FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN SRI LANKA: DOES CORPORATE SOCIAL RESPONSIBILITY MATTER?

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Abstract

This paper examines the impact of Corporate Social Responsibility (CSR) on the financial performance of the listed commercial banking sector in Sri Lanka. CSR is measured using content analysis based on an index. The financial performance of the banking firms is measured by accounting-based performance indicators (ROA, ROE, and PAT) and market-based performance indicators (P/E, EPS, and MTB). Bank size and Leverage were the control variables for the study. Annual reports have been used to collect secondary data of the listed commercial banks for 10 years from 2010-2020. Fixed effect panel regression was employed for the data analysis and to test the study hypotheses. The study findings reveal that CSR partly has a significant positive influence on the banks' financial performance. Accordingly, CSR of listed commercial banks in Sri Lanka positively impacted the market-based financial performance. Consequently, investments in CSR lead to increase market-related-performance indicators of listed commercial banks compared to accounting performances measures. Moreover, study results conclude that CSR does not have an impact on the accounting-based performance measures, and therefore, CSR disclosures are not reflected through accounting-based performance in Sri Lankan commercial banks. However, the relationship between control variables and firm performance is uncertain. Consequently, there is no difference between larger banks or smaller banks based on their financial performances. Further, the study concludes that the leverage of the listed commercial banks is not highly critical in achieving financial performance during the last ten-year period. In sum, the operating profitability of commercial banks is not guaranteed through CSR involvement as well as the banks do not engage in CSR only for the reason that they are profitable. However, well-coordinated investments in CSR and its disclosure could affect banks' share prices, investors' funds, and stakeholder loyalty. Moreover, spending on CSR as a non-profit *making activity could assist the banks to enhance future intangible profits, to face the competition in the market while addressing the social responsibility requirements of the banking firms.*

Keywords: corporate social responsibility, market-based performance, accounting-based performance, listed commercial banks

1. Introduction

The growing attention of corporations to dress up Corporate Social Responsibility (CSR) as a mainstream business practice to build a socially conscious image is remarkably spreading over the past few decades. Moreover, CSR has become a significant component of corporate planning and business competitiveness that lead the firms to attain sustainable growth (Dyllick & Hockerts, 2002). Increasingly, companies made initiatives to report their CSR practices mainly in their published annual reports in recent years (Galant & Cadez, 2017). Consequently, CSR disclosures attempt to portray the relationship between the corporate world and the wider society that they serve. It reports beyond the financial measures targeting enhanced transparency and accountability in business operations.

CSR and its relationship with various dimensions of the firm have garnered increasing attention from scholars over the recent decades (Djalilov et al., 2015; Galant & Cadez, 2017). It can assure the sustained long-term profitability of the firms while enhancing their reputation (Waddock & Graves, 1997). High CSR ratings usually provide returns more than those with low CSR ratings (Statman & Glushkov, 2009). Moreover, firms are highly enthused to involve CSR activities to enhance their profitability, sales, and goodwill (Fernando, 2007). If CSR strategy is handled successfully, it will not only enhance stakeholder amusement but also boost the financial performance of corporations (Galant & Cadez, 2017).

Although some scholars argue that CSR is kind of an investment that can enhance firm performance, Bratenius and Melin (2015) state that CSR is a waste of resources and time of the firm and instead, firms can use those resources to maximize shareholder wealth (Gangi et al., 2018). Furthermore, CSR initiatives could be resource-wasting efforts and might be weakening firms' competi tiveness (Jensen, 2010). Friedman (1970) also concludes that CSR exploits organizational scarce resources without any significant return.

Despite the resource wastage and other contradicting arguments on CSR initiatives, yet, firms increasingly invest and engage in CSR practices (Maqbool & Zameer, 2018), and report the CSR activities within annual reports or other modes of communication. This communication of CSR to the stakeholders can be gainful to the companies (Bihari & Pradhan, 2011). Freeman (1994) stated that corporate financial performance is positively affected by CSR practices due to improved relationships with diverse stakeholders that can increase market opportunities while generating higher financial performances. Conversely, According to Friedman (1970), agency theory suggests that financial perfor mance is affected negatively by CSR practices because it involves a cost to the firm. Therefore, this paper attempts to investigate whether the CSR disclosures impair or improve the corporate financial performance of banking firms in Sri Lanka while addressing the nexus in CSR literature where results are still inconclusive and debatable (Galant &Cadez, 2017; Maqbool & Zameer, 2018; Mohamud, 2018). Moreover, existing findings provide varied results and mixed conclusions about the relationships between two constructs in both developed and developing contexts (Djalilov et al., 2015; Mohamud, 2018). Some studies found a direct and substantial association of CSR initiatives towards the financial performance of companies in different contexts (Abilasha & Tyagi, 2019; Gangi et al., 2018). In contrast, some scholars discovered the pessimistic influence of CSR on firm performance (Chih et al., 2010; Kao et al., 2018; Lee et al., 2009). Moreover, McWilliams and Siegel (2000), and Kesto (2017) recognized a neural effect of CSR activities on firms' financial performance.

