**Journal of Asian Business Strategy**
*ISSN(e): 2225-4226*
*ISSN(p): 2309-8295*
*DOI: 10.18488/journal.1006.2021.111.33.45*
*Vol. 11, No. 1, 33-45.*

*URL: www.aessweb.com*

# DOES MANAGER'S OPPORTUNISTIC MOTIVE MODERATE THE RELATIONSHIP BETWEEN CSR DISCLOSURE AND FIRM'S MARKET VALUE OF EQUITY? STUDY ON THE LISTED BANKING COMPANIES IN THE DHAKA STOCK EXCHANGE

**Mashiur Rahman**[1+]
**Siti Zaleha Abdul Rasid**[2]

[1]*Assistant Professor, School of Business and Lead Consultant, IBAT, Dhaka, Bangladesh.*
*Email: mashiur1953@gmail.com Tel: +8801405503288*
[2]*Associate Professor, Azman Hashim International Business School, UTM, Kuala Lumpur, Malaysia.*
*Email: szaleha.kl@utm.my Tel: +60321805178*

*(+ Corresponding author)*

**Article History**
Received: 12 February 2021
Revised: 17 March 2021
Accepted: 20 April 2021
Published: 26 May 2021

**Keywords**
Corporate social responsibility
Disclosure
Earnings management
Discretionary loan loss provisions
Market value of equity
Global reporting initiatives
Dhaka stock exchange.

## *ABSTRACT*

Despite the growing prevalence of CSR disclosure, it is unclear what fundamental importance the market places on it. Previous literature has also shown attention to whether those organizations with more outstanding CSR disclosure scores are more Market Value of Equity (MVE) by market respondents. Empirical confirmation, nonetheless, delivers inconclusive outcomes concerning the path of these associations. This study aims to convey onward the standing research accomplishments and fill the research gaps that encompass examining the possible relationship between CSRD and MVE and the moderating effect of discretionary loan loss provisions (DLLP) to observe the right direction in this inconclusive relationship. Also, through a generalized valuation framework stimulated by Ohlson, this research examines whether CSRD is value relevant and, especially, the moderating effect of DLLP on this association. This study is based on a sample of 30 firm-year observations using cross-sectional data methodology for an example of Bangladeshi listed banking companies (both conventional and Islamic perspective) of the Dhaka Stock Exchange (DSE) over the year 2019. Regarding DLLP, this study investigates earnings aggressiveness through loan loss provisions. More importantly, this study measure CSR disclosure by developing a CSR Disclosure index based on prior studies on CSR and global reporting initiatives (GRI) guidelines. This study's expected finding anticipated that CSR reports could positively affect the stock price, and DLLP may negatively affect this association's direction. Our results could have several ramifications for financial institutions, investors, and policymakers.

**Contribution/ Originality:** This study is one of the very few studies investigating the relationship between CSR disclosure and the Market value of equity in Bangladeshi banking sector. Moreover, it contributes in the existing literature by investigating the moderating effect of discretionary loan loss provisions in this relationship.

## 1. INTRODUCTION

Despite the economic and technological advancement accomplished by many corporations, they have been criticized for their difficulties instigated by their adverse communal and environmental impact. In response, relevant guidelines, for instance, EMAS (Eco-Management and Audit Scheme) or ISO 14000 regarding environmental strategies and quality controls, have been adopted. Moreover, the financial report has a shortcoming in that it does not deliver information about specific queries that are currently generating much concern, especially the communal and environmental aspects of corporate undertakings (Martínez-Ferrero, Gallego-Álvarez, & García-Sánchez, 2015). To overcome this constraint, corporations incorporate in the annual report or corresponding reports regarding sustainability issues and other governance topics, such as intellectual resources, business governance, and corporate social responsibility (CSR hereafter). Thus, the growing significance employed on sustainability worldwide has specified to focusing consideration on CSR (Yip, Van Staden, & Cahan, 2011).

Furthermore, CSR Disclosure (CSRD) may lead to the formation of business value. Market Value of Equity (MVE) examine the relationship between economic data and, because of the Ohlson (1995) valuation show additionally non-financial data and share values or stock returns De Klerk and De Villiers (2012). CSRD is a type of non-financial related data. If CSRD is connected with the organizations' share value, hypothetical contentions prompt the induction that the evidence disclosed is essential for shareholders to value the organization (Hassel, Nilsson, & Nyquist, 2005). As indicated by Rahman, Rasid, and Basiruddin (2020a) specialists can understand from value-relevance tests whether the data thing of premium (CSRD regarding this review) is related to the data set that financial specialists use to value the organization's stocks.

Thus, considering financial information and non-financial information (CSR) together may elucidate market estimates better than an exclusive emphasis on financial information (Reverte, 2016). Also, the distribution of supplementary information deals with only reassurance and self-reliance to commercial investors concerning different phases of their operations, growing visibility, and decreasing the level of secretive information (Rahman, Rasid, & Basiruddin, 2020b). Subsequently, these activities could affect the economic value creation of the firm. Therefore, it is crucial to investigate whether the non-financial information, specifically CSR information, disclosed by the companies in the annual report or other standalone reports (such as sustainability reports, CSR reports, etc.) is value relevant or not. Consequently, the goal is to understand if disclosing a detailed disclosure on these issues can produce clear benefits in value creation in the medium-long period.

