

## Forward-Looking Information and its Determinants: an Empirical Evidence from Listed Pharmaceutical Firms of Bangladesh



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**ABSTRACT:** The purpose of this paper is to examine the factors that affect how forward-looking information is disclosed by Bangladeshi listed pharmaceutical firms. In this study, a total sample of 115 firms from 23 pharmaceutical firms listed on the Dhaka Stock Exchange (DSE) is considered from the period of 2016 to 2020. Board size, board independence, gender diversity, firm size, leverage, liquidity, and profitability are used as the determinants of forward-looking information. According to the descriptive statistics, the average level of extent of forward-looking information is only 59.33%, which is inadequate for the pharmaceutical industry to survive in the long term. The multiple regression results show that the level of forward-looking information disclosure is positively and significantly associated with board size, firm size, and firm profitability. But the regression results documented that gender diversity, leverage and liquidity and board independence have no significant association with forward-looking information. The findings of this study suggest that companies should focus more on forward-looking information to survive in the market and pursue a competitive advantage. Moreover, the findings of this study also suggest that further research can be conducted using qualitative research in a different sector as well as a cross-country comparison.

**KEYWORDS:** Forward-Looking Information, Board Size, Board Independence, Gender Diversity, Firm Performance

**JEL Classification Code:** M14, M41, M48, Q56

### 1. INTRODUCTION

In a globalized and competitive business world, accounting information is of great importance to investors for decision-making purposes which are presented through the annual report. Annual reports provide both financial and non-financial information about the particular company that will be made available to the users. Annual reports are used as the major source document due to regular publications each year, and the availability of annual reports within three to four months (Aljifri & Hussainey, 2007). Besides, it is positioned as a high communication tool in prior research (Chang & Most, 1985). Moreover, it is easily comparable among firms as they are published in almost the same format and at the same time, rather than other sources like direct contact, website information, or press releases. Prior research (Botosan, 1997; Lang & Lundholm, 1993) documented that the disclosure score based on the annual report is positively associated with other media of financial communications). Thus, annual reports are used in this research paper due to the availability of the annual reports and ease of measurement.

The information can be either forward-looking information or backward-looking information in the annual reports (Kılıç & Kuzey, 2018; Hussainey, 2004). Though forward-looking information disclosure is voluntary, it provides the company with a competitive advantage in the market. Tsalavoutas and Dionysiou (2014) found that if compliance is high, then the number of proprietary and non-proprietary information given by companies will also be high. Healy and Palepu (2001) observed that voluntary disclosure of information will allow the company to select the information that is needed to be provided in their financial statement. Information asymmetry is reduced by the disclosure of forward-looking information and thus, there exists some motivation to disclose this information (Alkhatib, 2014; Bravo, 2016; Uyar & Kılıç, 2012).

Forward-looking information is the group of information that prefers existing plans and prospects which helps investors to evaluate or decide about a company's prospects. Forward-looking information comprises both financial and non-financial information. Expected cash flows, expected revenues, next year's earnings, etc. are considered financial information. Non-financial information like risks and uncertainties may be forward-looking which causes the difference between targeted results or

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predictions. Lata (2020) found that non-financial information (through risk and uncertainties) affects the actual results. Some terminologies are utilized to find out forward-looking information like forecast, expect, anticipate, predict, estimate, etc. In the case of forward-looking information disclosure, the annual report includes plans, prospects, types and extent of risks and relationships, expected performance of the company like target profitability, earnings target, capital expenditure, company's strategies, and objectives, and other obtainable financial and nonfinancial information (Menicucci, 2013).

Most of the studies conducted previously were about the degree of disclosure of forward-looking information with specific firm characteristics. Aljifri and Hussainey (2007) stated that they tried to identify the factors that determined the level of forward-looking information disclosure in annual reports and they found that debt ratio and firm performance are influential factors but other variables including auditor size, firm size, and sector type, are not significant factors. Another study by Uyar and Kılıç (2012) evidenced that profitability and firm size positively affect firm value regardless of the disclosure level of forward-looking information. The firm size has a positive impact on the level of voluntary disclosure (Hossain & Hammami 2009; Hossain & Reaz, 2007; Scaltrito, 2016) but Aljifri and Hussainey (2007) found no significant correlation between forward-looking disclosure and firm size; So, the evidence of forwarding-looking information with the firm size is mixed.