Accordingly, the current paper proceeds intending to analyze the effect of CSR initiatives on the financial performance of listed commercial banks, Sri Lanka. Besides, the paper classifies financial performance as accounting-based performance measures (or termed as internal/operating performance or profitability measures) and market-based performance measures (or termed as external measures) (Galant & Cadez, 2017) in a single study, to provide a breadth and depth analysis on the relationship between two constructs; financial performance and social responsibility initiatives. In literature, the least attention has been given to exploring the impact of CSR on financial performance using both external and internal performance measures in a stand-alone study in different contexts (Galant & Cadez, 2017; Yoon & Chung, 2018). Consequently, this paper aims to compensate for this lacuna in the literature by providing empirical conclusions from an emerging countries' perspective regarding the listed banking sector.

Section two of the paper reviews existing theoretical and empirical contributions, section three provides the methodology for the study, the next section presents the analysis of study results and, the last section reveals study findings, implications, and suggestions for future research.

2. Review of Literature

2.1 Corporate social responsibility

CSR is a global disclosure practice that contributes to the social, economic, and environmental sustainability of a country which benefits wider stakeholders and society as a whole. CSR has different interpretations given by different scholars. For this study, CSR is identified as voluntary activities of the organization which reveal the involvement of environmental and social matters in business activities of the organization and the stakeholder interrelationships (Van Marrewijk, 2003). CSR disclosure is the communication of social, economic, employment, and environmental concerns of the corporations to their wider stakeholder groups (Ghazali, 2007; Kolk, 2016). Hence, CSR contributes to enhancing the tran sparency and accountability of the corporation while assuring governance.

Although CSR is a voluntary practice, Stakeholder theory (Jamali, 2008), Legitimacy theory (Lehman, 1983) and Social contract theory (Weiss, 2014) motivate the firms to involve more socially responsible activities and to disclose them to the stakeholders. However, agency theory weakens the managers' involvement in CSR activities as its main focus is maximizing shareholder wealth (Friedman, 1970). Yet, nowadays organizations need to be responsible for all their actions that impact the environment and whole society and must compensate for the damages they created (Oeyono et al., 2011). Therefore, firms are responsible for CSR and its disclosure to the various stakeholders irrespective of its benefits or damages to the firm.

Galant and Cadez (2017) identified four major approaches of CSR measurements including content analysis methodo logies, questionnaire-based surveys, reputation indices, and one-dimensional measures. Accordingly, content analysis is employed to quantify social respon sibility disclosures within the banks' annual reports because it is a widely used approach to codify qualitative CSR data to obtain quantitative information, which can be used in succeeding statistical evaluation (Karagiorgos, 2010). Abbott and Monsen (1979) used content analysis to categorize CSR into 24 items under six groups; workforce, environment, community, unbiased opportunity, products, and other, and determined a CSR score using a 0 – 5 rating scale (0 – no criteria fulfillment, 5 – criteria fulfillment). Maqbool and Zameer (2018) have identified 32 items of CSR under four dimensions; workplace, environment, community, and diverse, and ascertained a CSR score using a 0 – 1 rating scale (1 – present the disclosure, 0 – absent the disclosure). Further, Karagiorgos (2010) has identified 26 items for both social and environmental performance dimensions and rated them using a scale from 0 –3 (0 – indicator is not considered 3 –indicator is fully considered). Content analysis is a flexible method and researchers can specify which of the CSR dimensions are to be investigated (Galant & Cadez, 2017; Maqbool & Zameer, 2018). However, the company's reporting bias and researcher's prejudice embedded from beginning to the end of the research process are the main drawbacks of this approach.

2.2 Financial performance

Financial performance shows the revenues and profitability of business firms over a certain period demonstrating how that firms have utilized their resources efficiently to generate income (Mohamud, 2018). Internal / accounting-based and external / market-based are two major financial performance measurements (Galant & Cadez, 2017). Internal financial performance measures are more sensitive to the specific company features and focus on operating profitability. It reflects how certain activities lead to a particular firm's short-term profits and productivity (Yoon & Chung, 2018). Return on Capital Employed (ROCE), Return on Assets (ROA), Return on Equity (ROE), Return on Sales (ROS) are the internal profitability (accounting-based) measures widely used by many researchers (Al-Tuwaijri et al., 2004; Djalilov et al., 2015; Maqbool & Zameer, 2018). Some other financial performance measures are Profit After Tax (PAT), Net Profit (NP), Profit Before Tax (PBT), Net Interest Margin (NIM), and Net Interest Income (NII) (Gangi et al., 2018; Mohamud, 2018). Consequently, accounting-based performance measure ments selected for the study are ROA, ROE, and Profit after tax (PAT).