According to the validity hypothesis, CSR results may be irrelevant or even negatively associated with stock market values. Simultaneously, the economic agency theory claims that disclosures are not worth anything (assuming that copying certain activities and disclosures is costly) (Rahman, Rasid, & Basiruddin, 2020c). Furthermore, previous research has indicated that actual CSR output may differ from that disclosed. In this regard, previous studies that looked into the relationship between CSR disclosure and market value of equity were conducted by De Klerk and De Villiers (2012); Muttakin, Khan, and Azim (2015); Rahman et al. (2020b) with mixed results.

On the other hand, earnings management has resulted in accounting report scandals at firms such as Enron, Merck, WorldCom, and several others in the United States. Previous research into the relationship between earnings management and accounting information value relevance has shown that earnings management reduces accounting information value relevance (Belgacem & Omri, 2015; Verbeeten, Gamerschlag, & Möller, 2016). Accounting knowledge has Market Value of Equity, according to Rahman et al. (2020c) if it is predicted to have a substantial relationship with the stock price. As a result, it's clear that DLLP lowers the MVE of financial data; hence, it's crucial to look into earnings management's impact on the relationship between CSR Disclosure (non-financial data) and Market Value of Equity.

In this context, this study has many aspects. The primary element deals with the practical contribution toward CSR Disclosure (CSRD) and Market Value of Equity (MVE) area. This study fills a significant gap and adds to the currently limited literature and scientific debate in this area in several ways. Initially, a positive relation between CSR Disclosure and firm value has been shown to prevail in some studies, but results remain mixed (Carnevale & Mazzuca, 2014). Thus, the unresolved debate on the voluntary CSRD- Market Value of Equity links led to an urgent need to examine this nexus's possible moderating effect. In this respect, this study seeks to investigate whether earnings management has a moderating impact on the relationship between CSRD and firm valuation. Second, however, despite numerous studies on CSR Disclosure, this study shows that the market worth in terms of share price and CSR disclosures in the context of overall banking perspective that has not been satisfactorily explored and finally, so far, the author knowledge there is a shortage of research from the developing country perspective like Bangladesh.

The remainder of the paper is laid out as follows. Section 2 summarizes the literature on CSR disclosure practices Market Value of Equity and discusses the fundamental hypothesis to be tested. Section 3 explains the research methods and presents data and analytical models in depth. The findings are presented in Section 4. Finally, I present the study's discussion and conclusions.

### *1.1. Research Questions*

Social concern tends to be acknowledged as noteworthy business awareness to the link between groups and the community of corporate social responsibility or sustainability. Prior research also illustrates the growing importance of sustainability disclosure. However, it appears that the link between CSR Disclosure and Market Value of Equity remains unclear. Thus, the following research questions are addressed:

1. What is the relationship between CSR Disclosure and Market Value of Equity in Bangladesh's banking sector?
2. Does Discretionary Loan Loss Provisions moderate the relationship between CSR Disclosure and Market Value of Equity?

### *1.2. Research Objectives*

In general, this study investigates the impact of CSR Disclosure practices on the Market Value of Equity of Bangladeshi Islamic companies operated in the Banking industries. In particular, the study proposes to:

1. Examine the relationship between CSR disclosure practices and the Market Value of Equity in Bangladesh's banking sector.
2. Examine the moderating influence of DLLP on the relationship between CSR Disclosure practices and Market Value of Equity.

## 2. LITERATURE REVIEW

The concept of Market Value of Equity (MVE) is not new in the area of research. If the accounting value has an anticipated association with the market's equity value, it is defined as value relevant. Most presentations are based on accounting variables (Muttakin et al., 2015; Ohlson, 1995). However, in general, previous studies stated that accounting information only is not enough to elucidate an organization's market value of equity and its deviations (Bose, Saha, Khan, & Islam, 2017). Conversely, many academics have encouraged investigation of the value of relevance of non-financial information to close the rising gap between the book value and market value of corporate stocks. Subsequently, the stimulus of non-financial variables on the worth of share prices continues to be an exceptionally vital concern in theoretical arguments (Lourenço, Callen, Branco, & Curto, 2014; Marcia, Maroun, & Callaghan, 2015). In this respect, this study is interested in examining the relationship of Market Value of Equity of market value of stocks and non-financial information in terms of CSR disclosure.

Moreover, to assess the relationship between CSR performance or disclosure and market value of stocks, some researchers investigate the overall effect of non-financial information in terms of societal, environmentally friendly, and other spaces of business accountability performance or disclosure (De Klerk & De Villiers, 2012). CSR disclosure analysis has previously used the event-study approach to look at a range of corporate issues and their impact on environmental and community responsibility (Rahman et al., 2020a). At the adaptation level, Hassel et al. (2005) assessed the financial market and stock market performance in Ohlson (1995) and, in combination, compared the results with equity value on the Stockholm stock exchange. Social and environmental knowledge about performance ratings is value appropriate, according to their works, and reveals that the additional-economic value is a combination of accounting profits, the book value of equity, and ecological and communal performance.