The pharmaceutical industry in Bangladesh is one of the most developed sectors since the early 80s. As Bangladesh was the least developed country at the emerging time of the pharmaceutical industry, it was difficult to develop technology and knowledge-based sector with its immense economic challenges. The pharmaceutical industry has grown significantly at a compound annual growth rate (CAGR) of 15.6% in the last five years. In addition, the pharmaceutical industry is growing very fast and can meet 98% of domestic demand and 27% growth in export earnings. In Bangladesh, more than fifty pharmaceutical firms are doing business and maintaining international standards and among them, 32 are listed. Forward-looking information is very necessary for the pharmaceutical industry to achieve a competitive advantage and be in a market-leading position. Most of the empirical research conducted on forward-looking information has been in developed countries and research is scarce in developing countries, particularly in the pharmaceutical sectors.

This research study will address two research questions:

RQ1: What is the disclosure quality of forward-looking information?

RQ2: What are the determinants of forward-looking information?

This study will aim to identify the disclosure quality of forward-looking information and its determinants in the pharmaceutical companies on Dhaka Stock Exchange from 2016 to 2020. As the disclosure is voluntary, very few firms comply with this issue and do not provide any forward-looking statement separately. So, it is necessary to go through the whole narrative sections of annual reports like the director's statement, director's responsibility statement, auditor's statement, governance report, remuneration report, shareholder's information, financial history, financial summary, etc. to find out respective forward-looking information. The nature of forward-looking information disclosure will be analyzed through descriptive statistics. The influential factors of forward-looking information will be the board size, proportion of independent directors, gender diversity, firm size, leverage, liquidity, and profitability as determinants factor on forward-looking information disclosure.

The study will contribute twofold. Firstly it will enrich the forward-looking disclosure literature in Bangladesh. And it will also contribute to investors, company management, and future researchers as well. Such information will allow investors to take better decisions about their investment, it will help the company management to be more attentive to the information they provide and improve the forward-looking disclosure and lastly, it will add insight and knowledge to help future researchers to further research.

The rest of the paper is organized as follows- Section 2 presents the theoretical framework; Section 3 discusses the literature review and hypothesis development; Section 4 shows the research methodology Section 5 focuses on findings and analysis and section 6 ends with the conclusion.

## 2. THEORETICAL FRAMEWORK

Research has been conducted previously about the disclosure of forward-looking information. The extent of forward-looking information disclosure in annual reports has been examined by various researchers in prior research (Firmansyah & Irwanto, 2020; Al-Najjar & Abed, 2014; Alkhatib, 2014; Mathuva, 2012; Aljifri & Hussainey, 2007). Aljifri and Hussainey (2007) found that the type of sector has no relation to the level of forward-looking disclosure but Alkhatib (2014) examined that there is a relationship between sector type and level of forward-looking disclosure. Mathuva (2012) found mixed results when investigating the association between disclosures and firm characteristics. Some important factors have been found to influence disclosure and include company size, profitability, liquidity, leverage, and the sector in which the company operates (Cooke, 1992; Alkhatib, 2014;

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Menicucci, 2013; Mathuva, 2012; Aljifri & Hussainey, 2007; Kent & Ung, 2003). The prominent theories that support corporate disclosure are:

### **2.1. Agency Theory**

The agency theory stated that delegation of authority is shifted from principal to agent, where the principal provides the right to the agent to manage and take decisions on matters related to the business. Most of the time, the owner wants to maximize the company's profit whereas the agent wants to improve their performance to obtain a satisfactory achievement from the principal. There may arise two types of conflicts, those conflict between owners and managers and conflict between creditors and shareholders (Jensen & Meckling, 1976). These types of conflicts arise mostly from information asymmetry (Hanifah & Cooke, 2002) as agents have more access to internal information than the principal. Reducing information asymmetry and its related costs can be regarded as an important driver to voluntarily disclosing forward-looking information.

### **2.2 Disclosure Theory**

Disclosure theory also deals with asymmetric information. According to Akerlof (1978), companies prefer not to disclose the negative implications of information asymmetry. However, Beyer et al. (2010) found that timely disclosure of reliable information can positively affect share prices which ultimately persuades investors to invest in the company, who will then experience long-term growth to maximize returns.

