysis, interpretation, and presentation of the aggregated and disaggregated effects of CSR on market-adjusted stock returns of firms in the Asian context in the short-run and the long-run. The data are presented following the sequence of the specific objectives raised in the first section.

Table 2 shows that out of 958 listed firms in Asia, the highest CSR composite rating is 77.50, whereas the lowest rating is 19.33. It also reports that CSR has a mean value of 47.85. In terms of CSR pillars, ENV shows the highest and lowest ratings of 93.30 and 14.10, respectively. It has a mean value of 56.84. SOC has a mean value of 52.38, and it shows the highest and lowest ratings of 92.21 and 5.18, respectively. GOV shows the highest and lowest ratings of 78.07 and 5.06, respectively. In addition, it reports a mean value of 34.07. These results reveal that firms in Asia are engaged in different CSR activities. There are companies with high exerted efforts and engagements, resulting in high CSR performance. Among the three pillars of CSR, governance has the lowest mean ratings. Moreover, firm characteristics such as market capitalization, CAPM beta, and market-to-book value show a huge variation, as shown in Table 2.

Table 2 also shows that among the 11 Asian countries, firms from Thailand have the highest CSR average rating of 53.10, whereas firms from Taiwan have the lowest average rating of 40.71. In terms of CSR pillars, firms from Japan have the highest environment average rating of 63.43, and firms from China have the lowest average rating of 44.05. Firms from Thailand have the highest social average rating of 59.00, and firms from Taiwan have the lowest average rating of 44.09. Firms from Singapore have the highest governance average rating of 53.14, whereas firms from Taiwan have the lowest average rating of 25.34. Furthermore, most of the listed firms from the 11 Asian countries outperformed its respective market indices but firms from China, Malaysia, Indonesia, and Thailand were outperformed by its market indices based on the 2015 market-adjusted stock returns. Firms from countries such as Taiwan, Hong Kong, Malaysia, Indonesia, and Thailand were outperformed by their respective market indices based on the market-adjusted stock returns in the two years holding period. However, firms from countries such as Japan, South Korea, India, China, and the Philippines outperformed its respective market indices based on the market-adjusted stock returns in the three years holding period.

Table 3 presents the descriptive statistics per business sector. It shows that firms from the telecommunication services sector have the highest CSR average rating of 54.29, whereas firms from consumer services sector have the lowest average rating of 44.19. In terms of CSR pillars, firms from basic materials sector have the highest environment average rating of 64.38, and firms from the financial sector have the lowest average rating of 49.41. Firms from the telecommunication services sector have the highest social average rating of 63.01, whereas firms from the financial sector have the lowest average rating of 48.12. Moreover, firms from the telecommunication services sector have the highest governance average rating of 45.74, and firms from consumer services sector have the lowest average rating of 29.03.

Brammer et al. (2006) explained that firms' CSR performance depends on the level of importance and priorities of a particular sector. Table 3 shows that firms from sectors such as resources, industrial, basic materials, and technology reveal high average ratings of CSR towards the environment. These sectors consider different liability, compliance, and regulatory risks as demanded by different stakeholders due to its business operation. Moreover, most of the sectors show a high engagement on CSR towards social activities. Lastly, governance shows the lowest average ratings among the three pillars.

Table 4 presents the Pearson correlation coefficients between variables. We examined the correlation matrix to identify any strong relationships and determine if there are any relations between the variables