In contrast, research on Australian companies showed a significant negative relationship between sustainability disclosure and abnormal returns of equity value (Rahman, Rasid, & Basiruddin, 2020d). Moreover, Cardamone, Carnevale, and Giunta (2012) conducted an investigation based on 178 Italian listed organizations in the Milan Stock Exchange throughout 2002 - 2008. They claimed a significant adverse association between the company's market worth and CSR revelations. The market value of a share is a function of the earning, book value, and the CSR or sustainability disclosure. They also conclude that book value per share is more relevant for the CSR-oriented companies than their counterparts, while the Market Value of Equity of earnings per share does not change for these corporations. Thus, this study is fit into this background and proposes to offer a key to understanding the possible relationship between CSR Disclosure and the value that the market attributes to the companies that publicize their commitment to CSR through CSR disclosure.

On the other hand, studies related to CSR and firm financial performance are ample. Still, the literature regarding CSR disclosure and earnings management (DLLP)is insufficient, and the research outcomes are mixed. CSR can be applied as a tool to manage the affiliation between a corporation and its sponsors or get a positive response from the investors on the stock's value (Rahmawati & Dianita, 2011). Moreover, participating and disclosing CSR actions decreases the external gravity on organizations for being more communally responsible (Alsaadi, Jaafar, & Ebrahim, 2013). Nonetheless, organizations lose authorization and sustenance from diverse stakeholders. They may harm the corporation's survival chances or hamper the business operation's control to fail to participate in CSR initiatives (Rahman et al., 2020d). Notwithstanding the pursuit of the interests of the organization's stakeholders, it has been claimed that executives may participate in CSR actions to fulfil their interests or for the tenacity of camouflaging the consequences of misconduct in the business's undertakings. It has also been argued that to accomplish their career goals, CSR may be utilized as a window-dressing mechanism by managers (Muttakin et al., 2015).

This study found few studies examining CSR disclosure and earnings management, and the results are mixed. The prior research examines the relationship between the level of pre-event environmental disclosure and the extent of earnings management in response to a regulatory threat by using a sample of 40 US chemical firms that exhibited significant negative discretionary accruals and environmental disclosures (Rahman et al., 2020d). These results are consistent with the argument that corporate management believes environmental disclosure is an effective tool for reducing exposure to potential regulatory costs and that decision to manipulate earnings are tied to a larger corporate strategy for dealing with political pressures. However, Muttakin et al. (2015) explore that managers in an emerging economy manage earnings when they provide more CSR disclosure, while the existence of influential stakeholders constrains DLLP. Moreover, it was suggested that earnings quality impacts companies' disclosure choices and if the relationship is mitigated by political cost concerns otherwise regarding the organization's moral inclination. Specifically, Yip et al. (2011) find evidence of a substantial negative (complementary) link in the gas and oil sector. In contrast, the food sector treasures a positive (substitutive) relationship and concludes that this relationship is predisposed by political setting rather than moral bias. Though the relationship between CSR disclosure and earnings management is mixed, it is clear from the previous studies that the relationship is statistically significant.

On the other hand, earnings efficiency may clarify the relationship between earnings management and accounting information's Market Value of Equity. According to Chih, Shen, and Kang (2008) earnings management is linked to earnings efficiency. They also said that earnings that are highly regulated are of poor quality. As a result, earnings management actions would lower the standard of earnings (i.e., reliability of earnings). Furthermore, Lourenço et al. (2014) and Bose et al. (2017) review the literature of Market Value of Equity and implicitly suggest that accounting data are more informative when the data are highly related to sharing price or returns. Overall, the prior literature outcomes stated that accounting method outcomes show that better quality is correlated with increased earnings and decreased market value of shareholders' equity.

Moreover, the alleged lack of earnings reliability has consequences in the market, including less reliance on earnings in the stock valuation process (Rahmawati & Dianita, 2011). That means that earning management actions influence the corporation's market negatively. Thus, this study offers another vital contribution to observe the moderating effect of earnings management in the relationship between CSR Disclosure and Market Value of Equity to solve this inconclusive finding.

## 3. THEORETICAL FRAMEWORK

### *3.1. Stakeholder-Legitimacy Theory*

Stakeholder theory elucidates the association between diverse stakeholders and the information they obtain. Executives are employed as the representative of all relevant parties in an organization; these are the owner and other stakeholders (Rahman et al., 2020c).

On the other hand, when the value structure of the more extensive social system in which the business operates and the object's value structure is consistent, the situation or position of Legitimacy is recognized as an essential element for organizational existence must be present. Thus, based on prior research, the incentive to become involved in performing CSR often depends on legitimacy theory (Belgacem & Omri, 2015).

As a result, CSR actions and its disclosure deliver operational networks that notify stakeholders of the company's broader wellbeing and its responsibility to act in a communally accountable manner. To sum up, it is articulate that CSR disclosures' stimulus is to mislead stakeholders' consideration from revealing unlawful discretionary practices through DLLP (Gargouri, Shabou, & Francoeur, 2010). Although disclosures may be driven by communal and sponsor pressure, such revelations are likely to diminish evidence of disproportionateness and, therefore, be satisfied by financiers with more significant financial market appraisals (Reverte, 2016).

The research frameworks of the current study are as follows in Figure 1. The framework indicates that CSRD and MVE have significant relationship. However, discretionary loan loss provision negatively moderate this association.

