

Nonfinancial Information Disclosure and Company Characteristics: A Study on Listed Pharmaceutical and Chemical Companies of Bangladesh

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Abstract

The purpose of this study is to find out the important company characteristics that can affect disclosing non-financial information by the company. The study demonstrates the current scenario of disclosing non-financial information by sample companies i.e. 22 listed pharmaceutical and chemical companies in Bangladesh. It reports the results of the association between company specific characteristics and non-financial information disclosure of the sample companies. It also shows the results of an investigation for the extent of affecting company characteristics on disclosing non-financial information by Bangladeshi companies. The finding of the research indicates that the enhanced use of non-financial information is effectively assessed by evaluating two company characteristics i.e. size and age as significant in explaining the level of non-financial information disclosure. The important characteristics are useful in making effective investment decision by the investors.

Keywords:

Nonfinancial information disclosure; Company characteristics; Pharmaceutical and chemical companies

Introduction

As the world moves towards emphasizing a good financial reporting, Bangladesh is also predicted to move in tandem with the world's aspiration, particularly the accounting system. Bangladesh not only needs to be consistent with the world changes, but also with the development and sophistication in business dealings. The need for nonfinancial reporting is to meet the challenges of a globalize environment by encouraging the utilization of information and knowledge driven processes of business activities. Nonfinancial information belonging to the narrative part of any annual report are an addition to financial information and disclosed voluntarily for serving better interests of the stakeholders of a company.

Bangladesh currently is widely regarded as a new growth engine and an indispensable participant in global economy. Over the last several years most East Asian economies have been actively reviewing and improving their regulatory frameworks, in particular disclosure practice, and Bangladesh is not exceptional to this regard. Within this background, this study investigates the disclosure practices of companies in Bangladesh to see to what extent they disclose nonfinancial information. In addition, it examines the association between company characteristics and the extent of nonfinancial disclosure.

The aim of this research is to contribute to the contents of nonfinancial information reporting based on prior empirical studies. Issues relating to the nonfinancial information reporting are attracting considerable research attention. A list of items of nonfinancial information is focused in this study to investigate the extent to which reporting these type of information are influenced by company characteristics.

Importance of Nonfinancial Information Disclosure

In a fast-changing, globalizing world, information material for investor in decision-making is becoming increasingly diverse and dynamic. Reporting only financial information in the annual report does not provide investors the company's future valuation and the ability to understand its opportunities and risks. To complement the financial information provided by traditional accounting, non-financial information reporting provides information that helps put historical performance into context, and portray the risks, opportunities and prospects for the company in the future. Non-financial information, when combined with financial information, can provide valuable insight into the overall nature of management, a critical variable in the appraisal of the firm's financial prospects.

The disclosure literature devotes much attention to the circumstances surrounding the decision to make nonfinancial information public. It is a standard argument here that management's decision about whether to disclose information or not is based on weighing expected costs and benefits of making the information public (Frolov, 2004). The available literature has suggested many ways in which a firm or its management can benefit from improved disclosure. For example, direct evidence that firms increase the intensity of their disclosure efforts before offering public debt and equity has been obtained by Lang and Lundholm (1996), Healy *et al.* (1999) etc. The list of other suggested explanations of voluntary nonfinancial information disclosure includes motives related to institutional factors and signaling to the market.

The above discussion shows that, while information disclosure is socially desirable (Frolov, 2004; Diamond, 1985), the interplay between its benefits and costs may lead to partial or no disclosure, and one thereupon should ask whether the nonfinancial disclosure should be voluntary or mandatory. Indeed, the economic and accounting literature has asserted that, in the view of informational asymmetry, costless nonfinancial information disclosure brings general gains in economic efficiency. However, the size of the gains and the ultimate effect on financial prices may vary considerably depending on the informativeness of disclosed information and on the ways the information is disseminated and used.

Reporting of relevant and material non-financial information is an essential part of the disclosure required to enable shareowners and investors to make informed investment decisions. The value of qualitative and quantitative reporting alongside the financial statements should not be underestimated, nor the importance of judgment in ensuring the relevance of non-financial information reporting. Non-financial information reporting can help inform the investment process by revealing in both quantitative and qualitative terms those drivers that increasingly shape company performance. It should be appropriately integrated with and

presented alongside financial information in companies' reports to shareowners.

Nonfinancial Information Material

In recent years, many companies have embraced various forms of non-financial information reporting, notably in terms of their environmental and social impacts. Non-financial issues that may be material include: the impact of environmental risk, such as climate change; matters affecting employees, customers, suppliers and host communities; the development and protection of intellectual property and other intangible assets which are crucial to success; ethics, and governance arrangements. Non-financial information reporting is material if it might reasonably be expected to affect investors' decisions about the acquisition and sale of shares or the exercise of ownership rights and obligations.