Table 2

Descriptive Statistics per Country

		JPN	TWN	KOR	IND	CHN	HKG	MYS	SGP	IDN	THA	PHL	Ave.
CSR	Mean	47.94	40.71	48.35	52.19	43.66	50.71	50.98	50.70	47.49	53.10	47.08	47.85
	Max	70.40	70.08	69.67	77.50	64.28	76.56	74.42	76.99	70.80	74.43	68.16	77.50
	Min	22.09	19.33	22.03	27.64	26.86	27.98	31.94	24.69	27.10	31.62	31.25	19.33
	SD	13.46	14.86	15.55	12.32	8.76	12.50	10.03	13.40	12.40	11.49	12.28	13.44
ENV	Mean	63.43	52.69	60.39	56.87	44.05	51.26	46.46	49.47	47.56	54.38	51.46	56.84
	Max	92.78	91.13	91.71	93.30	83.63	85.58	75.41	88.32	77.89	83.26	82.44	93.30
	Min	14.18	28.71	25.07	26.63	26.98	25.89	14.08	26.40	14.91	25.48	32.16	14.08
	SD	20.40	18.65	20.02	17.46	11.48	16.74	13.24	18.95	17.63	17.44	18.20	19.70
SOC	Mean	53.65	44.09	54.94	56.94	44.87	51.56	54.30	49.48	57.15	59.00	51.03	52.38
	Max	85.58	80.34	84.55	90.26	76.48	85.38	88.08	75.13	92.21	78.88	80.81	92.21
	Min	6.85	13.05	20.16	22.03	22.13	20.19	5.18	16.31	6.71	35.28	23.92	5.18
	SD	16.65	18.80	20.33	13.92	13.48	16.17	15.27	15.65	17.31	12.13	15.97	17.02
GOV	Mean	26.46	25.34	29.71	42.75	42.08	49.31	50.32	53.14	35.88	45.92	38.75	34.07
	Max	52.68	48.93	54.65	68.33	57.49	78.07	68.92	75.51	49.73	66.01	52.27	78.07
	Min	6.63	9.96	10.97	16.34	18.90	29.93	7.35	31.38	5.06	30.74	21.74	5.06
	SD	8.26	10.12	10.27	11.88	7.23	9.77	9.94	10.46	10.39	7.99	8.07	13.28
MC	Mean	8.98	4.69	7.50	115.01	33.48	17.06	5.28	7.79	5.59	6.34	6.59	19.62
	Max	219.27	112.80	156.31	755.63	251.31	231.15	19.05	49.31	23.61	19.34	14.78	755.63
	Min	0.01	0.01	0.05	1.78	0.68	0.50	0.33	0.17	0.21	0.56	1.07	0.01
	SD	15.53	11.98	16.92	130.61	54.63	31.44	4.85	9.82	6.74	4.60	3.87	53.28
BET	Mean	0.93	1.08	1.10	3.05	1.13	0.98	1.19	0.79	1.27	1.01	0.92	1.19
	Max	2.19	3.46	2.80	167.40	1.80	2.77	3.35	1.80	2.36	2.13	1.66	167.40
	Min	-0.17	-0.06	-0.49	-0.49	0.43	0.12	-0.04	-0.06	0.58	-0.38	0.23	-0.49
	SD	0.43	0.59	0.70	18.16	0.26	0.46	0.82	0.44	0.51	0.64	0.44	5.40
MBV	Mean	1.76	1.93	1.59	4.12	2.98	1.44	5.18	3.10	7.45	3.64	3.23	2.53
	Max	13.53	10.19	13.83	48.77	58.41	11.09	89.97	39.37	69.55	14.63	7.33	89.97
	Min	-1.63	0.40	-2.93	-29.19	0.55	-23.28	0.29	0.48	0.70	0.82	0.70	-29.19
	SD	1.33	1.62	2.06	7.68	6.67	3.64	13.95	6.51	15.04	3.72	1.82	5.54
MAR_t	Mean	0.19	-0.08	0.05	0.43	-0.02	0.00	-0.02	0.04	-0.36	-0.21	0.00	0.09
	Max	1.38	0.51	1.29	3.14	3.07	0.40	0.50	0.58	0.21	0.48	0.32	3.14
	Min	-0.57	-0.49	-0.57	-0.48	-0.92	-0.57	-0.48	-0.33	-0.80	-0.58	-0.34	-0.92
	SD	0.30	0.19	0.39	0.50	0.56	0.21	0.19	0.18	0.24	0.27	0.18	0.37
MAR_{t+1}	Mean	0.07	-0.13	0.02	0.23	0.07	-0.05	-0.07	0.01	-0.01	-0.02	0.04	0.04
	Max	1.93	0.63	1.96	2.95	3.58	0.50	0.42	0.44	6.17	0.62	0.72	6.17
	Min	-0.69	-0.71	-0.93	-0.81	-0.67	-0.90	-0.60	-0.44	-0.72	-0.77	-0.47	-0.93
	SD	0.40	0.26	0.40	0.57	0.56	0.22	0.22	0.21	1.23	0.35	0.28	0.45
MAR_{t+2}	Mean	0.07	-0.09	0.23	0.28	0.13	-0.16	-0.10	-0.03	-0.08	-0.08	0.03	0.05
	Max	4.90	1.99	5.22	4.22	5.43	1.05	0.36	1.56	8.53	1.16	1.02	8.53
	Min	-0.77	-0.82	-0.97	-0.97	-0.63	-1.22	-0.78	-0.55	-1.15	-1.29	-0.67	-1.29
	SD	0.54	0.44	0.75	0.85	0.82	0.39	0.27	0.37	1.72	0.63	0.40	0.66
N		388	96	93	84	73	61	48	36	29	28	22	958

Note: *CSR* is the CSR composite ratings, *ENV* is the environment pillar, *SOC* is the social pillar, *GOV* is the governance pillar, *MC* is the market capitalization, *BET* as the CAPM beta, MBR as Market-to-Book ratio, $MAR_{i,t}$ is the market-adjusted stock returns for 1-year-holding period, $MAR_{i,t+1}$ is the market-adjusted stock return for 2-year-holding period and $MAR_{i,t+2}$ is the market-adjusted stock returns for 3-year-holding period, *JPN* is Japan, *TWN* is Taiwan, *KOR* is South Korea, *IND* is India, *CHN* is China, *HKG* is Hong Kong, *MYS* is Malaysia, *SGP* is Singapore, *IDN* is Indonesia, *THA* is Thailand, and *PHL* is the Philippines. The researchers re-scale the value of market capitalization and divide the original value into 1,000,000 to standardize the range of data.