Market-based performance measures are more sensitive to the market-specific characteristics and the market-based values indicate firms' ability to create future intangible profits (Yoon & Chung, 2018). Market-based indicators such as EPS, firm value, or growth of stock price reveal how investors' capability to earn future tangible profits (Luo & Bhatta charya, 2006). Extensively used market-based performance indicators are Earning Per Share (EPS), firm value, Price- Earnings Ratio (P/E Ratio), share return (Gangi et al., 2018), and market to book ratio. Ashraf et al. (2017) have used market-based indicators such as EPS, P/E ratio, stock return, and firm value in their study. Accordingly, EPS, P/E ratio, and market to book (MTB) ratio were identified as the market-based perfor mance measurements for the current study.

2.3 Association between CSR and financial performance

Although studies about CSR and its effect on various dimensions have been conducted regarding both developed and developing countries, they provide mixed and inconclusive results (Galant & Cadez, 2017; Yoon & Chung, 2018). Thus, as per stakeholder theory in literature, some scholars found a positive association of CSR on the firm performance while some scholars found a negative relationship between two variables according to agency theory. Moreover, some other scholars found a neutral connection of CSR activities on the firm performance, and these diverse relationships established in various studies are provided below.

2.3.1 Positive relationship between CSR and financial performance

CSR establishes an affirmative and direct impact on financial performance according to stakeholder theory (Freeman, 1994). Moreover, legitimacy theory (Lehman, 1983) and Social contract theory (Weiss, 2014) also promote CSR within firms as it focuses on satisfying different stakeholder needs (Moser & Martin, 2012). According to this perspective, being socially respon sible increases the firms' financial performance. The scholars argue in support of a positive impact emphasized CSR as a significant factor in increasing financial performance (Galant & Cadez, 2017). Gangi et al. (2018) revealed that CSR has a direct association with the financial performance in European banks between 2009 and 2015. Moser and Martin (2012) highlighted that invest ments in socially responsible initiatives generate favorable outcomes on the value of shareholders. McGuire et al. (1988), Roman et al. (1999), and Mohamud (2018) concluded a positive relationship among CSR practices and indicators of financial performance (ROA, ROE, and return on sales). Samy et al. (2010) also established a weak positive relationship between CSR practices and earnings per share among 20 UK corporations. Abilasha and Tyagi (2019) established a positive link between CSR and financial performance (PBT, ROA, ROE & firm value). According to this perspective, CSR initiatives are not just another cost for the business but important investment activities for firms' sustained existence in the continually growing competitive business environment (Samy et al., 2010).

2.3.2Negative relationship between CSR and financial performance

This perspective specifies that CSR has a negative relationship with firms' financial performance as the firms' involvements in CSR initiatives incur losses or generate adverse effects on firms' financial performance. This school of thought is backed by agency theory (Friedman, 1970). According to agency theory, protecting ownership is the main responsibility of a manager as an agent, and therefore manager's spending on CSR is a form of mandate violation (Jensen & Meckling, 1976). Moreover, under agency theory, CSR is expensive, and being involved in CSR activities puts the bank into an unfavorable condition compared to competitors who are not practicing CSR (McWilliams & Siegel, 2000). Friedman (1970) argued that without any significant return, CSR exploits organizational scarce resources. Wright and Rwabizambuga (2006) stated that CSR initiatives can be challenging and also cost-consuming. These supple mentary expenditures cannot be sustained by firms as they suffer many other financial restrictions. Therefore, according to this perspective, CSR initiatives have been identified as efforts of wasting recourses which leads to reducing the firms' performance rather than enhancing their competitiveness. Jensen (2010) mentioned that, since the expected cost is higher than the expected economic benefits, investment in CSR would be an unjustified hazard. Some scholars found an adverse relationship between CSR and bank performance (Makni et al., 2009; Selcuk & Kiymaz, 2017; Soana, 2011). Vance (1975) has also found a negative association between CSR and financial performance, indicating a lower return on assets for the companies that report CSR activities more than other firms.