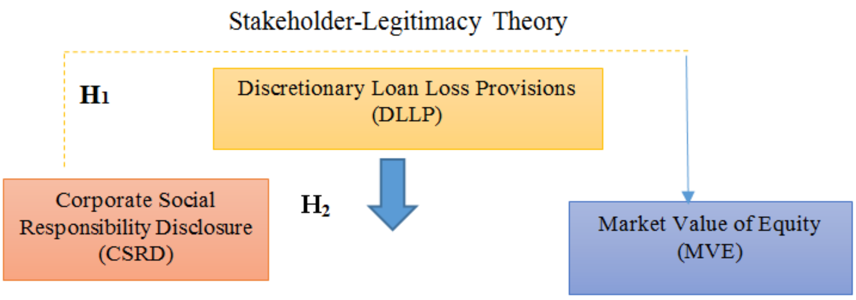


**Figure-1.** The relationship between CSR disclosure and market value of equity.

## 4. RESEARCH HYPOTHESIS, DESIGN AND DATA

### *4.1. Research Hypothesis*

CSR disclosure utility can be assessed in a market-based environment using value-relevance studies (Marcia et al., 2015). Value-relevance studies look at the connection between financial and non-financial details and share prices and returns, as determined by the Ohlson (1995) valuation model. Non-financial information is a type of CSR disclosure. Theoretical reasons conclude that CSR disclosure is relevant for shareholders to value the business if the share price/market value of companies' stock is associated with CSR disclosure (Verbeeten et al., 2016; Zuraida, Houqe, & Van Zijl, 2015).

In contrast, research conducted by Jones, Frost, Loftus, and Van Der (2007) on Australian companies showed that there is a significant negative relationship between sustainability disclosure and abnormal returns of equity value. Moreover, Cardamone et al. (2012) conducted an investigation based on 178 Italian listed organizations in the Milan Stock Exchange for 2002 - 2008. They claimed a significant adverse association between the company's market worth and CSR revelations. The market value is a function of the earning, book value, and the CSR or sustainability disclosure. They also conclude that book value per share is more relevant for the CSR-oriented companies than their counterparts, while the Market Value of Equity of earnings per share does not change for these corporations.

Even though empirical research outcomes are mixed, many accounting regulators think that information related to economic, social, and environmental dimensions helps investors in policymaking and that such evidence is considered value relevant (Carnevale & Mazzuca, 2014). Thus, this study hypothesised that CSR revelations reduce the risk of information asymmetries in enhancing business level disclosure, which subsequently impacts the organization's market value. As a result, this study draws the following hypothesis:

*H1: There is a positive relationship between CSR Disclosure and Market Value of Equity in Bangladeshi banking companies.*

Earnings quality describes the relationship between earnings management and accounting information's Market Value of Equity. According to Muttakin et al. (2015) earnings management is linked to the consistency of earnings. Furthermore, according to Leventis, Jallow, and Dimitropoulos (2012) highly regulated earnings are of poor quality. As a result, earnings management would lower earnings efficiency (i.e., reliability of earnings). Overall, the earnings management and Market Value of Equity literature's findings show that higher accounting efficiency is linked to the higher book and market value of equity and fewer earnings management. Furthermore, the alleged lack of earnings consistency has market ramifications, such as less dependence on earnings in the stock valuation process. That is to say, earning management decisions have a negative impact on the company's market value of equity.

There is a relationship between CSR Disclosure and Market Value of Equity, which is mixed. Still, the association is negative in the case of earnings management and Market Value of Equity. This research would like to examine this inconclusive relationship of CSR Disclosure and Market Value of Equity by using earnings management as a moderating variable. Moreover, the relationship between CSRD and DLLP and the Market Value of Equity and DLLP is significant. In the prior research, researchers had used CSR practices or disclosure and share price along with other influential factors such as corporate governance, investor perception, political costs, and institutional context. Still, there is a shortage of research in CSR Disclosure and Market Value of Equity with DLLP as a moderating variable. Thus, this study draws the following hypothesis:

*H2: Earnings management moderates the relationship between CSR Disclosure and Market Value of Equity.*

### *4.2. Data Collection Procedures*

The sample consists of 30 commercial and nationalized banks scheduled in the DSE of Bangladesh during 2019. This study will eliminate banks with inadequate statistics from the sampling structure resulting from preceding studies (Leventis et al., 2012; Rahman & Chowdhury, 2019; Rahman et al., 2020d). In this study, a sample is comprised of 30 firm-year observations.

The data are expected to derive from the many secondary data sources, mainly from the annual reports. The sample consists of the following financial sectors: Conventional Banks (23), Islamic Banks (7). This study will use content analysis to assess the extent of corporate social responsibility Disclosure.

### *4.3. Sources of Data*

The study uses secondary data to achieve the objectives of this research. This study aimed to collect accounting/financial data from the annual reports for each sample bank. The secondary data contained in the annual reports of the sample companies are the primary source of information. Besides, annual reports are a collective and widespread means of communication to stakeholders. Thus, to determine the extent of CSR disclosure in yearly reports, this study comprises annual reports of Bangladesh's banking companies (Rahman, Rasid, & Basiruddin, 2018). Information regarding CSR was to be collected from CSR disclosures in a separate section, standalone CSR/Sustainability reports, executive reports, corporate governance revelations, CEO statements, and notes to the financial statements confined in annual reports. Also, yearly reports help gather financial data related to measuring earnings management. However, the stock prices were collected from the DSE website and the annual reports.