Table 3

Descriptive Statistics per Sector

		FIN	IND	COS	TEC	BML	COG	UTS	HCR	RSC	TCS	Ave.
CSR	Mean	45.37	48.80	44.19	49.08	49.99	47.41	51.84	47.43	54.01	54.29	47.85
	Max	75.78	74.43	70.49	76.49	72.67	72.46	76.56	75.87	77.50	74.42	77.50
	Min	21.24	24.98	20.93	19.33	20.38	24.72	33.71	23.11	26.02	27.62	19.33
	SD	12.89	11.79	14.38	15.23	14.31	12.38	11.58	12.32	12.72	11.81	13.44
ENV	Mean	49.41	60.51	54.48	63.05	64.38	53.05	61.49	52.16	62.65	54.11	56.84
	Max	90.66	91.98	92.78	91.13	92.23	83.93	88.91	80.70	93.30	85.65	93.30
	Min	14.08	26.84	25.48	28.51	32.95	14.18	35.17	25.07	34.19	29.48	14.08
	SD	16.91	19.06	22.13	21.26	19.54	17.26	14.99	19.28	17.30	16.44	19.70
SOC	Mean	48.12	52.89	49.08	53.73	53.06	55.06	55.59	55.78	59.25	63.01	52.38
	Max	80.81	81.98	84.78	85.58	80.46	92.21	85.38	90.26	79.49	88.08	92.21
	Min	5.18	19.67	18.83	15.40	13.05	8.30	21.00	21.02	21.46	36.23	5.18
	SD	16.31	15.06	17.69	17.87	19.18	16.30	17.04	16.30	15.22	13.89	17.02
GOV	Mean	37.67	32.98	29.03	30.46	32.52	33.03	38.44	34.35	40.14	45.74	34.07
	Max	78.07	66.01	63.95	68.33	59.33	62.22	68.93	67.08	72.97	70.63	78.07
	Min	5.06	13.43	11.80	11.18	9.96	6.63	13.68	13.38	15.69	12.88	5.06
	SD	14.29	12.11	11.38	12.36	12.81	12.64	14.35	10.95	12.17	13.08	13.28
MC	Mean	25.64	9.97	12.94	23.91	10.60	22.20	17.81	27.18	48.83	33.75	19.62
	Max	387.20	241.46	267.50	755.63	119.29	394.52	182.90	320.33	395.90	237.48	755.63
	Min	0.08	0.01	0.07	0.03	0.05	0.02	1.07	0.29	0.37	1.52	0.01
	SD	55.66	22.77	33.30	90.25	19.61	58.37	32.90	55.51	104.10	57.26	53.28
BET	Mean	1.89	1.17	0.93	1.17	1.14	0.71	0.78	0.57	1.01	0.86	1.19
	Max	167.40	3.35	2.80	3.46	2.89	3.09	2.10	2.07	2.18	2.20	167.40
	Min	-0.31	-0.04	-0.38	-0.06	-0.20	-0.49	-0.13	-0.49	0.05	0.12	-0.49
	SD	11.68	0.62	0.47	0.55	0.53	0.50	0.47	0.45	0.53	0.50	5.40
MBV	Mean	1.58	2.12	2.80	2.30	1.54	5.90	1.65	3.34	1.56	6.72	2.53
	Max	11.09	58.41	44.51	13.53	13.00	69.55	4.15	8.26	6.78	89.97	89.97
	Min	0.34	-23.28	0.48	-1.63	-1.88	0.45	0.39	0.80	-1.70	-29.19	-29.19
	SD	1.25	4.87	4.52	2.24	1.49	11.06	0.96	1.95	1.32	17.69	5.54
$MAR_{i,t}$	Mean	0.06	0.11	0.11	0.01	0.08	0.19	0.04	0.45	0.04	-0.02	0.09
	Max	1.03	1.73	1.51	0.80	1.46	1.16	0.76	3.14	3.07	0.47	3.14
	Min	-0.52	-0.92	-0.50	-0.57	-0.88	-0.50	-0.70	-0.43	-0.78	-0.55	-0.92
	SD	0.26	0.37	0.34	0.28	0.42	0.36	0.23	0.60	0.67	0.27	0.37
$MAR_{i,t+1}$	Mean	-0.03	-0.01	0.04	-0.08	0.11	0.24	0.01	0.40	0.12	-0.09	0.04
	Max	1.13	1.69	1.82	0.76	6.17	1.93	0.51	1.96	3.58	0.63	6.17
	Min	-0.62	-0.93	-0.77	-0.69	-0.81	-0.43	-0.71	-0.33	-0.46	-0.67	-0.93
	SD	0.27	0.37	0.41	0.31	0.80	0.43	0.23	0.52	0.69	0.31	0.45
$MAR_{i,t+2}$	Mean	-0.03	0.02	0.00	0.07	0.29	0.20	-0.20	0.34	0.18	-0.23	0.05
	Max	2.52	2.02	2.01	1.99	8.53	4.90	0.66	5.22	5.43	1.13	8.53
	Min	-0.96	-1.22	-1.29	-0.69	-0.97	-0.87	-1.15	-0.52	-1.22	-0.92	-1.29
	SD	0.42	0.49	0.54	0.53	1.13	0.77	0.30	0.96	1.07	0.39	0.66
N		203	181	155	99	95	71	43	39	38	34	958

Note: *CSR* is the CSR composite ratings, *ENV* is the environment pillar, *SOC* is the social pillar, *GOV* is the governance pillar, *MC* is the market capitalization, *BET* as the CAPM beta, MBR as Market-to-Book ratio, $MAR_{i,t}$ is the market-adjusted stock returns for the one year holding period, $MAR_{i,t+1}$ is the market-adjusted stock return for the two years holding period and $MAR_{i,t+2}$ is the market-adjusted stock returns for the three years holding period, *FIN* is financial, *IND* is industrial, *COS* is consumer services, *TEC* is technology, *BML* is basic materials, *COG* is consumer goods, *UTS* is utilities, *HCR* is health care, *RSC* is resources, and *TCS* is telecommunications services. The researchers re-scale the value of market capitalization and divide the original value into 1,000,000 to standardize the range of data.

of interest and other variables, which may cause multicollinearity in our subsequent regressions. Table 4 shows a positive and significant correlation between CSR composite ratings and its pillars: environment, social, and corporate governance. Hence, we ran separate regressions for CSR composite score and the three pillars' scores. In addition, firm characteristics attributed to stock return such as market capitalization, beta, and market-to-book value, and the inclusion of previous stock returns (market momentum) have weak correlations on CSR variables. However, market capitalization, although it is weak, shows a significant correlation on CSR variables. This result confirms our intuition that at constant, the business firms included in this study are large companies and generate higher CSR ratings compare to small companies (Brammer, 2006).

Table 5 presents the multivariate cross-sectional regression results of the short-run and long-run impact of CSR and its pillars on market-adjusted stock returns from the overall sample firms in Asia. It shows that CSR composite ratings have a weak positive effect on market-adjusted stock returns in the short-run. This effect becomes significant in the three years holding period at $p < 0.05$. It supports H_1 of the study, which states that CSR composite ratings have a significant positive effect on market-adjusted stock returns. The effect of CSR could be accumulated and reinforced positive and significant effect in the long-run, thus leading to better stock returns for the firms (Peters & Mullen, 2009). Kao, Yeh, Wang & Fung (2018) explained that the relationship between performance and CSR appears to change over time and may give positive and negative results, depending on the period of analysis. As CSR is a long-term process, the negative effect that CSR has on performance reflects the initial costs of CSR engagement whereas the positive effect summarizes the overall net benefits. In addition, our evidence is parallel to the conjecture of Wang (2011), Von Arx and Ziegler (2014), and Lins et al. (2017) that CSR activities induce stockholder's wealth through the firms' performance in the stock market. Our results emphasize the positive effect of CSR on firms' financial performance in Asia, which contradict the conjecture of previous studies from America and Europe that CSR has destructive effect on firms' financial performance that affects shareholders' wealth (McWilliams & Siegel, 2000; Brammer et al., 2006; Berens et al., 2007; Wagner et al., 2009; Groza et al., 2011; and Vujicic, 2015). Hence, Asian firms are benefited from CSR activities.