2.3.3 Neutral relationship between CSR and financial performance

This perspective argues that investment in CSR or its revelation has no impact on the firm's performance, and that performance is influenced by variables other than CSR. Therefore, according to this perspective, CSR and financial performance are two different variables that do not show any connection. The survey conducted by ACCA in 2004 found no strong link between CSR activities and profitability (ACCA, 2009). Some researchers have found CSR has neither a positive nor a negative connection with financial performance (Chih et al., 2010; D'ARCIMOLES & Trebucq, 2002; Hagberg et al., 2015; Kesto, 2017) McWilliams and Siegel (2000) also found that financial performance has not been affected by CSR and showed a neutral effect.

Thus, the association between CSR and financial performance could be negative, positive, or neutral. On the other hand, in reviewing the literature, little theoretical contributions can be seen in analyzing CSR with accounting-based and market-based financial performance measures in a stand-alone study. Accordingly, resear chers attempt to explore whether CSR disclosure improves banks' operational and market-based financial performance or CSR disclosure harms banks' operational and market-based financial performance in the Sri Lankan Commercial banking sector. Conse quently, two hypotheses were developed.

H1: CSR disclosure has a significant positive relationship with accounting-based performance.
H2: CSR disclosure has a significant positive relationship with market-based performance.

2.4 CSR in Sri Lanka

Although many studies were conducted to investigate CSR and its effect on financial performance especially regar ding developed contexts, little attention has been given to studying developing contexts (Fernando, 2007). Moreover, firms in emerging economies have critical differences in organiza tional and behavioral aspects compared with developed countries (Fan et al., 2011). Hence conducting studies on corporate voluntary disclosures in emerging contexts has timely importance (Thilakerathne, 2009). Sri Lanka is an emerging economy where banking firms are paying much attention to voluntary corporate social responsibility disclosures (Tilakasiri, 2013). Further, he states that society, employees, and other stake holders pressurize the government and corporate sector to enhance the economic and social concern in the community, because of the severe economic issues faced by the country. Fernando (2007) highlighted that Sri Lankan private sector companies began to observe the outcome of CSR activities after the Tsunami in 2004. Though research studies have been conducted in Sri Lanka to explore the interconnection between CSR and financial perfor mances of different companies, inconclusive results were found (Tilakasiri, 2013). A handful of research studies have been conducted to examine the relationship between CSR and firm financial performance in Sri Lanka, where the association between the two constructs is still unconvincing (Abeysinghe & Basnayake, 2016; Wijesinghe & Senaratne, 2011). Further, analyzing the impact of CSR and financial performance by adopting both internal performance indicators and external performance indicators is infrequent in a single study regarding the commercial banks in Sri Lanka. Even though many studies largely considered non-banking firms in their studies, this study primarily attempts to explore the commercial banking industry because it is a crucial economic force, especially which makes up a considerable part of the whole financial system of Sri Lanka.

3. Methodology

3.1 Research design, sample, and data

The quantitative approach is employed to investigate the impact of CSR on performances in Sri Lanka. Listed commercial banks were selected to conduct the study because it is one of the key contributing sectors to the other industries and also to the economic growth and stability (Wijesinghe & Senaratne, 2011). Excluding new listing and delisting banking firms during the study period, researchers selected all domestic licensed commercial banks listed on Colombo Stock Exchange (CSE, 2020). Accordingly, the effective sample was ten commercial banks.

The current study is conducted using only the secondary data that was collected from published annual reports of commercial banks. Since this study examines the effect of CSR on financial performance, it is assumed that CSR disclosure of the preceding year has an impact on the performance of the succeeding year. Accordingly, CSR data was collected for a period of 10 years from 2010 to 2019 and the financial performance data was collected for 10 years from 2011 to 2020.

3.2 Measurement of CSR

CSR is the independent variable that demonstrates banks' social, economic, and environmental information to their stakeholders in their annual reports. Researchers used content analysis (Galant & Cadez, 2017; Karagiorgos, 2010; Maqbool & Zameer, 2018) to analyze CSR disclosures of banks' published annual reports based on an index developed according to the literature. Though there are various approaches developed to measure CSR, researchers adopted the CSR framework developed by Maqbool and Zameer (2018) specifically for the Indian context with a slight modification made after reviewing Abbott and Monsen (1979) and Dorr and Mandl (2007) to cover all stakeholder groups. It is a compatible CSR index to the Sri Lankan context where CSR is still a voluntary practice. In this index, CSR activities are classified into main four categories; environment, workplace, community, and miscellaneous. Each of these categories has eight sub-items. Thus, there are a total of 32 CSR items under four main CSR categories, where scale '1' is given for the disclosure of that item and scale '0' for the non-disclosure. Subsequently, a CSR score is ascertained for each bank and it is transformed into percentage terms (%) using the following formula for the analysis purposes (Maqbool & Zameer, 2018).

