“Determinants of corporate voluntary disclosure in a transition economy”

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DETERMINANTS OF CORPORATE VOLUNTARY DISCLOSURE IN A TRANSITION ECONOMY

Abstract

Corporate voluntary disclosure becomes a burning issue in the literature of accounting throughout the last two decades. The study aims to explore the most crucial determinants that influence corporate voluntary disclosure in a transition economy. A cross-sectional study based on the pharmaceutical and chemical companies listed in the Dhaka Stock Exchange is conducted to reconnoiter the crucial determinants affecting the voluntary disclosure. Based on the agency theory, stakeholder theory, and previous literature, the determinants are selected. An unweighted disclosure index is used to measure the extent of voluntary disclosure; after that, a multivariate analysis is steered to reconnoiter the key determinants of voluntary disclosure. It is found that firm leverage and firm liquidity are the key determinants that significantly influence the corporate voluntary disclosure in a transition economy. In contrast, no significant positive association is found between voluntary disclosure and board size. In addition, it is also found that market category significantly influences voluntary disclosure with an inverse direction. This study has important implications for both the corporate people and the regulatory bodies of the transition economy. The study also helps various stakeholders of the transition economy – Bangladesh, in designing their strategies regarding the most significant determinants of voluntary disclosure.

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INTRODUCTION

Nowadays, the business organizations are considered a member of society and their primary motives of maximizing their profit or maximizing their wealth. Business entities are operating their activities in society, reflecting the glasshouse concept that assumes each activity of the business organizations followed by other society members. Thus, the business entities are induced to provide more voluntary information to its various stakeholders to satisfy their requirements. This overwhelming appeal of corporate voluntary disclosure creates ample research opportunities in academic research over the years. Indeed, corporate voluntary disclosure becomes an enduring and vibrant aspect of the corporate reporting landscape in the last couple of years (Cotter et al., 2011; Kamel & Awadallah, 2017; Kolsi, 2017; Zaini et al., 2018). Business organizations have to disclose a minimum level of information in a competitive business environment, which is accredited as mandatory disclosure. Consequently, due to compliance requirements, all the business entities must disclose such mandatory information to various stakeholders (Hassan et al., 2009). Nevertheless, in the context of the contemporaneous corporate competitive environment, corporate

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mandatory disclosure is insufficient and inappropriate to satisfy the interest of potential investors (Elfeky, 2017). These overwhelming requirements of the investors – both current and prospective – enhance the need for additional information beyond the mandatory information disclosed by the business entity. This supplementary information provided by the entities is termed as corporate voluntary disclosure. Rezaee and Tuo (2017) described from Dhaliwal et al. (2011) that any financial and non-financial information disclosed by the business entity beyond mandatory financial reports is known as corporate voluntary reporting. Corporate voluntary disclosure in annual reports is not only used as a mechanism of communicating information to promote and market the ideas of the management towards the stakeholders (Abeysekera & Guthrie, 2005; Zaini et al., 2018) but also communicated the strategic information to the stakeholders (Rezaee, 2016). Corporate voluntary disclosure gains remarkable advancement in developed countries (Kolsi, 2017; Sharma & Davey, 2013; Wang et al., 2008). Few studies have been conducted based on developing or emerging countries (Elfeky, 2017), and very few studies were found based on the transition economy. The extent of voluntary disclosure varied due to the political and social factors (Belal et al., 2013). Consequently, the nature, determinants, and consequences of developed, developing, and transition economies are not the same.

A transition economy is an economy that is on the way of being a developing economy from the least developing economy. The United Nations has defined a bar of being a developed, developing, and least developing country. There are three criteria required to be satisfied by the least developing countries to be a developing country (Masum et al., 2020b; UNCTAD, 2019). As per the policies of the UN, a country will be graduated from the least developed country to developing country only if it complied with at least two criteria from a predetermined set of three criteria, namely economic vulnerability index that should have 32 or fewer points, human asset index that should have 66 points or more, and the gross national income per capita that should be USD 1,242 or more (Masum et al., 2020b; UNCTAD, 2019). As per the policy of the United Nations Economic and Social Council, these three measurement sticks should be cross-checked, and after the successful graduation of at least two criteria out of these three, a country will be finally graduated from the least developing country to a developing country. However, these criteria will be evaluated in two phases – each of them will take three years. A country undergoing these processes is considered a transition economy. March 2018 is a memorable month for Bangladesh as it satisfies all three criteria of the UN on that month (Bhattacharya, 2018; Masum et al., 2020b). Till now, only five countries have graduated from the least developing country to a developing country, and Bangladesh becomes number six. In this study, Bangladesh has been selected as a platform as the country will be finally graduated to a developing country after a successful evaluation of two phases – one in 2021 and another in 2024 – within which the country will be on the way to being a transition economy.