Table 4

Matrix of Correlation Between Variables

	$MAR_{i,t}$	$MAR_{i,t+1}$	$MAR_{i,t+2}$	*CSR*	*ENV*	*SOC*	*GOV*	*MC*	*BET*	*MBV*
$MAR_{i,t}$	1.00									
$MAR_{i,t+1}$	0.62***	1.00								
$MAR_{i,t+2}$	0.48***	0.82***	1.00							
CSR	0.04	0.05	0.07**	1.00						
ENV	0.09***	0.03	0.07**	0.86***	1.00					
SOC	0.06	0.07**	0.08**	0.93***	0.77***	1.00				
GOV	-0.09	0.02	0.01	0.59	0.19	0.44	1.00			
MC	0.14***	0.07**	0.03	0.19***	0.10***	0.15***	0.23***	1.00		
BET	0.02	-0.04	0.01	-0.01	-0.03	0.01	-0.02	0.01	1.00	
MBV	0.04	0.03	-0.03	0.04	-0.04	0.06*	0.10***	0.10***	-0.02	1.00

Note: Cell entries are Standardized Coefficients; t-stats are in parentheses; *CSR* is the CSR composite ratings, *ENV* is the environment pillar, *SOC* is the social pillar, *GOV* is the governance pillar, *MC* is the market capitalization, *BET* is the Capital Asset Pricing Model beta, *MBV* is the Market-to-Book value, $MAR_{i,t}$ is the market-adjusted stock returns for the one year holding period, $MAR_{i,t+1}$ is the market-adjusted stock return for the two years holding period, and $MAR_{i,t+2}$ is the market-adjusted stock returns for the three years holding period, *, **, and *** denote significance at 10%, 5% and 1% levels, respectively.

Table 5

Regression results of Market-Adjusted Stock Returns on CSR and its Pillars

Variables	coefficients (t-stats)	Variables	coefficients (t-stats)	Variables	coefficients (t-stats)	Variables	coefficients (t-stats)
<1-year holding period>							
CSR	0.01	*ENV*	0.08	*SOC*	0.04	*GOV*	-0.13
	(0.44)		(2.56)**		(1.26)		(-3.92)***
MC	0.14	*MC*	0.13	*MC*	0.13	*MC*	0.17
	(4.16)***		(4.03)***		(4.08)***		(5.10)***
BET	0.02	*BET*	0.02	*BET*	0.02	*BET*	0.02
	(0.57)		(0.64)		(0.55)		(0.50)
MBV	0.03	*MBV*	0.03	*MBV*	0.03	*MBV*	0.04
	(0.92)		(1.05)		(0.87)		(1.24)
Adj. R^2	0.02	*Adj. R^2*	0.02	*Adj. R^2*	0.02	*Adj. R^2*	0.03
<2-year holding period>							
CSR	0.03	*ENV*	-0.03	*SOC*	0.03	*GOV*	0.08
	(0.99)		(-1.12)		(1.19)		(3.04)***
MC	-0.02	*MC*	-0.01	*MC*	-0.02	*MC*	-0.03
	(-0.66)		(-0.39)		(-0.65)		(-1.20)
BET	-0.05	*BET*	-0.05	*BET*	-0.05	*BET*	-0.05
	(-2.08)**		(-2.13)**		(-2.11)**		(-2.06)**
MBV	0.00	*MBV*	0.00	*MBV*	0.00	*MBV*	-0.01
	(-0.05)		(-0.09)		(-0.08)		(-0.29)
MOM_{t-1}	0.62	MOM_{t-1}	0.62	MOM_{t-1}	0.62	MOM_{t-1}	0.63
	(24.10)***		(24.13)***		(24.05)***		(24.41)***
Adj. R^2	0.38	*Adj. R^2*	0.38	*Adj. R^2*	0.38	*Adj. R^2*	0.39
<3-year holding period>							
CSR	0.04	*ENV*	0.05	*SOC*	0.03	*GOV*	0.01
	(2.12)**		(2.70)***		(1.87)*		(0.37)
MC	-0.04	*MC*	-0.04	*MC*	-0.04	*MC*	-0.03
	(-2.09)**		(-2.01)**		(-1.98)**		(-1.77)*
BET	0.04	*BET*	0.05	*BET*	0.04	*BET*	0.04
	(2.40)**		(2.45)**		(2.34)**		(2.37)**
MBV	-0.05	*MBV*	-0.04	*MBV*	-0.05	*MBV*	-0.04
	(-2.43)**		(-2.27)**		(-2.47)**		(-2.41)**
MOM^1_{t-1}	0.82	MOM^1_{t-1}	0.82	MOM^1_{t-1}	0.82	MOM^1_{t-1}	0.82
	(44.53)***		(44.62)***		(44.43)***		(44.52)***
Adj. R^2	0.68	*Adj. R^2*	0.68	*Adj. R^2*	0.68	*Adj. R^2*	0.67
N	958		958		958		958

Note: Cell entries are Standardized Coefficients; t-stats are in parentheses; *CSR* is the CSR composite ratings, *ENV* is the environment pillar, *SOC* is the social pillar, *GOV* is the governance pillar, *MC* is the market capitalization, *BET* is the Capital Asset Pricing Model beta, *MBR* is the Market-to-Book ratio, MOM_{t-1} is the 2015 market-adjusted stock returns, *and* MOM^1_{t-1} is the 2016 market-adjusted stock returns *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. The previous stock return is used in the cross-regression analysis of the effect of CSR on stock returns in the long-run.