#### *4.3.1. Sample Selection and Period of the Study*

Since the report will focus on listed banking companies in Bangladesh, it will include all listed banking companies (roughly 100% of the population) listed on the Dhaka Stock Exchange (DSE). Annual reports are collected from various bank branches, the Chittagong Stock Exchange, Dhaka and Chittagong DSE regional offices, and business websites. Because of the Bangladesh Bank's directives in 2008 to encourage CSR operations and the fact that banking companies are at the forefront of CSR, banking companies were chosen as a sample (Rahman & Chowdhury, 2019).

The initial companies selected from the listed banks in DSE consisted of 30 banks. The firms chosen from the list were the ones that existed in the year 2019. Table 1 presents that the expected final sample for evaluating the objectives of this study is 30.

**Table-1.** Sample description.

| **Panel A: Sample Size** | **Sample size** |
|---|---|
| Number of listed Banks of the DSE in Bangladesh | 30 |
| Less: Corporations without required information (expected) | 0 |
| Total | 30 |
| Panel B: Distribution in terms of Conventional and Islamic Perspective | No. of Banks |
| Conventional Banks | 23 |
| Islamic Banks | 7 |
| Total | 30 |

**Source:** Rahman et al. (2020d).

### *4.4. Empirical Models and Analysis*

#### *4.4.1. Price Model*

In line with previous studies (Lourenço et al., 2014; Rahman et al., 2020a; Reverte, 2014; Reverte, 2016; Verbeeten et al., 2016) this thesis assesses the previous (Ohlson, 1995) valuation model that operationalised the concept of Market Value of Equity.

$$P = \beta_0 + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + \beta_3 CSRD_{it} + LEV_{it} + \varepsilon_{it} \qquad (1)$$

Where, P = Share price (of common shares) at the end of the quarter when all relevant reports have been published;
BVPS = Book value per share at the finish of the financial year;
EPS = Net income per share at the completion of the financial year;
CSRD = CSR Disclosure score/ index over the fiscal year (the CSR disclosures provided in the annual report);
LEV = Ratio of total debt to the total value of assets at the end of the fiscal year
$\varepsilon_{it}$ = An error term

The above Equation 1 is generated based on the Ohlson price model. It shows the market value of equity has a positive impact not only on the financial values but also on the non-financial information. Besides, this research applies various earnings management indicators intrinsically to check the robustness concerning the valuation of earnings management in the listed banking sector of Bangladesh. This study also will examine the discretionary loan loss provisions (DLLP) technique of earnings manipulation, specifically handling Loan Loss Provisions (LLPs) as a mechanism for aggressive earnings management. This process is commonly applied in empirical research on DLLP (Chih et al., 2008; Leventis et al., 2012).

#### *4.4.2. Independent Variable – Corporate Social Responsibility Disclosure Indices*

To construct an inclusive magnitude of a bank's commitment to sustainability or CSR disclosure, this study considers these issue areas to be more relevant to banks in terms of financial Service Sector (FSS) of GRI and extensive review of prior studies. Following Rahman et al. (2020a) and Muttakin et al. (2015) the CSRD index is calculated as follows:

$$\boldsymbol{CSRD} = \Sigma\, \boldsymbol{di}$$

Where,

di = 1 if the item *di* is reported;

di = 0 if the item is not reported;

*n* = number of items

This CSR reporting index is shown in Appendix A.

#### *4.4.3. DLLP, Earnings Management Model: (Measurement of the Variable)*

***Phase 1:*** *Assessment of the regression's parameters*

The initial step contains on assessment of the coefficients of the model that recognizes the usual portion of provisions on the assessment year (2019). The prototype is as follows:

$$LLP_{it} / TC_{it-1} = \beta_0 + \beta_1 NPL_{it} / TC_{it-1} + \beta_2 LLA_{it-1} / TC_{it-1} + \beta_3 COLLT_{it} / TC_{it-1} + ULLP_{it}$$

Where LLP stands for bank i loan loss provisions at period t; TC it-1 standing for bank I total credit at time t-1; NPL represents for bank I non-performing loan at period t; LLA it-1 refers for bank I loan loss allowance at year t-1; and COLLT indicates for bank I total collateral released at point t. To avoid heteroscedasticity, variables are standardized by total credit ($TC_{it-1}$); $ULLP_{it}$, the equation's error term that represents the discretionary portion of bank i, LLP in a given time.

***Phase 2:*** *Valuation of the non-discretionary element of loan loss provisions*

In the second phrase, the estimated coefficients in the regression 4, such as $\beta_0$, $\beta_1$, $\beta_2$ and $\beta_3$, are applied to compute the non-discretionary part of loan loss provisions (LLPND). The equation is as follows:

$$LLPND_{it} / TC_{it-1} = \beta_0 + \beta_1 NPL_{it} / TC_{it-1} + \beta 2\, LLA_{it-1} / TC_{it-1} + \beta 3\, COLL_{it} / TC_{it-1} + ULLP_{it}$$

***Phase 3:*** *Valuation of the discretionary component of loan loss provisions*

In the final phase, the discretionary portion of loan loss provisions is determined using the distinction within loan loss provisions (LLP) and the non-discretionary component of loan loss provisions (LLPND) which are computed in the first phrase and second phrase, respectively:

$$LLPD_{it} = LLP_{it} - LLPND_{it}$$

The second objective of this study was to assess the moderating effects of earnings management on the relationship between Market Value of Equity (as dependent variable) and CSR Disclosure (as independent variable) which pertained to hypothesis $H_2$.

$$P = \beta_0 + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + \beta_3 CSRD_{it} + \beta_4 DLLP + \beta_5 CSRD_{it} \times DLLP + \beta_6 LEV + \varepsilon_{it} \qquad (2)$$

The above Equation 2 shows the relationship between the financial and non-financial value on the share price. Moreover, Equation 2 indicates the impact of the manager's opportunistic motives in terms of discretionary LLP on the market value of equity.