Corporate voluntary disclosure is value relevant for the transition economy due to various reasons: firstly, voluntary disclosure reduces the information asymmetry towards the prospective investors – both local and foreign (Jensen & Meckling, 1976; Meek, Roberts, & Gray, 1995; Sahasranamam et al., 2019; Sarhan & Ntim, 2019) and having large volume of information induces the investors in the transition economy; secondly, voluntary disclosure reduces the cost of capital (Botosan & Harris, 2000; Dhaliwal et al., 2011) and reducing the cost of capital will ensure more capital employment in the transition economy; thirdly, voluntary disclosure enhances the transparency of the corporate reporting (Cheng & Courtenay, 2006) and transparency in corporate reporting will ensure the reliability of the corporate disclosure. Thus, investors become highly motivated; fourthly, voluntary disclosure encourages the management discretion in deciding the nature of the information to disclose (Rouf & Akhtaruddin, 2018), and more discretion towards managers will bring enthusiasm to them for working wholeheartedly on behalf of the business; finally, corporate voluntary disclosure enhances the reputation and brand name of the business entity (Masum et al., 2019) and reputed organization can certainly perform well in the transition economy.

1. LITERATURE REVIEW

Prior studies on corporate voluntary disclosure have used numerous theories to investigate the fundamental factors that influence the extent of corporate voluntary disclosure. In the study, the kernel of agency theories and stakeholder theory is assumed to evaluate the key determinants of corporate voluntary disclosure. Agency theory postulates that voluntary disclosure in the annual reports should remove information asymmetry and uncertainty not only to the investors – both current and prospective – but also to other stakeholders (Jensen & Meckling, 1976; Lim et al., 2017). Moreover, regulatory bodies like the Dhaka Stock Exchange have issued disclosure guidelines – for instance, the Code of Good Governance 2012 – to overcome the gap of knowledge between the management and the stakeholders of the concerned company. The stakeholder theory explains that the objectives and goals of a company can be attained by balancing the incompatible interests and demands of numerous stakeholders (Freeman, 1984). Stakeholders of an organization may have specific requirements and expectations regarding the voluntary disclosure of the organizations like environmental disclosure, CSR disclosure, climate change disclosure, intakes of natural resources, establishment of equal employment opportunity, etc. (Chakroun et al., 2017; Orazalin, 2019). Consecutively, the business entities should act following the requirements and opportunities of the stakeholders to achieve their support by providing a translucent and large volume of voluntary information to them (Barako & Brown, 2008). Therefore, the study also assumes the proposition of stakeholder theory as it supports improvements and implementation of voluntary reporting to placate the requirements and expectations of the stakeholders.

1.1. Voluntary disclosure and firm leverage

Transition economy is an economy based on trade rather than aid (Masum et al., 2020b). Thus, it requires more investors, and without sufficient information the prospective investors cannot have their optimum decisions. The previous literature on voluntary disclosure has suggested that firms having high leverage tend to report supplementary information to meet the requirements of external capital providers and reduce the qualms of borrowers concerning the chance of transferring the resources to the managers and shareholders from debt holders (Jensen & Meckling, 1976; Kamel & Awadallah, 2017). Complying with this thought, a good number of studies have found a positive association between corporate voluntary disclosure and the degree of leverage (Wallace & Naser, 1995). In contrast, some of the studies did not find any significant positive association; some of the studies found a negative association between corporate voluntary disclosure and leverage (Alsaeed, 2006; Zarzeski, 1996). Regardless of the inconclusive findings of the study between the corporate voluntary disclosure and the degree of leverage, there are numerous reasons to assume a positive association between them. Firstly, a high degree of leverage on the firm capital structure will enhance the agency cost, which ultimately compels the management to provide more information to minimize cost (Alves et al., 2012; Elfeky, 2017). Secondly, Jensen and Meckling (1976) postulate that an organization having high leverage tends to incur high monitoring costs; therefore, such a firm discloses more information. Based on these arguments, the first hypothesis is set.