Table 5 also presents the multivariate cross-sectional regression results of the short-run and long-run impact of ENV, SOC, and GOV on market-adjusted stock returns. Table 5 shows that ENV is positively and significantly associated with market-adjusted stock returns in the short-run and in the three years holding period at $p < 0.05$ and $p < 0.01$, respectively. These findings support H_{2a}, which states that ENV ratings have a significant positive effect on market-adjusted stock returns. Derwall, Guenster, Bauer, and Koedijk (2005) and Flammer (2013) realized that businesses with responsible behaviors towards the environment experience a significant increase in its stock price. The findings of Anton, Deltas, and Khanna (2004), Darnall, Henriques, and Sadorsky (2008) and Brouhle, Griffiths, and Wolverton (2009) revealed that the positive effect is due to the liability, compliance, and regulatory risks of firms implementing environmental activities.

Moreover, Table 5 shows that SOC has a consistent positive effect on stock returns of listed firms in Asia in the short-run and the long-run. The effect is insignificant in the one year and two years holding periods. However, its effect becomes significant in the three years holding period at $p < 0.10$. This result supports H_{2b}, which states that SOC ratings have a significant positive effect on market-adjusted stock returns. Social pillar is composed of the workforce, human rights, community, and product responsibility ratings (Thomson Reuters, 2019). In terms of job satisfaction of employees, Edmans (2012) mentioned that employees' job satisfaction creates a positive effect on stock return. In addition, Brammer and Millington (2008) disclosed that firms with high social rating have higher financial performance.

Lastly, Table 5 reveals that GOV has a significant and negative effect on market-adjusted stock returns in the short-run at $p < 0.01$. The short-run result rejects H_{2c}, which states that GOV ratings have a significant positive effect on stock returns. However, GOV ratings have a positive and significant effect on the two years holding period at $p < 0.01$. The governance pillar rating is composed of management, shareholders, and CSR strategy (Thomson Reuters, 2019). It covers the effectivity and commitment of a company in implementing corporate governance best practices, fair treatment of shareholders and the use of anti-takeover devices, and communication practices into its day-to-day decision-making processes. We acknowledge the importance of corporate governance in creating value for the company and maximizing shareholders wealth (Gompers, Ishii, & Metrick, 2003; Jo and Harjoto, 2011). However, there are issues on CSR towards corporate governance such as management compensation, transparency of financial reporting, shareholder rights infringement, and insider dealings particularly the manipulation of share price (Thomson Reuters, 2019). We conjecture that these problems create a negative reaction on stock returns of listed firms in Asia in the short-run. In addition, these issues increase the costs, which affect the profit of the company and destroy good stock performance in the market in the short-run. Friedman (1970) explained that CSR activities are beneficial at a social perspective, but an indication of conflict between the managers' interests, and shareholders and these engagements are used at the expense of shareholders.

Table 6 presents the multivariate cross-sectional regression results of the short-run and long-run impact of CSR and its pillars on market-adjusted stock returns of firms from each country. Firms from Thailand reveal that CSR composite ratings have a positive and significant effect on market-adjusted stock returns at $p < 0.10$, consistent with H_1. However, firms from India reveal that CSR has a negative and significant effect on market-adjusted stock returns in the short-run. Table 6 shows that the negative and significant effect on market-adjusted stock return in India becomes positive and significant in the two years holding period, consistent with H_1. This evidence affirms the accumulation of effects of CSR activities on firm performance in the long-run.

Moreover, Table 6 shows that firms from Japan and Thailand reveal that ENV has a positive and significant effect on stock returns in the short-run at $p < 0.10$, consistent with H_{2a}. However, firms from Indonesia show that ENV is negatively and significantly associated with market-adjusted stock returns at $p < 0.05$. We conjecture that this finding is due to firms' spending on environmental activities caused by liability, compliance, and regulatory risks (Molloy, Erekson, & Gorman, 2002). For instance, Lin and Amin (2016) discussed that Indonesia has mandatory CSR reporting, particularly on firms engaged in natural resources which increase the costs of doing CSR. Moreover, firms from India show that ENV has a positive and significant effect on market-adjusted stock returns at $p < 0.05$, but it shows a negative and

Table 6

Regression Results of Market-Adjusted Stock Returns on CSR and its Pillars per Country