### 4.5. Control Variable

The risk of bankruptcy is determined by variable leverage (LEV). Leverage is measured by total debt to total assets (Rahman et al., 2020a; Zuraida et al., 2015). Moreover, total debt to total assets signifies pertinent risk influences that unfavourably influence price (Muttakin et al., 2015).

## 5. RESULTS

The independent and dependent variables' descriptive statistics are shown in Table 2. The table shows that CSR disclosures vary widely among Bangladeshi listed banking companies, with total CSR disclosures ranging from 15 to 30. Table 3 displays the correlation coefficients between the regressors. The association between EPS and BVPS is (q = 0.699), and at the 5% scale, both CSRD and DLLP are statistically significant. However, none of the unreported variance inflation factors (VIFs) surpass the critical value of 10 (Rahman et al., 2020c). As a result of this research, it can be concluded that multicollinearity is not a severe issue.

**Table-2.** Descriptive Statistics.

| | $P_t$ | $BVPS_t$ | $EPS_t$ | DLLP | $CSRD_t$ |
|---|---|---|---|---|---|
| Mean | 22.156 | 13.564 | 2.655 | 2.955 | 20 |
| Median | 17.567 | 6.876 | 2.701 | 2.791 | 18 |
| SD | 23.811 | 18.543 | 3.864 | 3.955 | 0.462 |
| Maximum | 210.648 | 100.657 | 25.923 | 25.765 | 30 |
| Minimum | 3.802 | 1.342 | 0.432 | 0.876 | 15 |

Variables are already defined in Model 1.

**Table-3.** Correlation coefficients among the explanatory variables.

| | BVPS | EPS | CSRD | DLLP |
|---|---|---|---|---|
| BVPS | 1.000 | 0.699** | 0.125 | -0.886 |
| EPS | | 1.000 | 0.178 | -0.977 |
| CSRD | | | 1.000 | -0.868** |
| DLLP | | | | 1.000 |

The results support H1 by demonstrating that CSR disclosure provides shareholders with more accurate information than financial accounting data alone. This conclusion is close to Schadewitz and Niskala (2010) in Finland and De Klerk and De Villiers (2012) in South Africa. Overall, these outcomes appear to sustenance the view that non-financial information in CSR information is value relevant.

**Table-4.** Results from the estimation of model (1 and 2).

| | Model-1 | Model-2 |
|---|---|---|
| Intercept | 3.798 (1.273) | 4.788 (1.273) |
| Book Value per Share (BVPS) | 0.845 (2.312)* | 0.745 (2.112)* |
| Earnings per share (EPS) | 1.936 (3.916) ** | 1.342 (3.788)* |
| Corporate Social Responsibility Disclosure (CSRD) | 0.436 (1.872) * | 0.226 (2.887) * |
| Discretionary Loan Loss Provisions (DLLP) | | -1.352 (1.788)* |
| CSRD × DLLP | | 0.225 (3.119)* |
| Leverage (LEV) | 0.499 (1.773) * | 0.435 (1.897) * |
| Adjusted $R^2$ (N = 30) | 0.679 | 0.657 |

Note: *, ** Significance at the 5% and 1 % level, respectively.

The regression results from models 1 and 2 are reported in the table above. Table 3 lists the variables. The regression coefficients' t statistics are given in parentheses. This research measures clustered-robust standard errors that are robust to heteroscedasticity, according to Rahman et al. (2020c). Table 3 also demonstrates the results of model (1) and model (2).

As anticipated, the EPS, BVPS, and CSRD coefficients are positively and significantly linked to the share price. The adjusted $R^2$ is 0.679 see Table 4, meaning that EPS, BVPS, and CSRD account for 67.9% of the volatility in Bangladeshi banking companies' stock prices. In terms of explanatory capacity, these findings are close to those of recent studies by Marcia et al. (2015) and Reverte (2016) for South African and Spanish samples (Adjusted $R^2$ = 0.539 and $R^2$ = 0.637, respectively). However, DLLP is negatively associated with share prices. The interaction between CSRD and DLLP in Model 2 and CSRD and DLLP are negatively and significantly associated with the equity value. These explain that CSRD has an increment value in share prices, but when organizations manipulate earnings, that negatively impacts the share price, which supports $H^2$. Model 2 adjusted $R^2$ 0.657, and this indicates that models explain 65.7% of the variance of the Bangladeshi Banking companies' equity values.

## 6. SENSITIVITY ANALYSIS

In this study, I have executed numerous robustness forms to confirm the outcomes are robust to different measurements. Foremost, I change share prices corresponding to 3 months after the AGM, which is conducted after the year-end, and expected all relevant reports are published. Subsequently, I include the control variable that previous Market Value of Equity research (Rahman et al., 2020a) have associated with concern's equity values, such as firm size. Next, I apply alternative deflators such as total assets except for the number of shares outstanding. In all points of view, the critical decisions of the research persist unaffected with these different requirements.