### **2.3 Signaling Theory**

Signaling theory is also very important for understanding the determinants of forward-looking information. Spence (1973) developed the signaling theory which accounts for the uncertainty in the market workforce. Gallego-Alvarez et al. (2011) stated that information disclosure can be considered as a signal to the capital market to reduce information asymmetry which ultimately decreases financing costs and boost firm value. Elzahar and Hussainey (2012) study found that managers generally disclose a considerable level of information to send signals to the present and potential users of annual reports.

## **3. LITERATURE REVIEW**

Dey et al. (2020) examined the determinants of disclosure of forward-looking items in an emerging country and found that leverage, profitability, auditor's global affiliation, and board size have a positive impact on disclosure of forward-looking items. On the other hand, there is a significant negative association with disclosure of forward-looking items and firm size and listing age and there is an inverse effect with female boardroom representation. Mahboub (2019) examined the influential factors of forward-looking information disclosure in the narrative segments of annual reports of commercial banks of Lebanon. The result explains that there is an insignificant association between leverage, size, and age with forward-looking information disclosure. On the other hand, profitability, liquidity, and capital expenditure have a positive impact on the level of this disclosure.

Hassanein et al. (2019) examined whether forward-looking narratives influenced investors' valuation and used annual reports from the year 2005 to 2014. This study finds that forward-looking disclosures positively enrich investors' valuation of low-performing firms but it has no significant influence on the valuation of high-performing firms. Bravo and Alcaide-Ruiz (2019) showed that an audit committee consisting of females with expertise in finance and accounting improves the level of forward-looking information disclosure. Hassanein and Hussainey (2015) stated that forward-looking information disclosure (FLID) is unproductive if it does not update the information from previous years though a significant change occurs in the firm environment and firm performance. FLID reduces information gap and agency costs and thus decreases the cost of capital (Hassanein & Hussainey, 2015; Kılıç & Kuzey, 2018).

Alkhatib (2014) examined the factors of forward-looking information disclosure in the annual report of companies listed on the Jordanian stock exchange. The study showed a mixed result for both service and industrial sectors where profitability, total assets, and auditor types are the most influential variable. Menicucci (2013) examined the management commentary of 40 Italian listed companies and found that profitability is the only determinant of forward-looking disclosure whereas firm size and leverage are insignificantly correlated. Mathuva (2012) examined the interim reports of non-financial firms of developing countries using a sample of three years. It showed that there is a significant positive relationship between forward-looking disclosure and firms with higher debt and more concentration of foreign investment, higher capital investment, and better performance. Heitzman et al. (2010) study concluded that managers will engage in more information disclosure if the benefits will be greater than the cost of disclosures.

Other factors such as gender diversity on the board (Kılıç & Kuzey, 2018) and higher board size (Wang & Hussainey, 2013) have a positive impact on FLID. Prior research found that some developed countries considered forward-looking information disclosure to be costly and less revealing and are not interested to disclose (Cooke, 1992) whereas Vanstraelen et al. (2003) found

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that some developed countries considered forward-looking information as crucial and useful. O'Sullivan et al. (2008) studied the annual reports of 200 Australian companies between the period 2000-2002 and explored the corporate governance attributes and their connection with forward-looking information. The study showed that the corporate governance system and disclosure of forward-looking information are positively related. Aljifri and Hussainey (2007) investigated the annual reports of 46 companies listed on the Abu Dubai stock exchange to find the determinants of forward-looking information. The result showed that profitability and the debt ratio are significant but firm size, auditor size, and sector type have an insignificant relationship with information disclosed in the annual reports.

Utami et al. (2020) found that forward-looking information disclosure has a significant impact on information asymmetry. Other prior studies also stated that disclosure of forward-looking information can minimize the asymmetry of information amongst parties, companies, and shareholders (Alkhatib, 2012; Uyar & Kılıç, 2012).