	JPN	TWN	KOR	IND	CHN	HKG	MYS	SGP	IDN	THA	PHL
<1-year holding period>											
CSR	0.08	-0.08	-0.02	-0.20	0.08	0.13	-0.07	-0.19	-0.28	0.39	9.18E-04
	(1.55)	(-0.92)	(-0.21)	(-1.74)*	(0.59)	(1.06)	(-0.49)	(-1.05)	(-1.65)	(1.82)*	(4.63E-03)
ENV	0.09	-0.12	-0.04	-0.12	0.03	0.14	0.00	-0.19	-0.37	0.35	0.06
	(1.62)*	(-1.37)	(-0.40)	(-1.04)	(0.24)	(1.19)	(0.01)	(-1.06)	(-2.32)**	(1.70)*	(0.32)
SOC	0.10	-0.07	0.05	-0.20	0.14	0.04	-0.04	-0.14	-0.27	0.49	-0.07
	(1.96)*	(-0.85)	(0.47)	(-1.79)*	(1.05)	(0.31)	(-0.27)	(-0.74)	(-1.56)	(2.43)**	(-0.34)
GOV	7.29E-04	7.27E-05	-0.12	-0.20	-0.02	0.17	0.06	-0.16	-0.17	0.07	-4.77E-04
	(0.01)	(8.16E-04)	(-1.15)	(-1.71)*	(-0.19)	(1.45)	(0.44)	(-0.93)	(-0.95)	(0.35)	(-2.21E-03)
<2-year holding period>											
CSR	0.06	0.03	0.06	0.26	2.29E-03	-0.05	-0.15	-0.05	0.29	-0.08	-0.04
	(1.48)	(0.44)	(0.86)	(3.18)***	(0.05)	(-0.44)	(-1.27)	(-0.41)	(1.50)	(-0.48)	(-0.26)
ENV	0.03	0.04	0.04	0.21	-4.48E-03	-0.06	-0.26	-0.01	0.38	0.03	0.03
	(0.68)	(0.48)	(0.57)	(2.57)**	(-0.10)	(-0.52)	(-2.48)**	(-0.05)	(1.96)	(0.15)	(0.20)
SOC	0.07	0.04	0.06	0.18	-0.02	0.00	-0.12	-0.09	0.22	-0.11	-0.10
	(1.92)*	(0.58)	(0.90)	(2.14)**	(-0.45)	(-0.03)	(-1.01)	(-0.79)	(1.10)	(-0.62)	(-0.65)
GOV	0.05	-2.09E-03	0.07	0.26	0.05	-0.08	-0.13	-0.04	0.23	-0.19	-0.07
	(1.34)	(-0.03)	(1.01)	(3.27)***	(1.13)	(-0.70)	(-1.24)	(-0.34)	(1.20)	(-1.31)	(-0.41)
<3-year holding period>											
CSR	0.05	0.07	-0.06	0.06	0.02	-0.10	0.04	-0.08	0.02	0.08	0.06
	(1.22)	(0.87)	(-0.96)	(1.17)	(0.35)	(-1.22)	(0.46)	(-0.48)	(0.66)	(0.56)	(0.57)
ENV	0.02	0.04	-0.06	0.07	0.08	-0.09	0.04	0.05	0.02	0.09	0.04
	(0.51)	(0.45)	(-0.93)	(1.57)	(1.48)	(-1.18)	(0.42)	(0.32)	(0.44)	(0.60)	(0.35)
SOC	0.07	0.07	-0.09	0.09	-0.03	-0.08	0.05	-0.16	0.03	0.07	0.03
	(1.95)*	(0.85)	(-1.53)	(1.86)*	(-0.57)	(-0.98)	(0.53)	(-0.98)	(0.71)	(0.44)	(0.33)
GOV	0.04	0.12	0.03	-0.04	-1.95E-03	-0.08	0.04	-0.15	0.04	0.05	0.14
	(1.05)	(1.41)	(0.46)	(-0.84)	(-0.04)	(-0.98)	(0.45)	(-1.03)	(1.11)	(0.38)	(1.33)
N	388	96	93	84	73	61	48	36	29	28	22

Note: Cell entries are Standardized Coefficients; t-stats are in parentheses; *CSR* is the CSR composite ratings, *ENV* is the environment pillar, *SOC* is the social pillar, *GOV* is the governance pillar, *JPN* is Japan, *TWN* is Taiwan, *KOR* is South Korea, *IND* is India, *CHN* is China, *HKG* is Hong Kong, *MYS* is Malaysia, *SGP* is Singapore, *IDN* is Indonesia, *THA* is Thailand, and *PHL* is the Philippines, *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively. We only present the CSR composite ratings and its integral pillars to avoid repetition.

significant effect to firms from Malaysia at $p < 0.05$ in the two years holding period.

On the other hand, most of the firms from its respective countries show an insignificant effect from one to three years holding periods. We conjecture that CSR towards the environment is a long-term program, its effect is cumulative, and reinforce positive effect after several years. This conjecture is consistent with the findings of Nakamura (2011) that environmental investment has an insignificant effect in the short-run but it creates a positive result on firms' performance in the long-run. Von Arx and Ziegler (2014) mentioned that these mixed findings are possible due to different factors that play a more important role in a specific country. This conjecture is consistent with stakeholder theory, which explains that an outcome is usually influenced through the satisfaction of groups with interests in the business by the management (McWilliams et al., 2006). For instance, the demand of government and non-governmental organizations of a certain country to business firms to act and participate in dealing with climate change may result to a positive and negative effect on stock performance (Ziegler, Busch, & Hoffmann, 2011).

Table 6 also shows that firms from Japan reveal that SOC ratings have a significant positive effect on stock returns from one to three years holding periods at $p < 0.05$. Firms from Thailand also show that SOC has a positive and significant effect on market-adjusted stock returns in the short-run at $p < 0.05$. These findings are consistent with H_{2b}. However, firms from India reveal that SOC ratings have a negative effect on stock returns in the short-run at $p < 0.10$ but generates positive effect in the two and three years holding periods at $p < 0.05$ and $p < 0.10$, respectively. These results reject H_{2b} in the short-run but support the hypothesis in the long-run. CSR towards social aspect is focused on community, workforce, and other external activities. The negative and positive effect on stock returns varies from firms of one country to another. It depends on the priority and objectives of firms, which needs cash outflow to sustain social performance. The outcome is usually influenced through the satisfaction of groups with interests in the business by the management (McWilliams et al., 2006). Furthermore, Table 6 shows that CSR towards governance aspect has a significant effect on stock returns of firms from India. Firms from India show that GOV ratings have negative and significant effect on market-adjusted stock returns in the short-run but generate positive and significant effect on the two years holding period. These results reject hypothesis H_{2c} in the short-run but support the hypothesis in the long-run.

Table 7 presents the multivariate cross-sectional regression results of the short-run and long-run impact of CSR and its pillars on market-adjusted stock returns of firms from each sector. CSR has a positive and significant effect on market-adjusted stock returns of firms from technology and basic materials sectors in the short-run at $p < 0.05$. Firms from consumer services and financial sectors show similar findings in the 2-year and 3-year holding periods at $p < 0.10$ and $p < 0.05$, respectively. These findings are consistent with H_1 of the study, which states that CSR composite ratings have a significant positive effect on market-adjusted stock returns. However, firms from the health care sector reveal that CSR has a negative and significant effect on market-adjusted stock returns at $p < 0.10$.