## 7. CONCLUSIONS

Financial details contained in a company's annual reports, whose aim is to provide an accurate and reasonable view of the firm's financial success, has been the foundation of corporate Disclosure for many decades (Reverte, 2016). However, the recent studies indicate that financial information is not well enough to explain the market value of equity but non-financial information in terms of CSR revelation also has a great impact on Market Value of Equity. However, whether such interaction is advantageous to stakeholders is a point of contention, and statistical findings are mixed. This research looks at both the direct effects of corporate social responsibility on stock prices and the moderating effects of discretionary loan loss provisions in the relationship between CSRD and Market Value of Equity, in order to fill this research gap. This advocates that the disclosure of CSR revelation affects the market's aptitude to predict impending earnings variations (Belgacem & Omri, 2015) and DLLP as a measure of earnings management negatively moderated the relationship.

We have to consider that CSR disclosure is wholly voluntary in Bangladesh and many other nations' universal. Since the findings for CSR disclosure and share price in Bangladesh are consistent with those for the Market Value of Equity of CSR reports obtained in other institutional environments, they may help companies determine whether or not to engage in CSR Disclosure. However, the CSR disclosure score is sensitive to a mathematical error. Thus, we need to be cautious to generalize this study outcome. Further research into the effects of individual components of CSR (e.g., environmental, social, and governance) to see whether they are valued differently by investors may be a potential extension of this paper.

**Funding:** This study received no specific financial support.
**Competing Interests:** The authors declare that they have no competing interests.
**Acknowledgement:** Both authors contributed equally to the conception and design of the study.

## REFERENCES

Alsaadi, A., Jaafar, A., & Ebrahim, M. S. (2013). *Corporate social responsibility, Shariah-compliant and earnings management.* Paper presented at the Paper Presented at the Seventh Asia Pacific Interdisciplinary Research in Accounting Conference, Kobe 26-28 July, 2013.

Belgacem, I., & Omri, A. (2015). Does corporate social disclosure affect earnings quality? Empirical evidence from Tunisia. *International Journal, 3*(2), 73-89.

Bose, S., Saha, A., Khan, H., & Islam, S. (2017). Non-financial disclosure and market-based firm performance: The initiation of financial inclusion. *Journal of Contemporary Accounting and Economics, 13*(3), 263-281. Available at: https://doi.org/10.1016/j.jcae.2017.09.006.

Cardamone, P., Carnevale, C., & Giunta, F. (2012). The value relevance of social reporting: Evidence from listed Italian companies. *Journal of Applied Accounting Research, 13*(3), 255–269. Available at: https://doi.org/10.1108/09675421211281326.

Carnevale, C., & Mazzuca, M. (2014). Sustainability report and bank valuation: evidence from E uropean stock markets. *Business Ethics: A European Review, 23*(1), 69-90. Available at: https://doi.org/10.1111/beer.12038.

Chih, H.-L., Shen, C.-H., & Kang, F.-C. (2008). Corporate social responsibility, investor protection, and earnings management: Some international evidence. *Journal of Business Ethics, 79*(1), 179-198. Available at: https://doi.org/10.1007/s10551-007-9383-7.

De Klerk, M., & de Villiers, C. (2012). The value relevance of corporate responsibility reporting: South African evidence. *Meditari Accountancy Research, 20*(1), 21-38.

Gargouri, R. M., Shabou, R., & Francoeur, C. (2010). The relationship between corporate social performance and earnings management. *Canadian Journal of Administrative Sciences, 27*(4), 320-334.

Hassel, L., Nilsson, H., & Nyquist, S. (2005). The value relevance of environmental performance. *European Accounting Review, 14*(1), 41-61. Available at: https://doi.org/10.1080/0963818042000279722.

Jones, S., Frost, G., Loftus, J., & Van Der, L. S. (2007). An empirical examination of the market returns and financial performance of entities engaged in sustainability reporting. *Australia Account Review, 17*(1), 78–87. Available at: https://doi.org/10.1111/j.1835-2561.2007.tb00317.x.

Leventis, S., Jallow, K., & Dimitropoulos, P. (2012). The role of corporate governance in earnings management: Experience from US banks. *Journal of Applied Accounting Research, 13*(2), 161-177.

Lourenço, I. C., Callen, J. L., Branco, M. C., & Curto, J. D. (2014). The value relevance of reputation for sustainability leadership. *Journal of Business Ethics, 119*(1), 17-28. Available at: https://doi.org/10.1007/s10551-012-1617-7.

Marcia, A., Maroun, W., & Callaghan, C. (2015). Market value of equity and corporate responsibility disclosure in the South African context: An alternate view post king-III. *SAJEMS NS, 18*(4), 500-518.

Martínez-Ferrero, J., Gallego-Álvarez, I., & García-Sánchez, I. M. (2015). A bidirectional analysis of earnings management and corporate social responsibility: The moderating effect of stakeholder and investor protection. *Australian Accounting Review, 25*(4), 359-371. Available at: https://doi.org/10.1111/auar.12075.