For investors, current reporting simply does not deliver all necessary information. Quality of management, brands and reputation, governance, social and environmental risks and opportunities has yet to appear in a consistent and reliable fashion in company reports. According to the FAS and IAS, disclosures relating to corporate governance compliance are now an integral feature of corporate reporting. IAS emphasizes on social and environmental reporting also. It expects the organizations that are perceived as environmentally aware would provide stakeholders with details of their policies. It becomes apparent that socially aware policies can improve brand perception and hence add to shareholder value.

Bangladesh is rapidly incorporating nonfinancial information in corporate reporting. The Statement of Auditing Standards (SAS) requires auditors to assess both the quantitative and qualitative aspects of materiality. In order to enhance nonfinancial information reporting in the interest of stakeholders, the companies listed with any stock exchange in Bangladesh are required to disclose status of corporate governance compliance with the conditions imposed by the Securities and Exchange Commission's Notification No. SEC/CMRRCD/2006-158/Admin/02-08 dated 20th February 2006 under section 2CC of the Securities and Exchange Ordinance, 1969. This notification constitutes information about Board Size, Independent Director, Nature of appointment & status of Chairman of the Board and Chief Executive, contents of Director's reports, appointments of CFO, Head of Internal audit & Company's Secretary, composition of Audit Committee information and also about assignments of additional services other than External Audit and Reporting the compliance of the Director's reports.

Nonfinancial Information and Company Characteristics

Company having better performance, less significant disruption in business and better relation with stakeholders for a longer period of time tends to disclose more nonfinancial information that are in nature of voluntary. Usually old companies can achieve stability in market by utilizing large number of assets and can also earn reputation for their experiences in doing business. Companies with long age and/or large assets are likely to ventilate all their strengths including experience and capacity of doing business. So, age and assets can be two vital characteristics of a company that can cause for disclosing nonfinancial information.

Besides, pharmaceutical and chemical companies should provide

nonfinancial information more. Research and development (R&D) activities are more vibrant in this type of companies for discovering or innovating new drugs/products. The innovation, discovery, modification, or changes in specification are the regular practices for pharmaceutical and chemical companies. So, they should let the people know about the details of their any attempt and/or success of these in the form of disclosing nonfinancial information reporting.

Investors and lenders get benefit from being informed about relevant nonfinancial information since taking efficient investment decision. So, they should know the important company characteristic(s) that can lead a particular company in disclosing more nonfinancial information. Knowledge about such important company characteristics can help investors/lenders in selecting best portfolio of the companies to invest their fund effectively.

Literature Review and Development of Hypotheses

There is extensive research in developed and developing countries to measure corporate disclosure on different companies, for example, the work of Singhvi and Desai (1971), Kahl and Belkaoui (1981), Cooke (1992), Ahmed and Nicholls (1994), Inchausti (1997), Craig and Diga (1998), Haniffa and Cooke (2002) and Akhtaruddin (2005).

However, the study by Kahl and Belkaoui (1981) investigated the overall extent of disclosure by 70 companies located in 18 countries. Their results indicated that the extent of disclosure was different among the countries examined. Hossain and Mitra (2004) empirically investigated the extent of disclosure of 25 companies and associations of company size with disclosure level. A total of 61 items of information were included in the disclosure index; the approach to scoring items was dichotomous. The results indicated that larger companies provide more transparent disclosures. The dataset contains detailed information about the nonfinancial items companies disclose in their annual accounts. Based on the results of prior empirical research, the characteristics of companies and data availability, this study developed two hypotheses. A detailed analysis has been made below.

Size

The size of the company is a potentially important explanatory variable to establish an association with the extent of disclosure. Most researchers in this area find a close relationship between these two variables in both developing and developed countries; for example, Ahmed and Nicholls (1994), Al-Amin (2006), Cooke (1992), Craig and Diga (1998), Kahl and Belkaoui (1981), Singhvi and Desai (1971) found a positive relationship between company size and the extent of disclosure. A number of reasons have been advanced in the literature in an attempt to justify this relationship on *a priori* grounds. For example, Singhvi and Desai (1971) offered three justifications for why the extent of disclosure

is different for firms of different sizes. First, the cost of accumulating certain information is greater for small firms than large firms. Second, larger firms have a greater need for disclosure because their securities are typically distributed via a more diverse network of exchanges, and third, management of a smaller corporation is likely to believe more strongly than the management of a larger corporation that the full disclosure of information could endanger its competitive position. Thus, the following hypothesis is established.

H 1: Companies with higher values of total assets disclose more nonfinancial information.