Table 7 also shows that ENV ratings of firms from basic materials, technology, consumer goods, and industrial sectors have a positive and significant effect on market-adjusted stock returns in the short-run. In addition, firms from telecommunications services show similar findings in the two years holding period. These results support H_{2a} of the study. CSR towards the environment creates value and generates competitive resources on firms (Brammer et al., 2006; Flammer, 2013; and Von Arx & Ziegler, 2014). Moreover, Brammer et al. (2006) explained that CSR performance depends on the level of importance and priorities of a particular sector. However, firms from the industrial and utilities sectors reveal that ENV has a negative and significant effect on market-adjusted stock returns.

In addition, Table 7 shows that the SOC ratings of firms from basic materials and technology sectors have a positive and significant effect on market-adjusted stock returns in the short-run at $p < 0.01$ and $p < 0.05$, respectively. Firms from the financial sector show a similar result in the three years holding period at $p < 0.01$. These results support H_{2b} of the study, which states that SOC ratings have a significant positive effect on stock returns. However, firms from the health care sector show that social CSR has a significant negative effect on the three years holding period. The positive and negative results of social CSR are dependent on the priorities of firms at a particular period. Business firms are compelled to acquire a well-managed human resource and creates different programs, which induce company's effectiveness towards job satisfaction, a

Table 7

Regression Results of Market-Adjusted Stock Returns on CSR and its Pillars per Sector

	FIN	IND	COS	TEC	BML	COG	UTS	HCR	RSC	TCS
<1-year holding period>										
CSR	-0.05	0.05	0.02	0.23	0.23	0.13	-0.18	0.02	-0.16	0.24
	(-0.67)	(0.74)	(0.28)	(2.25)**	(2.21)**	(1.00)	(-1.30)	(.15)	(-0.88)	(1.61)
ENV	0.06	0.13	0.09	0.21	0.35	0.25	-0.14	0.02	-0.09	0.24
	(0.94)	(1.81)*	(1.09)	(2.12)**	(3.54)***	(2.13)**	(-1.02)	(.14)	(-.50)	(1.55)
SOC	-0.02	0.08	0.05	0.22	0.27	0.09	-0.17	-0.02	-0.20	0.20
	(-0.26)	(1.03	(0.62)	(2.21)**	(2.77)***	(0.72)	(-1.17)	(-.12)	(-1.13)	(1.35)
GOV	-0.14	-0.14	-0.17	0.15	-0.22	-0.11	-0.12	0.07	-0.12	0.13
	(-1.93)*	(-1.99)**	(-2.05)**	(1.39)	(-2.10)**	(-0.89)	(-0.78)	(0.44)	(-0.64)	(0.89)
<2-year holding period>										
CSR	0.08	-0.04	0.10	-0.11	0.07	0.03	-0.12	0.01	0.05	0.10
	(1.42)	(-0.77)	(1.89)*	(-1.33)	(0.66)	(0.30)	(-1.08)	(0.05)	(0.55)	(0.83)
ENV	3.34E-03	-0.12	0.05	-0.09	-0.03	-0.04	-0.22	0.02	0.02	0.23
	(0.06)	(-2.04)**	(0.95)	(-1.07)	(-0.24)	(-.41)	(-1.97)*	(0.16)	(0.21)	(2.13)**
SOC	0.01	0.01	0.08	-0.09	0.06	0.09	-0.13	-0.01	0.09	0.14
	(0.14)	(0.19)	(1.58)	(-1.15)	(0.59)	(.91)	(-1.06)	(-0.04)	(0.91)	(1.25)
GOV	0.18	0.04	0.15	-0.12	0.18	0.07	0.08	-0.01	0.03	-0.15
	(3.06)***	(.69)	(2.80)***	(-1.39)	(1.76)*	(0.67)	(0.62)	(-0.06)	(0.28)	(-1.48)
<3-year holding period>										
CSR	0.11	0.05	-0.03	0.03	0.03	.06	.06	-.24	.04	.09
	(2.55)**	(0.97)	(-0.70)	(0.32)	(0.61)	(.88)	(.69)	(-1.93)*	(.87)	(.69)
ENV	0.04	0.07	-0.02	-0.01	0.03	.03	-.08	-.19	.06	.16
	(0.91)	(1.51)	(-0.49)	(-0.13)	(0.76)	(.37)	(-.88)	(-1.53)	(1.38)	(1.23)
SOC	0.13	0.03	-0.04	0.03	0.03	.10	.15	-.24	.02	.07
	(3.12)***	(0.71)	(-0.89)	(0.37)	(0.75)	(1.53)	(1.56)	(-1.96)*	(.34)	(.59)
GOV	0.14	-0.02	-0.01	0.09	-0.01	.01	.08	-.11	.02	-.02
	(3.15)***	(-0.44)	(-0.29)	(0.88)	(-0.31)	(.17)	(.85)	(-.84)	(.45)	(-.16)
N	203	181	155	99	95	71	43	39	38	34

Note: Cell entries are Standardized Coefficients; t-stats are in parentheses; *CSR* is the CSR composite ratings, *ENV* is the environment pillar, *SOC* is the social pillar, *GOV* is the governance pillar, *FIN* is financial, *IND* is industrial, *COS* is consumer services, *TEC* is technology, *BML* is basic materials, *COG* is consumer goods, *UTS* is utilities, *HCR* is health care, *RSC* is resources, *TCS* is telecommunications services, *, **, and *** denote significance at the 10%, 5% and 1% levels, respectively. We only present the CSR composite ratings and its integral pillars to avoid repetition.

healthy and safe workplace, fair treatment and diversity preservation, and development opportunities for its workforce. Vujicic (2015) explained that a positive effect of CSR toward social indicator on stock returns is due to employee factor because it will increase customers of the firms and create a positive impact on profit and stock returns for business firms, but it destroys value if the firm is engaged with activities not relevant to the firm, particularly if it will not influence the customers and community. Furthermore, Table 7 shows that firms from industrial and basic materials sectors provide evidence that GOV ratings have a negative and significant effect on market-adjusted stock returns at $p < 0.05$ in the short-run. Firms from consumer services sector show similar findings in the short-run, but this sector shows that GOV ratings have a positive and significant effect on the two years holding period. Moreover, firms from financial sector reveal that GOV ratings have a negative and significant effect in the short-run but positive and significant effect on the two and three years and holding periods. These results in the long-run support H_{2c} of the study. The negative impact in the short-run can be associated with a reduction of the perceived risk of a firm caused by greater insider ownership, presence of institutional block holders, and independent boards (Pham, Suchard, & Zein, 2012). We conjecture that the effect of governance initiatives of firms from these sectors generates positive outcome in the long-run (Jo & Harjoto, 2011).