CSR score of the bank = No. of CSR items adopted by bank / Total no. of CSR items

3.3 Measurement of financial performance

Financial performance signals the revenue and profits of a company over a particular period and measures the efficient use of the company's resources (Mohamud, 2018). Scholars have investigated the financial performance of companies in various dimensions. Many studies have taken accounting-based indicators such as ROA, ROCE, PAT, PBT, and ROE (Gangiet al., 2018; Mohamud, 2018; Wijesinghe & Senaratne, 2011) to evaluate banks' financial performance because acco unting-based indicators can be easily accessible and reasonably comparable (Galant & Cadez, 2017). In contrast, some scholars have used market-based indicators such as EPS, P/E ratio, stock return, and firm value (Ashraf et al., 2017) because changes in CSR practices can be easily indicated by market-based ratios. Conversely, few researchers have used both accounting-based and market-based indicators in their studies to measure banks' financial performance (Galant & Cadez, 2017; Hagberg et al., 2015; Maqbool & Zameer, 2018) to explore the effects of both internal and external measures. Accordingly, this study used both internal and external financial performance measurements and the selected accounting-based performance indicators for the study are ROA, ROE, and, PAT and market-based performance indicators are P/E ratio, EPS, and market to book ratio.

3. 4 Measurement of control variables

Firm financial performance is influenced by several other firm-specific chara cteristics such as bank size (Abeysinghe & Basnayake, 2016; Maqbool & Zameer, 2018; Oyewumi et al., 2018), leverage and coverage rate of NPL (Wu & Shen, 2013; Yoon & Chung, 2018) firm age, ownership and GDP (Djalilov et al., 2015; Mohamud, 2018). Accordingly, bank size and leverage were selected as control variables because many researchers concluded bank size, and leverage was found to be connected with banks' financial performance. For the study purpose, banks' size is measured in terms of the natural log value of total assets (Abeysinghe & Basnayake, 2016; Maqbool & Zameer, 2018; Mohamud, 2018), and the ratio of total liabilities to total equity is used to measure leverage is measured.

Table 1: Constructs of variables

Variables	Measurements
CSR	CSR disclosure score – No. of bank's CSR items / Total CSR items
ROA	Return on assets – net income/average assets
ROE	Return on equity – net income/average equity
PAT	Profit after tax- natural log value of profit after tax
PE ratio	Price-earnings ratio – price per share/earnings per share
EPS	Earnings per share – net income of the company/average outstanding shares of the company
MTB ratio	Market to book ratio – market capitalization/total book value
Size	Natural log value of total assets
Leverage	Debt /equity ratio – total liabilities/total equity

Source:Literature review

3.5 List of hypotheses and data analysis

Descriptive statistics are used to identify the characteristics of disclosures ofCSR initiatives and the financial performance of the banking firms. Due to the time series and cross-sectional nature of the data, the panel regression technique was performed with the fixed effect model of the Hausman test results. The relative significance levels (two-tailed) for the study has been taken as 1%, 5% and 10% (p-value < 0.01***, 0.05** or 0.1*). The hypotheses and the regression models of the study are given below.

3.5.1 Regression models for CSR and accounting-based performance

H1: CSR disclosure has a significant positive relationship with accounting-based performance.

The first hypothesis is tested using the following three regression models.

Model 01: ROA = α + β1 CSRit + β2 LEVit + β3 SIZ it + eit………………..(1)

Model 02: ROE = a + β1 CSR it + β2 LEV it + β3 SIZ it + eit……..(2)

Model 03:PAT = a + β1 CSR it + β2 LEV it + β3 SIZ it + eit………………(3)

3.5.2 Regression models for CSR and market-based performance

H2: CSR disclosure has a significant positive relationship with market-based performance.

The second hypothesis is tested using the following three regression models.

Model 04: P/E = a + β1 CSR it + β2 LEV it + β3 SIZ it + eit……………..(4)

Model 05: EPS = a + β1 CSR it +β2 LEV it + β3 SIZ it + eit.................(5)

Model 06: MTB = a + β1 CSR it + β2 LEV it + β3 SIZ it + eit…………...(6)

Where,

ROA – Return on assets for bank i in year t

ROE – Return on equity for bank i in year t

PAT – Profit after tax for bank i in year t

P/E – Price-earnings ratio for bank i in year t

EPS- Earnings per share for bank i in year t

MTB – Market to book ratio for bank i in year t

CSR – CSR disclosure score for bank i in year t

LEV – leverage for firm i in year t

SIZ – firm size for firm i in year t

a = constant

β1, I =1,……3 = parameters

ei = error term

4. Results and discussion

The results and discussion section has two parts. The first part provides descriptive statistics and the next part discusses the results of panel-based regression analysis.