1.2. Voluntary disclosure and liquidity

Managers are motivated to disclose more information to the stakeholders due to various reasons, namely, strengthening their position towards the business, ensuring their remuneration smoothly, and signal organizational potentials (Rouf & Akhtaruddin, 2018). Liquidity is the ability of an organization to pay its day-to-day expenses and short-term obligations without liquidating its non-current assets or terminating any operating activities (Alsaeed, 2006; Kamel & Awadallah, 2017). The agency theory postulates that business entities having less liquidity may provide more information to the stakeholders to alleviate the dispute between shareholders and lenders (Abd-Elsalam, 1999). Previous studies on exploring the association between voluntary disclosure and liquidity are inconclusive. Camfferman and Cooke (2002) conducted a comprehensive study based on a multi-country context. They found that voluntary disclosure has an insignificant relationship with the liquidity for UK firm in the reverse direc-

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tion, while they found a significant positive association between voluntary disclosure and liquidity of a Dutch firm. This finding represents that the degree of association between voluntary disclosure and liquidity may depend on the socio-economic context of a country. Thus, there is a need to examine the degree of association between voluntary disclosure and liquidity in the context of a transition economy. Consecutively, the second hypothesis is assumed in this regard.

1.3. Voluntary disclosure and market category

The extent of voluntary disclosure depends on the nature of the industry. According to agency theory, Aljifri et al. (2014) found that the capital market has a significant association with corporate voluntary disclosure variability. Within the capital market, all the companies are not same, especially in DSE. There are four categories of companies: category A, category B, category N, and category Z. The quality of the disclosure of these categories is not the same. Listed companies regularly call their annual general meeting and declare and paid dividends to their shareholders are fall into category A in the Dhaka Stock Exchange. The organizations satisfying these two criteria tend to provide more voluntary corporate information to their stakeholders. Therefore, the third hypothesis was assumed as the market category significantly influences the corporate voluntary disclosure.

1.4. Voluntary disclosure and board size

Board size represents the number of executive and non-executive members on the board of governance of a company (Elfeky, 2017). Board size may influence the extent of corporate voluntary disclosure and the decision-making process of a business entity (Javaid Lone et al., 2016). The agency theory postulates that larger boards can play a vital role in monitoring management and having long-run sustainable decisions (Elfeky, 2017; Fama & Jensen, 1983). Moreover, a larger board is less likely to be controlled by the management (Jensen & Meckling, 1976). In the context of stakeholder theory, comparatively, the larger boards having members from the diversified field possess more bargain power compliance of both mandatory financial disclosure and voluntary disclosure due to satisfying their requirements and interests (Hahn et al., 2015). Previous studies between voluntary disclosure and board size have provided mixed findings. Researchers exploring the relationship between voluntary disclosure and board size have found a positive association between them (Jizi et al., 2014), while others found no significant association between them (Kolsi, 2017; Orazalin, 2019). Considering the theoretical framework and based on the above arguments, there is a need to justify whether the board size has s significant impact on corporate voluntary disclosure in a transition economy. Thus, based on these arguments, the fourth hypothesis was assumed.

2. AIMS

The study aims to explore the critical factors that influence corporate voluntary disclosure in the transition economy. The transition economy must identify the factors – both internal and external – that enhance the extent of corporate voluntary disclosure. To conduct the study, there is a need for a country having in the graduation process of being a developed country; therefore, Bangladesh has been selected as the platform of the study. More precisely, the Dhaka Stock Exchange listed pharmaceutical and chemical companies have been taken as the samples as such industry has grown in recent years and expands their operation across the boundaries of the country. The findings of the study will help the corporate peoples fix up their strategies in corporate reporting to induce potential investors to have their optimum investment decisions.