Conclusions

This study investigates the short-run and long-run impact of CSR on firm performance through market-adjusted stock returns in the Asian context. We hypothesize that firms' CSR engagement generates a positive outcome on present and future financial performance. In addition, we examine the disaggregated impact of CSR pillars, namely, environment, social, and governance pillars on market-adjusted stock returns. Moreover, this study investigates the phenomenon in the contexts of country and sector levels.

We offer several interesting findings. First, corporate citizenship is no longer new in Asia. This conjecture is evidently visible from the firms' CSR engagements on the environment, social, and governance. It is no longer a concept in Asia because the fair distribution of wealth, environmental protection, community relations, along with the improvement of economic value are observed.

We find that CSR programs have no significant effect in the short-run, but it generates a positive outcome on a firm's future financial performance in the long-run. Similar to the argument of Peters and Mullen (2009), we conclude that CSR has a cumulative effect which reinforces better stock return in the future.

Second, our findings reveal mixed evidence regarding the disaggregated effects of CSR pillars. ENV is positively and significantly associated with market-adjusted stock returns in the short-run and the three years holding period. SOC has a positive and insignificant effect in the one and two years holding periods. However, it shows significant finding in the three years holding period. GOV has a negative and significant effect on market-adjusted stock returns in the short-run but generates positive and significant effect on the two years holding period. We argue that these mixed findings are caused by the liability, compliance, and regulatory risks of firms to their stakeholders. Each CSR component contributes to firms' expenditures. Negative and neutral effects in the short-run can be associated with the initial costs in implementing these activities but create positive results in the long-run.

Third, our study reveals that the impact of CSR and its pillars on market-adjusted stock returns vary per country and per sector. Firms from India show that building corporate citizenship has an impact on stock returns in the short-run until the two years holding period. Firms from Japan provide evidence that social activities increase stock returns in the short-run and the long-run. However, firms from most countries prompt insignificant findings. We argue that each country has a different approach in implementing CSR activities relevant to culture and macroeconomic considerations. On the other hand, firms from basic materials and technology sectors provide findings that CSR and its pillars have a positive effect on market-adjusted stock returns in the short-run. In addition, firms from the financial sectors show that good governance produces positive results on firms' performance in the stock market in the long-run. Each business sector has a different priority to implementing CSR based on the liability, compliance, regulatory risks, and demands from its stakeholders. Management has to satisfy several groups who have some interest or stake in a firm and can influence its outcome (McWilliams et al.,

2006). In addition, the effect of CSR on stock returns vary over time and create a positive and negative result depending on the period of analysis because this strategy has a long-term process. Hence, we conjecture that CSR could be beneficial and destructive to Asian firms depending on culture, government policies, time of analysis, and priority of firms.

This study infers several implications from our findings. First, we characterize Asian firms based on stakeholders' perspective of CSR engagement on the combination of accounting and market-based measures of financial performance. Our study accentuates the effect of CSR engagement in building citizenship culture and value creation for stakeholders. This conjecture contributes to constructing a map of literature of corporate social responsibility and corporate financial performance, which can be used in comparing the phenomenon in other regions of the world in reference to stakeholder theory. This article provides evidence over the context of country and sector level analyses. The cognizance of ethical concerns among stakeholders plays an essential role in sustaining in Asian markets. Second, investors, policy-making institutions, and analysts may use the findings of this study to acknowledge the benefits of CSR strategies on the future financial performance of the company in the stock market. We suggest that firms from different markets and business sectors continuously implement and incorporate these activities into their corporate values and objectives. Asian firms may set targets to achieve higher CSR ratings, as the direct effect of CSR on financial performance will foster positive effect after it reaches a certain level (Lin et al., 2015).

The firm's decision-makers should contemplate on the idea that CSR initiatives are investments that create a positive image and generate earnings in the long-run. There is no trade-off between these investments and profitability. Hence, firms need not view social responsibility and financial performance as rival objective. Moreover, this study suggests that equity analysts and fund managers carefully assess their recommendations to investors because CSR is not always destructive to shareholders value. Lastly, our study findings can help policy-making institutions to formulate guidelines in addressing ethical and moral issues by building strong and relevant citizenship culture in reference to shared value among stakeholders of firms from different countries and sectors.

This study examines a wide range of data from a more representative number of firms from the selected countries to better understand the impact of CSR on corporate financial performance in the Asian context. However, firms from countries such as the Philippines, Thailand, and Indonesia are marginalized whereas other Asian countries such as Vietnam and Cambodia are not included due to incomplete and lack of CSR information. This study contemplates on data from ESG reports provided by an independent rating company, which limits us from the inclusion of other firms not included in their database. These data also face limitations like data from other sustainability databases (e.g., measurement and indexing issues). Our main result is accordant with the greater number of existing studies about the phenomenon. However, this result is subject to verification because the effect of CSR and financial performance is still inconclusive. Hence, we propose future studies to investigate the magnitude to which the result can be further generalized. Lastly, we suggest that future research examine other boundary conditions from the stock market and economic perspective, and address issues regarding data limitations in order to provide a thorough cognizance of the complexities in the phenomenon.

Declaration of ownership:

This report is our original work.

Conflict of interest:

None.

Ethical Clearance:

This study was approved by the institution.

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