4.1 Nature and extent of CSR disclosure of listed commercial banks

Table 2 shows the average CSR disclosure (%) for each CSR category of the listed commercial banks for the study period ranging from 2010 to 2020. Key CSR categories of the index are; community, environment, workplace, and force, miscellaneous.

Table 2: Average CSR disclosure for each category (%)

Category of CSR	Average disclosure (%)
Community	72.62
Environment	52.25
Workplace & force	51.25
Miscellaneous	60.37

Source: annual reports (2010 - 2020).

The most popular CSR disclosure area is the community (72.62%) and the least popular area is workplace and force (51.25%). The environment category is also disclosed slightly above 50% among the baking firms. The miscellaneous category of CSR shows all other CSR activities that do not belong tothe categories of workplace and force, community, and environment, and it is exactly 60%. Thus, more than 50% of the activities for each category of the CSR index have been disclosed by the commercial banks for the study period.

4.2 Descriptive statistics

Data were screened to assess the impact of distribution problems of skewness and kurtosis as well as outliers and non-linearity. To protect normality assumption, data related to ROA, ROE, PAT, P/E ratio, EPS, MTB ratio, Firm size, and Leverage were winsorized to remove the outliers. Descriptive statistics for all variables are shown in Table 3.

Accordingly, the average CSR disclosure of commercial banks is 59.12% with a minimum of 18.75% and a maximum of 93.75%. Nevertheless, there is a huge disclosure variation among the banks which reports 19.537% of standard deviation. Although there is a large disclosure difference among the commercial banks, banking firms have disclosed more than 55% of voluntary CSR within their annual reports.

The average ROA is 1.49 with a standard deviation of 0.576. However, the mean ROE of the banking firms is 11.116 with a maximum of 25.12 and a minimum of 0.700. During the study period, ROE was reported as 6.4558 and it reveals a larger variance of ROE among sample companies. The average PAT of sample companies during the ten years (2010 to 2020) is Rs. 4,751.06 million. In the last ten years, the average P/E ratio and EPS of listed commercial banks were 13.985% and Rs. 11.04 respectively. Sri Lankan listed commercial banks reported average total liabilities of 51.95% as a percentage of equity (leverage) during the last ten years. The mean value of total assets of listed banks is Rs. 379,140 million with higher variability among the banks. The average market capitalizations of the listed commercial banks are almost 9 times higher compared with their book values during the study period.

Table 3 : Descriptive statistics

	Mean	Median	S.D	Maximum	Minimum
CSR	59.120	60.938	19.537	93.750	18.700
ROA	1.4920	1.4220	0.576	3.700	0.190
ROE	11.116	11.565.	6.4558	25.12	0.700
PAT(Rs. million)	4751.1	3133.5	4769.9	17544	57.00
PE ratio	13.985	12.439	14.425	74.00	-43.43
EPS	11.043	7.830	9.737	51.560	1.410
MTB ratio	8.5733	8.1300	3.3047	17.100	2.540
Size (Rs. million)	379140	268380	365530	1736200	14496
Leverage	51.952	45.435	29.881	78.63	29.881

Source: survey data of annual reports (2010-2020)

4.3 Panel regression analysis: Relationship between CSR and financial performance

To analyze data, panel-based regression was employed based on the Hausman test with a fixed-effect model. Tables 4 and 5 show the panel regression results for the study because it uses two main financial performance categories.

4.3.1CSR and accounting-based financial performance (ABFP)

Table 4 shows the summary of panel regression results about the impact of CSR on accounting-based performance indicators; ROA, ROE, and Profit after tax.

Table 4 : Regaression results summary : Relationship between CSR and ABFP

	Model 1-equation (1)	Model 2-equation(2)	Model 3-equation(3)
Variables	**ROA**	**ROE**	**PAT**
Independent variable			
CSR	0.066	-0.065	0.004*
Control variables			
Size	-0.137	1.448	0.460***
Leverage	-0.020	0.610	-0.038***
Constant	2.021	1.814	0.973*
Adjusted R^2	0.364	0.727	0.914
F-statistics	4.155***	19.385***	77.786***
P value	0.000	0.000	0.000
Durbin-Watson	1.546	2.158	2.263

Source: Panel regression results – Annual reports of listed commercial banks (2010-2020)

Note: associations are statistically significant at *10%, **5% and ***1% levels (two-tailed)

Model 01: CSR and Return on Assets (ROA)

According to model 1 on CSR and ROA, the adjusted coefficient of determination is 0.364 ($F=4.1555$, $p<0.01$). Accordingly, 36.43% variance in ROA is explained by CSR jointly with bank size and leverage. Even though the coefficient indicates a positive number, CSR is not a significant predictor of ROA ($B = 0.066$, $p >0.05$). Accordingly, there is no significant positive relationship between CSR and ROA. Further, the study was unable to find statistically significant associations among CSR and control variables where coefficients show negative values; firm size with ROA ($B = -0.13796$, $p >0.05$) and leverage with ROA ($B = -0.02080$, $p >0.05$).