### 4. HYPOTHESIS DEVELOPMENT

#### 4.1. Board Size

As the board of directors of any company is the main body to implement all the objectives and strategies, having an effective board of directors may impact the management's decisions to disclose more information. Wang and Hussainey (2013) established that in case of communication and coordination problems, a larger board is more ineffective than a smaller board. Siregar and Bachtier (2010) found that communication and coordination problems may influence the ability of management to monitor and control their process and lower the quality of financial disclosure. Jaturat et al. (2021) study documented that board size plays a significant role in disclosing information. Amran et al. (2014) documented that board size is a major determinant of board effectiveness. Al-Najjar and Abed (2014) found that board size and the level of disclosure of forward-looking information disclosure are closely associated. Akhtaruddin et al. (2009) stated that a larger board is likely to have an effective governance mechanism that increased the voluntary disclosures and transparency of the company. The hypothesis developed for this study is as follows:

**H1:** *There is a positive relationship between board size and FLID.*

#### 4.2. Proportion of Independent Director

The number of independent directors should be at least twenty percent of total directors as per the code of corporate governance. Akhtaruddin et al. (2009) found that corporate governance mechanisms' effectiveness in the reduction of agency problems is often determined by the composition of their directors. Michelon and Parbonetti (2012) observed that when independent directors and management are not associated, they are encouraged to engage in a greater voluntary disclosure. If a board was dominated by independent directors, they would be able to lead management to engage in more forward-looking information disclosure (Lim et al., 2007; Wang & Hussainey, 2013). Forker (1992) evidenced that the independent director's accomplishment in the role of observing and controlling improved the value of information and estimates. Thus, the hypothesis is developed as follows:

**H2:** *There is a positive relationship between board independence and the level of FLID.*

#### 4.3. Gender Diversity

The term gender diversity means the inclusion of female directors on the board. Barako and Brown (2008), observed that gender-diverse boards can provide more viewpoints and diverse ideas to board discussions and help improve decisions. Bear et al. (2010) study showed that female directors are more encouraging in communication among board members so boards with gender diversity may help better in understanding the stakeholder's needs. So, it can be said that the diversification of boards with female directors will improve the capability of the company to deal with the needs of its stakeholders like investors, creditors analysts, auditors, and lenders (Harjoto et al., 2015). Other studies, by Kılıç and Kuzey (2018) and Frias-Aceituno et al. (2013) found that forward-looking information disclosure is positively associated with gender diversity. The hypothesis is developed is as follows:

**H3:** *There is a positive relationship between board gender diversity and the level of FLID.*

#### 4.4. Firm Size

The relationship between firm size and corporate disclosure is mixed. Previous studies found that more information is disclosed by larger companies as there is a significant positive relationship between forward-looking information disclosure with firm size. First of all, firms of large size face more agency costs because of more information asymmetry than small firms (Celik et al., 2006). Secondly, Aljifri and Hussainey (2007) found that larger companies have huge resources to bear the cost of information. Lastly, Frías-Aceituno et al. (2013) study observed that larger firms can extensively use the capital markets and this enhances their ability to integrate information to interact with different stakeholders. Larger entities are also able to disclose information about probable

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future earnings possibly because their earnings are more stable than smaller entities (Kent & Ung, 2003). From the above discussion, we can develop the following hypothesis:

**H4:** *There is a positive relationship between firm size and the level of FLID.*

### 4.5. Profitability

Profitability is deemed to be the ability of a firm to use its resources to generate revenues in excess of its expenses. Various ratios like return on assets (ROA), return on equity (ROE), operating ROA, etc. can be used to measure profitability. Research shows that there is a positive relationship between corporate disclosure with profitability. Profitable firms will spend more resources to disclose information so that it is known by the public (Garcia-Sanchez et al., 2013). Signaling theory supports that companies will generally disclose greater information when they achieve comparatively better results because disclosing information strategically sends positive indications to the capital market (Qu et al., 2015; Inchausti, 1997). Another study by Alsaeed (2006) suggested that a profitable company may disclose more information to provide a positive impression to the stakeholders. Also, Frias-Aceituno et al. (2013) found that profitable companies disclose more information and reduce the cost of capital in comparison to less profitable firms. Thus, we develop the following hypothesis:

**H5:** *There is a positive relationship between profitability and FLID.*

### 4.6. Leverage

Mathuva (2012) showed that high-levered firms have a greater intention to disclose forward-looking information. The reason behind the positive relationship could be that leveraged firms incur additional monitoring costs and they mitigate these costs by fulfilling the needs of creditors through greater information disclosure. However, Raffournier (1995) and Elzaha and Hussainey (2012) observed an insignificant relationship between financial leverage and narrative risk disclosures in 17 interim reports. A company whose capital structure depends more on debt will fulfill the needs of creditors by providing more information (Uyar & Kılıç, 2012). Leveraged companies mitigate the cost of capital and agency costs by providing more disclosure about corporate information as per agency theory (Barako, 2007; Jensen & Meckling, 1976), and can minimize risk through better information diffusion (Aljifri & Hussainey, 2007). Prior studies documented a significant relationship between disclosures and leverage (Wang & Hussainey, 2013; Aljifri & Hussainey, 2007), while others have found an insignificant association (Kılıç & Kuzey, 2018; Al-Najjar & Abed, 2014; Menicucci, 2013; Uyar & Kılıç, 2012). The hypothesis is developed, based on the above discussion, as:

**H6:** *There is a positive relationship between leverage and FLID.*

### 4.7. Liquidity

The relationship of forward-looking information disclosure with liquidity is mixed in prior research. Some suggest that they are positively related and others suggest that they are negatively related. Elzaha and Hussainey (2012) and Mangena and Pike (2005) found that the relationship between the level of disclosure and liquidity is insignificant. Marshall and Weetman (2007) observed that high-liquid firms disclose comparatively more risk information than low-liquid firms to give positive signals to investors. Thus, the hypothesis is developed as:

**H7:** *There is a positive relationship between liquidity and FLID.*

## 5. RESEARCH METHODOLOGY

### 5.1. Definition and Measurement Of Variables

The study is conducted with two variables; the dependent variable is forward-looking information disclosure and the independent variables are board size, percentage of independent directors, firm size, leverage, gender diversity liquidity, and profitability. Lang and Lundholm (1993) documented that forward-looking information is considered by investors as one of the most credible sources of information and that is why it is used as a dependent variable (Table 1).

**Table 1: Variables Measurement**

Variables	Symbol	Measurement
<b>Dependent Variable</b>		
Total Forward-Looking Information Disclosure	FLID	The proportion of total items disclosed by a firm to total items in the disclosure index.
<b>Independent Variables</b>		
Board Size	BSIZE	The natural logarithm of board size
Board Composition	BINDP	Percentage of independent directors to the total number of directors on the board



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Gender Diversity	GD	The proportion of female directors to a total number of directors.
Firm Size	SIZE	The natural logarithm of total assets.
Leverage	LEV	Percentage of total debt to total assets.
Liquidity	LIQUID	The proportion of current assets to current liabilities
Profitability	ROA	Percentage of net income to total assets.

### 5.2. Sample Selection and Data Collection

The study examines the listed pharmaceutical firms on Dhaka Stock Exchange (DSE). A total of 32 pharmaceutical firms are listed in DSE from which 23 companies' data have been taken as some companies' data are not available and are excluded from the sample. For a period of 5 years from 2016-2020 forming a panel data of 115 observations from these 23 companies were taken. The data has been collected from various secondary sources including audited annual reports available on the websites for the sample period of 2016-2020.

### 5.3. Research Models

In this study, multiple regression has been performed to find out the determinants of forward-looking information. We will be able to identify the most influencing independent variables affecting the forward-looking information disclosure of pharmaceutical firms in Bangladesh. The research model is given below:

$$Y_{i,t} = \alpha + \beta X_{i,t} + \mu_{i,t}$$

Here the subscript  $i$  represents the cross-sectional types of data means different types of data for the same period of time and  $t$  represents the time-series types of data that mean the same types of data for different periods of time. And  $Y$  is the FLID score which means the dependent variable and  $X_{it}$  represents independent variables estimated by the model. So, the actual regression model is given below:

$$FLID = \beta_0 + \beta_1 SIZE + \beta_2 BINDP + \beta_3 GD + \beta_4 SIZE + \beta_5 LEV + \beta_6 LIQUID + \beta_7 ROA + \beta + \epsilon$$

## 6. EMPIRICAL RESULTS

### 6.1. Descriptive Analysis

A summary statistic of all variables has been presented in Table 2. Forward-looking information is computed by an index using the content analysis and found that the average mean value of forward-looking information is 59.33% with a standard deviation value of 21.04% and maximum value of 94.11% and a minimum value is 29.41%. This result implies that pharmaceutical firms don't disclose almost 40.67% items of the forward-looking information which is not a good sign for survival in the market.