3. HYPOTHESES DEVELOPMENT

The hypotheses of the study are developed based on both the literature review concerning the exploration of the key determinants of the corporate voluntary disclosure in the transition economy and the purpose of the study. Aligning with the purpose of the study and literature review discussed in section 2, the following four hypotheses seem to be more relevant in the context of transition economy, which are tested further through the multivariate analysis:

H1: *Corporate voluntary disclosure has a positive association with leverage in a transition economy.*

H2: *Corporate voluntary disclosure has a positive association with the liquidity of the company in a transition economy.*

H3: *Corporate voluntary disclosure has a positive association with the market categories in a transition economy.*

H4: *Corporate voluntary disclosure has a positive association with the board size in a transition economy.*

4. METHODS

4.1. Data and sample

The study entails data of all Dhaka Stock Exchange listed pharmaceutical and chemical companies based on the financial years 2015–2016, 2016–2017, and 2017–2018. The total population of the study is 96 companies, out of which 68 samples are finally usable. Previous studies on Bangladesh also used a similar proportion of samples (Masum et al., 2019; Rouf & Akhtaruddin, 2018). The focus on only three years is justifiable for the transition economy – Bangladesh crossed over one measurement stick of the UN in 2015. The focus on one industry is also justifiable as different industries disclose numerous disclosure patterns (Botosan, 1997; Kolsi, 2017). Therefore, annual reports of the company after the compliance of at least one measurement stick by the country have been considered here. Hence, the annual reports from the years 2015–2016 were considered. A purposive sampling technique has been applied in which the following predetermined criteria have been used:

1) the company must be a pharmaceutical and chemical company;

2) only the annual reports for the years 2015–2016, 2016–2017, and 2017–2018 are considered;

3) annual reports are available on Dhaka Stock Exchange.

The data on corporate voluntary disclosure are collected manually from annual reports of the concerned company, the financial data are collected from the audited financial statement of the relevant company, and all other data are collected from the webpages of the Dhaka Stock Exchange. The details of sample construction are given in Table 1.

4.2. Operationalization of variables

4.2.1. Disclosure index for corporate voluntary disclosure

Empirical evidence of determining the extent of voluntary disclosure witnesses several measures (Botosan, 1997; Botosan & Harris, 2000; Botosan & Plumlee, 2002; Kamel & Awadallah, 2017; Sarhan & Ntim, 2019). To measure the quality of corporate voluntary disclosure, content analysis adopted from the previous literature was used. Content analysis is a technique that codifies the qualitative and quantitative information to derive the outlines in the presentation and reporting of information (Guthrie et al., 2004; Lim et al., 2017). A three-step unweighted disclosure index, also used by Botosan (1997) and Botosan and Harris (2000), has been used to conduct the study. Unweighted disclosure index has been used because both weighted and unweighted index consistently provide similar results (Chow & Wong-Boren, 1987; Zarzeski, 1996). The three steps of determining the voluntary disclosure index are stated as follows:

Step 1: Counting the number of items considered voluntary for the Dhaka Stock Exchange listed pharmaceutical and chemical companies.

Step 2: Providing a score of "1" for each item of the index disclosed by a company, otherwise "0."

Step 3: Dividing the actual scores by the maximum possible score.

A disclosure index having 92 items of nine broad categories of corporate voluntary disclosure has been applied to conduct the study. Consistent with the prior studies (Kiliç et al., 2015; Orazalin, 2019), corporate voluntary disclosure index has been considered a composite variable of the nine di-

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mensions mentioned earlier. The details are shown in Appendix A. The relative VD scores have been determined in the study by using the following formula:

$$VDij = \frac{\sum_{i=1}^{nj} Xij}{nj}, \qquad (1)$$

where Xij = 1 if the item is disclosed by j-th company and 0 otherwise and nj is the maximum score that each company may obtain.

4.2.2. *Independent variables*

Four independent variables are selected to conduct the study, namely, market category, firm liquidity, firm leverage, and board size. Firm leverage is considered a probable determinant of corporate voluntary disclosure because organizations with external debt are more accountable for providing more voluntary corporate information due to the reduced cost of debt (Masum et al., 2020a). In this study, firm leverage has been obtained by scaling the total liability of an organization by the total reported equity of the company. Since the study assumes the samples from the DSE listed companies, the DSE market category is very important in disclosing voluntary corporate information. The DSE categorized the listed companies into the following four broad categories:

Category A: Companies regularly arranging AGM and providing dividends of at least 10% simultaneously.

Category B: Companies that either failed to arrange the AGM or provided dividend of at least 10%.

Category Z: Companies neither arranging any AGM nor providing dividends to its shareholders.