Model 02: CSR and Return on Equity (ROE)

The adjusted R2 for model 2 on CSR and ROE is 0.7278 (F=19.3853, $p<0.01$). Therefore, CSR explains a 72.78% variance in ROE, jointly with bank size and leverage. Although the coefficient indicates a negative value, CSR is not a predictor of ROE (B = -0.0654, $p > 0.05$). Consequently, CSR has no statistically significant relationship with the ROE of listed commercial banks. However, as a control variable, leverage has a significant positive relationship with the ROE of commercial banks at 5% (B= 0.610823, $p<0.05$). Nevertheless, firm size has no significant relationship with ROA (B= 1.4481, $p>0.05$).

Model 03: CSR and Profit after Tax (PAT)

According to model 3, the adjusted R2 shows 0.9147 (F=77.7865, $P<0.01$), and 91.47% variance in PAT is explained by CSR, jointly with bank size and leverage. According to the model, CSR is a significant positive variable in explaining PAT at 10% (B = 0.004698, $p > 0.1$). Therefore, the results specify that CSR is a predictor of PAT of listed commercial banks. Moreover, control variables show statistically significant relationships with PAT at 1%. However, leverage has a significant negative relationship with ROA (B= -0.03824, $p<0.01$) and firm size has a significant positive relationship with ROA (B= 0.460183, $p>0.01$).

In sum, the results of the regression models reveal that the study could not find a significant positive influence of CSR towards the accounting-based financial performance indicators. Hence, the study findings are unable to support the established hypothesis (H1) ($p < 0.5$). Since the findings provide an insignificant relationship between CSR and accounting-based performance, study findings confirm the same opinion with the perspective of the neutral effect of the relationship between CSR and banks' accounting-based financial performance(Lee and Park, 2010; Kesto, 2017, McWilliamsand Siegel, 2000; Abbott &Monsen, 1979; Griffin & Mahon, 1997 as cited in Maqbool& Zameer, 2018).

The relationship among control variables and accounting-based performance indicators is also uncertain because leverage shows both negative and positive significant relationships with PAT and ROE respectively whereas firm size shows a significant positive relationship with PAT and insignificant relationships with ROE and ROA.

4.3.2 CSR and market-based financial performance (MBFP)

Table 5 shows the summary of panel regression results about the impact of CSR on market-based performance indicators; P/E ratio, EPS, and MTB ratio.

Table 5: Regression results summary: Relationship between CSR and MBFP

	Model 4-equation(4)	Model 5-equation (5)	Model 6-equation(6)
Variables	**P/E ratio**	**EPS**	**MTB ratio**
Independent variable			
CSR	0.252*	0.172**	0.075**
Control variables			
Size	10.487	-0.720	2.281
Leverage	1.380**	0.303	-0.220
Constant	-69.389*	2.034**	0.314*
Adjusted R^2	0.541	0.651	0.654
F-statistics	8.579***	13.538***	13.745***
P value	0.000	0.000	0.000
Durbin-Watson	1.534	2.415	2.106

Source: Panel regression results – Annual reports of listed commercial banks (2010-2020)

Note: associations are statistically significant at *10%, **5% and***1% levels (two-tailed)

Model 04: CSR and P/E Ratio (Price-earnings ratio)

According to model 4, CSR disclosures together with leverage and total assets represent 54.19% (F=8.5792, p<0.01) of the variance in the P/E ratio. The model shows that CSR is a significant predictor of ROE and accordingly, CSR has a significant positive relationship with the P/E ratio of listed commercial banks (B = 0.25259, p < 0.1). Moreover, leverage has a significant positive relationship with the P/E ratio (B = 1.38088, p<0.05). However, firm size has no significant relationship with ROA (B = 10.4874, p >0.05).

Model 05: CSR and EPS (Earning per share)

The adjusted R2 for model 5 on CSR and EPS shows 0.6512 (F=13.5382, p<0.01). Therefore, 65.12% variance in EPS is explained by CSR, jointly with bank size and leverage. According to the regression results, CSR is a predictor of EPS and CSR has a significant positive relation ship with EPS of listed commercial banks ($B = 0.17218$, $p < 0.05$). However, leverage ($B = 0.3037$, $p > 0.05$) and firm size ($B = -0.7208$, $p > 0.05$) have no significant relationships with EPS.