The board size whose a mean value is 7.513043 and the standard deviation is 0.2.062043. The variable has a maximum value of 2.708050201 and a minimum value of 1.386294361. The percentage of independent directors has a mean value of 28.29% with a standard deviation of 12.60%. This variable has a maximum value of 80% and a minimum value of 7.14%. Gender diversity whose mean value is 23.51% and the standard deviation is 17.37%. The variable has a maximum value of 62.5% and a minimum value of 22.22%. Firm size whose mean value is 21.61588181 and standard deviation are 2.9999601 and leverage whose mean value is 9.039942273 and the standard deviation is 33.21110319. Liquidity whose mean value is 3.49258 and the standard deviation is 5.364375619. The variable has a maximum value of 28.31168345 and a minimum value of -0.824817518. Profitability is an important performance measure because most profitable firms can continue their operations more smoothly at the time of financial distress than less profitable firms. Here the mean value of profitability is 5.27 and the standard deviation is 15.89. The variable has a maximum value of 0.528402743 and a minimum value of -0.81879391.

**Table 2: Descriptive Summary Statistics**

Variables	Obs	Mean	Minimum	Maximum	SD
Flid	115	59.3350384	29.4117647	94.1176471	21.044844
Board Size	115	7.513043	4	15	2.062043
Percentage of Independent Directors (%)	115	28.2913294	7.1428571	80	12.600626
Gender Diversity (%)	115	23.5069954	22.2222222	62.5	17.3681686
Firm Size	115	21.61588181	10.37782552	25.12778928	2.99996013
Leverage	115	9.039942273	-1.646909584	337.8062823	33.21110319

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Liquidity	115	3.49258	-0.824817518	28.31168345	5.364375619
Profitability	115	5.2715685	81.879391	52.8402743	15.8944625

### 6.2. Correlation Matrix

The correlation matrix is presented in Table 3 and shows that forward-looking information has a positive association with board size, gender diversity, firm size, and profitability but a negative association with board independence, leverage, and liquidity. This result implies that a large board, large firm, gender diversity, and firm's profitability have a significant impact on disclosing forward-looking information but other variables like board independence, leverage and liquidity have no significant association to disclose forward-looking information.

**Table 3: Correlation Matrix**

	FLID	BSIZE	BINDP	GD	SIZE	LEV	LIQUID	ROA
FLID	1.00							
BSIZE	0.3364	1.00						
BINDP	-0.2681	-0.3794	1.00					
GD	0.1474	0.0379	-0.1102	1.00				
SIZE	0.2689	-0.0799	0.1149	-0.0850	1.00			
LEV	-0.1927	-0.1319	0.1978	-0.1351	-0.0598	1.00		
LIQUID	-0.1993	-0.2412	0.1604	-0.1941	0.1450	0.5350	1.00	
ROA	0.3494	0.2869	-0.1473	-0.0712	0.1434	0.0027	0.0914	1.00

Table 4 shows the multi-collinearity test and multicollinearity problem arise when two or more explanatory variables are linearly dependent. If the correlation between any two explanatory variables is more than 80 percent, it can be said that there is multicollinearity in the data set. Using the Variance inflation factor (VIF) (Table 4), it is evident that no multicollinearity problem is present in the research model.

**Table 4: Multicollinearity Test**

Name of Variables	VIF	1/VIF
Liquidity	1.58	0.633485
Leverage	1.48	0.675737
Board Size	1.33	0.751663
Proportion Of Id	1.23	0.814466
Profitability	1.16	0.861507
Firm Size	1.09	0.914440
Gender Diversity	1.06	0.947825
<b>Mean VIF</b>	<b>1.28</b>	

### 6.3. Regression Analysis

Table 5 shows the regression results and it is evident that R-square is 0.3271 and the adjusted r-square is 0.2831 which presents a good research model. For the presence of heteroscedasticity, the ordinary least square method will no longer belong to Best Linear Unbiased Estimator (BLUE). Since the study used panel data, it's necessary to test heteroscedasticity. By using the formal method of the Breusch-Pagan test, this study finds that there is no heteroscedasticity problem.

The empirical regression result shows that firm performance, the board size, and firm size are significantly positively associated with forward-looking disclosure. This result implies that firms whose performance is good, show better forward-looking information. In addition, a large board size has a significant impact on disclosing forward-looking information rather than small boards. Moreover, large firms usually disclose more forward-looking information than small firms.