Category N: Companies newly enlisted that do not exceed one year after the enlistment.

The market category has been used as a dummy variable to conduct the study, say, for example, if any company falls into category A will get "1," otherwise "0". Firm liquidity is also an important determinant of corporate voluntary disclosure (Abd-Elsalam, 1999). The current ratio has been used as a proxy of liquidity ratio in the study, which is measured by scaling the current liability by the current assets. The existing literature concludes that board size is a key factor in determining the level of corporate voluntary disclosure (Kiliç et al., 2015; Orazalin, 2019). The operationalization of variables is stated in Table 1.

Table 1. Operationalization of variables used in the study

Full name	Abridged name	Variable description
Voluntary disclosure index	VD_SCORE	VD is used as a binary variable. Number of items disclosed by each firm scaled by maximum possible score
Firm leverage	S_LEV	Operationalized through scaling the total debt by the total assets
Firm liquidity	P_LIQ	Current asset divided by current liability
Market category	M_CAT	Market category has been used as a dummy variable, say, for example, if any company falls into category A, it will get "1," otherwise "0"
Board size	G_BSIZE	Number of members employed on the board

4.3. Model specification

To test the hypotheses stated earlier, the following multiple regression was employed:

$$\begin{aligned} VD\_SCORE &= \beta 0 + \beta 1\ S\_LEV + \\ &+ \beta 2\ M\_CAT + \beta 3\ P\_LIQ + \\ &+ \beta 4\ G\_BSIZE + \varepsilon. \end{aligned} \qquad (2)$$

5. RESULTS

5.1. Descriptive statistics

The summary of the descriptive studies is stated in Table 2. It is found that the mean *VD_SCORE* is around 29 with a standard deviation of 12, which is far better from the previous studies (Belal, 2001; Rouf & Akhtaruddin, 2018) and consistent with the studies of Masum et al. (2020). It is also found that the mean board size is around 7.25 members with a standard deviation of approximately 1.79 members, with the firm having a maximum of board members of 11 and a minimum of board members of 5. This result portrays that, on average, homogeneous policies are comprising the board size of the listed companies in Bangladesh. As per the Securities and Exchange Commission requirements, the board size of the Bangladeshi listed company should be within the range of 4 to 20 members. Thus, it can be concluded that from the point of view of the compliance issue, none of the samples has board members beyond this range. The summary of the descriptive statistics of the leverage of the selected samples shows that mean leverage ratios of 1.03 with a standard deviation of 0.79, with the lowest leverage of 0.02 and the highest leverage of 2.55. This finding reports that the listed companies in Bangladesh have an equal proportion of debt in their capital structure. The descriptive statistics of the liquidity ratio represent a mean of 3.11, with a standard deviation of 4.5. It represents that the listed pharmaceutical and chemical companies do not have any noticeable problems in the working capital financing in Bangladesh. Table 2 also reports the mean score of the market category as 0.75, with a standard deviation of 0.44. This result indicates that almost 70% of the listed companies fall into category A who regularly arrange the annual general meeting, and pay a regular dividend of more than 10%. The details of the descriptive statistics are presented in Table 2.

Table 2. Descriptive statistics of the study

Variable	N	Min	Max	Mean	Standard deviation
S_LEV	68	0.02	2.55	1.03	0.79
P_LIQ	68	0.48	22.95	3.11	4.52
M_CAT	68	0.00	1	0.75	0.44
G_BSIZE	68	5	11	7.25	1.79
VD_SCORE	68	13	61	29.46	12.16

5.2. Correlation coefficient and multicollinearity statistics

Table 3 provides the correlation among the variables. The correlation matrix can be easily observed the significant relationship between the variables at 1% and 5% levels of significance. It is found that leverage of the firm and market category has a significant positive relationship with the corporate voluntary disclosure at $p < 0.01$, whereas liquidity of firm has a significant negative association with the corporate voluntary disclosure at $p < 0.05$, while the firm leverage has no meaningful relationship with the corporate voluntary disclosure. Besides, from the correlation matrix, one can easily observe that none of the relationships becomes more than 0.7, reflecting no multicollinearity problem among the variables (Pallant, 2013). Consecutively, there are no multicollinearity problems in the independent variables based on VIF values. The details of tolerance value and VIF value are presented in Table 4.