Model 06: CSR and MTB Ratio (Market to book ratio)

According to model 6 on CSR and MTB ratio, the adjusted coefficient of determination is 0.6546 ($F=13.7459$, $p<0.01$). Hence, CSR explains 65.46% variance in MTB ratio jointly with bank size and leverage. Regression results indicate that CSR is a significant variable in explaining the MTB ratio and consequently, there is a significant positive relationship between CSR and MTB ratio ($B = 0.07503$, $p > 0.05$). Furthermore, the study was unable to find statistically significant associations among CSR and control variables where the coefficient of leverage shows a negative value ($B = -0.220$, $p > 0.05$)and firm size shows a positive value with MTB ratio ($B = 2.281$, $p > 0.05$).

Overall, analyzing the findings of the regression models, CSR shows a significant positive relationship with the market-based performance of the sampled banks. Therefore, the study results could support the established hypothesis (H2) on the positive relationship between CSR and MBFP ($p < 0.5$). Subsequently, these results confirm the perspective of a positive effect of the relationship between CSR and banks' market-based financial performance (Abilasha & Tyagi, 2019; Lee et al., 2009; Moser & Martin, 2012).

However, according to the study findings, control variables and market-based performance indicators show an insignificant relationship, and hence bank size or leverage do not support determining the market-based financial performance of listed commercial banks in Sri Lanka.

5. Conclusion and study implications

Nowadays, the developments in the economy and the competition among the industries enhanced the banking sector and pressurized the banks to involve in CSR activities to gain competitive advantages. Consequently, many banks engage in different CSR activities and disclose them to their stakeholders through their published annual reports. In literature, while some scholars argue that investing in CSR and its disclosures are mere waste of resources and incur a cost to the firm, some other scholars state that investing in CSR and disclosing it enhance both financial and non-financial benefits to the firm.

Therefore, this paper attempts to investigate the relationship between CSR disclosures and bank financial performance in the Sri Lankan context. The CSR disclosures of listed commercial banks were measured by a CSR score that was determined by content analysis. Financial performance was measured by both accounting-based measures (ROA, ROE, and PAT) and market-based measures (P/E, EPS, and MTB). Bank size and leverage were the control variables for the study. Panel regression was employed based on the Hausman test with fixed effect to analyze data of listed commercial banks for 10 years between 2010-2020.

The results indicate that CSR partly has a significant positive relationship with banks' financial performance. Moreover, study results conclude that CSR has no relationship with accounting-based performance measures, and therefore, CSR disclosures are not reflected through accounting-based performance in Sri Lankan commercial banks. However, CSR has a significant positive relationship with the market-based performance of listed commercial banks. Therefore, investment in CSR could lead to increased market-based performance compared to the accounting-based performance of commercial banks. Moreover, study findings suggest that investors and shareholders will be motivated to invest further in the higher CSR rating banks. Further, CSR was found to be a means to gain competitive advantages within the banking industry.

Nevertheless, the relationship between control variables and firm performance is uncertain according to the study findings. Consequently, there is no difference between larger banks or smaller banks based on their financial performances. Further, the study concludes that the leverage of the listed commercial banks is not highly critical in achieving financial performance.

Overall, banks do not engage in CSR just because they are financially powerful, and CSR activities and their disclosure do not assure the operational profitability of listed commercial banks. However, a well-balanced investment in CSR and its disclosure could affect banks' market-based performance, investors' funds, and also stakeholder loyalty. Moreover, spending on CSR as a non-profit making activity could assist the banks to face the competition in the market while addressing the social responsibility requirements of the banking firms.

The current study attempts to fill the gaps in the existing literature about the unrevealed findings of CSR and its impact on financial performance, where both market-based and accounting-based performance measures were used in a single study regarding an emerging economy like Sri Lanka. Further, study findings could be useful for policy makers in developing their policies regarding corporate social disclosures as it is still a voluntary practice in many developing contexts. Moreover, practiti oners and managers could use the study findings to determine new business approaches incorporating CSR in their strategic agenda to improve market-based performance and also for managing stakeholder relationships. Further, a significant relationship between CSR disclosures and firm performance supports the transparency and informed decisions in capital markets.

Although the current study only investigate the banking industry with a small sample of companies, future studies can look at larger samples that include all of the companies listed on the Colombo Stock Exchange. Furthermore, business value has not been studied within this study in the examination of market-based measures that reflect external performance. As a result, future research can utilize firm value as a metric to assess external performance. More over, CSR of an organization can be measured qualitatively to study its relation with organizational performance.

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