On the other hand, it is also found that there is no significant association between gender diversity, leverage, liquidity, and board independence with forward-looking information. This implies that female directors are not influential in the disclosure of forward-looking information. Even the independent directors are not more concerned about the forward-looking information. Creditors and a firm's liquidity also don't have any significant impact on disclosing forward-looking information.

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**Table 5: Regression Analysis**

Variables	Coefficient	Std. Err.	T	P
Cons_	-0.1006417	0.2074761	-0.49	0.629
BSIZE	0.1417295	0.0709151	2.00	0.048
BINDP	-0.252486	0.1467578	-1.72	0.088
GD	0.1618497	0.0986987	1.64	0.104
SIZE	0.0209146	0.0058175	3.60	0.000
LEV	-0.0001033	0.0006113	-0.17	0.866
LIQUID	-0.0063937	0.0039088	-1.64	0.105
ROA	0.3394493	0.1131239	3.00	0.003
R- square	0.3271		Adjusted-R Square	0.2831
Observations	115			

## 7. CONCLUSION

This study examines the extent of forward-looking information and its determinants in the listed pharmaceutical firms of Bangladesh during the period 2016-2020. A self-structured forward-looking disclosure index is developed using content analysis. This study considers the firm size, board size, board independence, gender diversity, leverage, liquidity, and profitability as independent variables to find out the influential impact on forward-looking information.

The multiple regression results show that the level of forward-looking information disclosure is positively and significantly associated with board size, firm size, and firm performance. This result implies that firms whose performance is good, show better forward-looking information. In addition, a large board size has a significant impact on disclosing forward-looking information rather than small boards. Moreover, large firms usually disclose more forward-looking information than small firms.

But the regression results evidence that forward-looking information disclosure has no significant association in terms of gender diversity, leverage and liquidity, and board independence. Even the independent directors are not more concerned about the forward-looking information. Creditors and firms' liquidity also don't have any significant impact on disclosing forward-looking information.

The extent of forward-looking information may vary if there is any change in the items of the forward-looking information disclosure index. The regression results are only limited to pharmaceutical sectors. Moreover, the regression results may change based on the time period, industry, and other determinants. The study recommends that companies should more focus on forward-looking information to pursue a competitive advantage in the market. This study also recommends that content analysis may be developed using the weighted method. Moreover, this study recommends that further research can be conducted using qualitative research in different sectors as well as cross-country comparison.

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## APPENDIX

### Appendix 1: Forward-Looking Disclosure Index (Kılıç and Kuzey, 2018)

No	Item	Disclosure Scoring Index
1.	Advertising and publicity plan	0 = No 1 = Yes
2.	Capital expenditure	0 = No 1 = Yes
3.	Expected cash flows	0 = No 1 = Yes
4.	Earnings target	0 = No 1 = Yes
5.	Growth opportunities	0 = No 1 = Yes
6.	Financial risks	0 = No 1 = Yes
7.	Political risks	0 = No 1 = Yes
8.	Environmental risks	0 = No 1 = Yes
9.	Industry/ market risks	0 = No 1 = Yes
10.	Investment projects	0 = No 1 = Yes
11.	Expected market share	0 = N 1 = Yes

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12.	Planned product research and development	0 = No 1 = Yes
13.	Sales target	0 = No 1 = Yes
14.	Expected profitability	0 = No 1 = Yes
15.	Share price	0 = No 1 = Yes
16.	Dividend per share	0 = No 1 = Yes
17.	Planned production volume	0 = No 1 = Yes

### Appendix 2: List of Sample Companies

No	Name of the Company	No	Name of the Company
1	ACI	13	IBN SINA
2	ACIFORMULA	14	KEYACOSMETICS
3	AFC AGRO	15	KOHINOOR
4	AMBEE PHARMACEUTICALS	16	MARICO
5	ACME LAB	17	ORION
6	ADVENT PHARMA	18	ORIONINFU
7	BEACON PHARMA	19	PHARMAID
8	BEXIMCO PHARMA	20	RENATA
9	BEXSYNTH	21	RECKTIBIN
10	CENTRAL PHARMA	22	SILVA
11	FARCHEM	23	SQUARE PHARMA
12	GHCL		



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