Table 3. Correlation matrix

Variables	VD_SCORE	S_LEV	M_CAT	P_LIQ	G_BSIZE
VD_SCORE	1.000	–	–	–	–
S_LEV	.586*	1.000	–	–	–
M_CAT	.472*	.286*	1.000	–	–
P_LIQ	–.227**	–.425*	.058	1.000	–
G_BSIZE	.087	–.072	.215**	–.113	1.000

Note: * 1% level of significance, ** 5% level of significance.

5.3. Multivariate and hypothesis analysis

In the study, multivariate analysis has been done through the SPSS software version no. 25. It is observed that the model on corporate voluntary disclosure is significant at $p < 0.01$ with an adjusted r square of 0.83. These findings represent that the four determinants used in the study explain eighty-three percent of corporate voluntary disclosure variations at a 1% level of significance. Table 4 reports that firm leverage significantly influences the corporate voluntary disclosure at $p \leq 0.01$ with a $\beta = 0.882$. The findings of the study concerning the association between voluntary disclosure and firm leverage are similar to the findings of Masum et al. (2019) and Rouf and Akhtaruddin (2018). Table 4 also shows that the liquidity ratio significantly influences the corporate voluntary disclosure at $p \leq 0.05$ with a $\beta = 0.042$. The market category has a significant inverse association with the corporate voluntary disclosure at $p < 0.10$. Based on the empirical study, it is found that there is no significant association between corporate voluntary disclosure and board size. The details of the regression coefficient and their level of significance are given in Table 4.

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Table 4. Regression coefficient

	Unstandardized B	Standard error	Standardized Beta co-efficient	t	Sig.	Tolerance value	VIF value
Constant	26.295	8.809	–	2.985	.004	–	–
S_LEV	13.563	1.626	.882	8.344	.000	.221	4.519
M_CAT	–3.635	2.086	–.130	–1.742	.087	.442	2.265
P_LIQ	.114	.170	.042	.669	.051	.618	1.618
G_BSIZE	1.589	.615	.234	2.585	.125	.302	3.312

6. DISCUSSION

The descriptive statistics for the entire set of dependent and independent variables of the study are presented in Table 2. It is observed that the Bangladeshi pharmaceutical and chemical companies are very concern nowadays. It is found that the mean *VD_SCORE* is around 29 with a standard deviation of 12, which is far better from the previous studies (Belal, 2001; Rouf & Akhtaruddin, 2018). This result proves that Bangladeshi listed companies are more concerned about their voluntary disclosure in recent days, which is also postulated by Masum et al. (2019). The findings of the study also represent the poor market history of the transition economy – Bangladesh. As the country becomes independent in 1971 while the liberalization of the trade started in 1991, this result is consistent according to the history of the country's economic liberalization. The descriptive statistics of the leverage of the company represent a mean of around 1.03 with a standard deviation of about 2, which demonstrates the homogeneity of the pharmaceutical and chemical industry. Since the pharmaceutical and chemical industries are focusing on exports, the revised government policy supports them to lend and expand their operation. Moreover, since some of the firms newly enter the pharmaceutical industry, their excess of current assets is still unutilized, which is proved by the highest liquidity ratio of 22.95 that is unusual for the experienced company.

The multicollinearity of the variables is also checked based on the tolerance value and Variance Inflation Factors (VIF) values. To examine the multicollinearity, Tabachnick, Fidell, and Ullman (2007) postulate that the tolerance value of the independent variables should be more than 0.10 to overcome the multicollinearity problem, while others like Menard (2000) suggest that the minimum tolerance value should be 0.20. In this study, it is observed that all of the variables have a tolerance value of more than 0.1. Neter et al. (1989) have suggested that the VIF value should be less than 10 to overcome the multicollinearity problems between the variables. It is observed that all of the variables have a VIF value of less than 10, thus having no multicollinearity problems.