Muttakin, M. B., Khan, A., & Azim, M. I. (2015). Corporate social responsibility disclosures and earnings quality. *Managerial Auditing Journal, 30*(3), 277-298. Available at: https://doi.org/10.1108/maj-02-2014-0997.

Ohlson, J. A. (1995). Earnings, book values, and dividends in equity valuation. *Contemporary Accounting Research, 11*(2), 661-687. Available at: https://doi.org/10.1111/j.1911-3846.1995.tb00461.x.

Rahman, M., & Chowdhury, S. (2019). Sustainability reporting and firm financial performance: A review of measurement tactics. *International Journal of Engineering Development and Research, 7*(4), 723-730.

Rahman, M., & Chowdhury, S. (2020). Relationship between corporate social responsibility and earnings management: A systematic review of measurement methods. *International Journal of Trend in Scientific Research and Development, 4*(2), 389-397.

Rahman, M., Rasid, S. Z. A., & Basiruddin, R. (2018). Determinants of corporate social responsibility reporting in the banking sector: A systematic review. *International Journal of Accounting Research, 3*(5), 30-43.

Rahman, M., Rasid, S. Z. A., & Basiruddin, R. (2020a). Corporate social responsibility disclosure and value relevance of the banking sector in Bangladesh. *Journal of Sustainability Science and Management, 15*(5), 192-214.

Rahman, M., Rasid, S. Z. A., & Basiruddin, R. (2020b). Do audit fees moderate the relationship between CSR disclosure and earnings management? *Journal of Corporate Governance and Social Responsibility, 2*(1). Available at: https://doi.org/10.28992/ijcgsr.v2i1.94.

Rahman, M., Rasid, S. Z. A., & Basiruddin, R. (2020c). Does socially committed bank manager manipulate earnings through discretionary accruals? Empirical evidence from an emerging economy. *Journal of Sustainability Science and Management, 15*(6), 136-166.

Rahman, M., Rasid, S. Z. A., & Basiruddin, R. (2020d). Moderating effect of earnings management in the relationship between sustainability disclosure initiatives and value relevance: Evidence from an emerging economy. *Indonesian Journal of Sustainability Accounting and Management, 4*(2), 266-277.

Rahmawati, & Dianita, P. S. (2011). Analysis of the effect of corporate social responsibility on financial performance with earnings management as a moderating variable. *Journal of Modern Accounting and Auditing, 7*(10), 1034-1045.

Reverte, C. (2014). Corporate social responsibility disclosure and market valuation: Evidence from Spanish listed firms. *Review of Managerial Science, 10*(2), 411-435.

Reverte, C. (2016). Corporate social responsibility disclosure and market valuation: evidence from Spanish listed firms. *Review of Managerial Science, 10*(2), 411-435.

Schadewitz, H., & Niskala, M. (2010). Communication via responsibility reporting and its effect on firm value in Finland. *Corporate Social Responsibility and Environmental Management, 17*(2), 96-106.

Verbeeten, F. H. M., Gamerschlag, R., & Möller, K. (2016). Are Sustainability disclosures relevant for investors? Empirical evidence from Germany. *Management Decision, 54*(6), 1359 – 1382.

Yip, E., Van Staden, C., & Cahan, S. (2011). Corporate social responsibility reporting and earnings management: The role of political costs. *Australasian Accounting, Business and Finance Journal, 5*(3), 17-34.

Zuraida, Z., Houqe, N., & Van Zijl, T. (2015). Market value of equity of environmental, social, and governance disclosure. Working Paper Series, Working Paper No. 98.

**Appendix-A.** CSR Reporting index (Total = 35).

| Items no. | Economic Dimension |
|---|---|
| 1 | Infrastructural and institutional development |
| 2 | State of domestic economy |
| 3 | Capital structure |
| 4 | Time contributions such as staff volunteering in paid time |
| | **Environmental Dimension** |
| 5 | Energy saving policies |
| 6 | Information concerning energy consumption |
| 7 | Energy Indirect Greenhouse Gas Emissions |
| 8 | Issues concerning climate change |
| 9 | Corporate environmental policies |
| | **Social Dimension** |
| 10 | Importance of community development |
| 11 | Granted fund for blind education and rehabilitation; |
| 12 | Grants to public universities |
| 13 | Sponsoring competitions |
| 14 | Scholarships for physical disable students; |
| 15 | Engaged in treating cleft lips, cataract, cancer and leprosy |
| 16 | Reward/ Promotion and recognition for better performance |
| 17 | Freedom of association for collective bargaining |
| 18 | Employee compensation, welfare or donation |
| 19 | Entry level wage compared to local minimum wage |
| 20 | Basic salary of men to women by employee category |
| 21 | Male-female ratio in employment |
| 22 | Rehabilitating the disabled |
| 23 | Creating Job opportunities |

| | |
|---|---|
| 24 | Tourism development |
| 25 | Nature of training attended by the employees |
| 26 | Healthy and safe workplace for staff |
| 27 | Support to the foreign victims |
| 28 | Vaccinations or other health programme of employees |
| 29 | Research and development for products and services |
| 30 | Use of Solar panel in office |
| 31 | Good customer relation |
| 32 | Mosque construction |
| 33 | Donation to prime minister fund/Relief fund |
| 34 | Financial contribution to the victims in accident or other tragedies |
| 35 | Heritage preservation |

**Sources:** Adapted from Rahman and Chowdhury (2020).