The empirical results of the study entail that there exists a positive association (β = 0.882) between the corporate voluntary disclosure and firm leverage with a statistical significance of p = 0.01. Therefore, the first hypothesis of the study that assumes a significant positive association between corporate voluntary disclosure and firm leverage is accepted, which is similar to Rouf and Akhtaruddin (2018) findings. Contrasting to the findings of the study, Kamel and Awadallah (2017) conducted a comprehensive study based on the Egyptian stock exchange and found that profitability and leverage of the firm are not significant determinants of voluntary reporting. However, the socio-economic atmosphere of the country is a vital factor that influences the determinants of voluntary reporting (Belal, 2001). These represent that in a transition economy like Bangladesh, the profitability of the company, and the intrinsic or extrinsic role of fund providers play a pivotal role in disclosing more voluntary information of the business entities. Table 4 also reports a positive association (β = 0.042) between the corporate voluntary disclosure and firm liquidity with a statistical significance of p = 0.01. Hence, the second hypothesis of the study that assumes a significant positive association between corporate voluntary disclosure and firm liquidity is accepted. Based on Table 4, it is also found that there exists an inverse relationship (β = –0.130) between market category and corporate voluntary disclosure at p = 0.10. Thus, the third hypothesis of the study assuming a significant positive association between the corporate voluntary disclosure and market category cannot be accepted. Based on the empirical study, no significant association between the corporate voluntary disclosure and board size can be found, consecutively, the fourth hypothesis cannot be accepted, which is similar to the findings of Elfeky (2017). Besides, having more members on board may have divergent thoughts resulting in the defensive attitudes of the organization in disclosing the low volume of information (Jensen & Meckling, 1976). Since good companies may have a reputation; thus, they are reluctant to disclose more voluntary corporate information.

In the study, the determinants of corporate voluntary disclosure in a transition economy are investigated according to the proposition of agency theory and stakeholder theory. From the agency theory perspective, when profitability increases, the management of the business becomes more motivated to provide more information on the face of the financial statement to strengthen their position and increase their compensations (Singhvi & Desai, 1971). According to the agency theory, Jensen and Meckling (1976) suggested that business organizations having higher leverage comparatively disclose more information to satisfy the requirements of the long-term creditors and eliminate the confusions of lenders concerning the chance of transferring the wealth of the business from the lenders to managers, as well as shareholders (Fama & Jensen, 1983). Following the stakeholder theory, organizations have to provide information not only for the shareholders but also for all the stakeholders (Abed et al., 2014). Thus, the lenders require sufficient information for their lending decisions, which is consistent with these findings.

CONCLUSION

Based on empirical investigation, it is found that firm leverage and firm liquidity are the key determinants that have a significant positive association with the corporate voluntary disclosure in a transition economy. In contrast, no significant positive association between voluntary disclosure and board size is established. The study has several important implications. Firstly, the findings of the study will provide evidence that the investors – both local and foreign – should consider the determinants and their consequences of disclosure explored by the study while having their investment and credit decisions. For instance, since the study suggests that the volume of voluntary disclosure in transition economy based on the annual report is not up to the mark – as the *VD_SCORE* is only 29 out of 100, the investor should consider some other source of information beyond the annual report in case of investment or lending decisions. Secondly, the regulators of the transition economy like securities and exchange commissions are required to investigate why the listed companies provide less disclosure when there is a matter of non-financial information and if it is discovered that such a low level of disclosure is the consequences of poor market regulations and lack of regular inspection, this sort of information should be explicitly laid out in the law and SEC rules. Thirdly, the transition economy government may assess the movements of the corporate people towards the journey of developing countries and may initiate policies for the business entity that will assist them on the way of being a developing country. Finally, the transition economy's academicians must explore more empirical studies on the transition economy that shed light on extensive future research on this burning issue.

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APPENDIX A

Table A1. Content analysis of corporate voluntary disclosure

No.	Head of contents	Items	References
1	General corporate and strategic information disclosure	12	Alnabasa et al. (2018), Elfeky (2017), Kamel and Awadallah (2017)
2	Corporate governance information disclosure	14	Elfeky (2017)
3	Climate change information disclosure	12	Masum et al. (2019)
4	Environmental disclosure	13	Masum et al. (2019), Kolsi (2017)
5	Energy information disclosure	8	Masum et al. (2019)
6	Employee related disclosure	16	Kamel and Awadallah (2017), Masum et al. (2019)
7	Social information disclosure	8	Alnabasa et al. (2018), Masum et al. (2019)
8	Product information disclosure	4	Kamel and Awadallah (2017), Masum et al. (2019)
9	Customer information disclosure	5	Kamel and Awadallah (2017), Masum et al. (2019)
Total		92	