Age

The extent of a company's disclosure may be influenced by its age, i.e. stage of development and growth (Owusu-Ansah, 1998; Akhtaruddin, 2005). Owusu-Ansah (1998) pointed out three factors that may contribute to this phenomenon. First, younger companies may suffer competition; second, the cost and the ease of gathering, processing and disseminating the required information may be a contributory factor, and finally, younger companies may lack a track record on which to rely for public disclosure. Kakani *et al.* (2001) pointed out that newer and smaller firms, as a result, take market in spite of disadvantages like lack of capital, brand names and corporation reputation with older firms. However, it is not possible to reach a conclusion that long-established companies can disclose more information or be more compliant than newly established companies. This leads to the following hypothesis:

H 2: Long-established companies may disclose more nonfinancial information than newly established companies.

Method

Sample Selection

The study covers 22 out of 26 pharmaceutical and chemical companies that are listed on Dhaka Stock Exchange (DSE) and/or Chittagong Stock Exchange (CSE). The study considers the annual reports for 2011–2012. Gray *et al.* (1995) state that the annual report is the only document produced regularly to comply with regulatory requirements, and more importantly is central to the organization's construction of its own external image. Hence, this study only considers the nonfinancial information disclosed in annual reports.

The Selection of Nonfinancial Information

The study focuses on nonfinancial information disclosure of pharmaceutical and chemical companies. The international institutions such as the IMF and the World Bank have given importance to the disclosure of companies. Other organizations such as the US Federal Reserve System and 'Standard and Poor' also published guidelines regarding disclosing voluntary items. Nonfinancial items are the part of corporate voluntary disclosing information. Table 1 is a list of chosen nonfinancial items and their

Table 1: The selection of nonfinancial items in the disclosure index

Title		Sources cited as example
1.	General Corporate Information	03 (Kahl and Belkaoui 1981; Ahmed and Nicholls 1994)
2.	Corporate strategy	05 (Craig and Diga, 1998):
3.	Corporate governance	17 (Haniffa and Cooke, 2002; Basel, 1998)
4.	Environmental and Corporate social disclosure	05 (Inchausti, 1997)
5.	Company's Industry Information/ Environment around the company	13 (Flöstrand and Ström, 2006)
6.	Company trends information	06 (Citigroup, 2005a)
7.	Customer/Client satisfaction Information	06 (Deloitte, 2007)
8.	Human Capital Information	05 (Deloitte, 2007)
9.	Supply chain information	03 (Deloitte, 2007)

A total of 63 items under nine above categories of nonfinancial information was identified as relevant and could be expected to be disclosed in the annual reports of companies in Bangladesh.

Scoring of the Disclosure Index

This study examined each of the annual reports and a total of 63 items of nonfinancial information have been identified in nine categories (see Table 2).

Table 2: Nonfinancial Information Index

A. General Corporate Information (03)	
1	Brief narrative history of the corporation
2	Basic organization structure/chart/description of corporate structure
3	General description of business activities
B. Corporate strategy (05):	
4	Management's objectives and strategies/corporate vision/motto/corporate goals
5	Future strategy – information on future expansion/general development of business
6	Description of employee and management incentive plans
7	Major factors that are critical to successfully implementing strategies
8	Adoption of Innovative Management Systems (like Balance Scorecard/JIT/TQM)
C. Corporate governance (17):	
9	Information about the chairman
10	Details of Chief Executive officer
11	Independent directors information
12	Nature of appointment and status of chairman and Chief Executive officer
13	Board size
14	Background of the directors/academic/professional/business experience
15	Number of shares held by directors
16	Directors' engagement/directorship of other companies
17	Contents of Director's report
18	Board selection process/Directors appointment
19	List of senior managers/senior management structure
20	Background of senior managers
21	Appointment of CFO, head of internal audit and company's secretary
22	Executive compensation
23	Composition of audit committee information
24	Appointment of Auditors
25	Audit process and internal control system

D. Environmental and Corporate social disclosure (05)	
26	Sponsoring public health, sporting or recreational projects
27	Information on donations to charitable organizations
28	Supporting national pride/government.-sponsored campaigns
29	Information on social activities and community relations
30	Environmental relations/environmental programs taken/environmental control ensured
E. Company's Industry Information/ Environment around the company (13)	
31	Market share, quality ranking in company's industry
32	Ability of new companies to enter the industry
33	Ability of substitute products or services to displace those of reporting company
34	Company's relationships with others
35	Competitors and their positions within the industry
36	Changes in markets competition or technology
37	Competitive advantages and disadvantages (industry, source, and sustainability)
38	Description of company's industry structure
39	Growth or shrinkage in market share
40	Information about economy, company's industry, and company itself
41	Intensity of competition in the industry
42	Recent changes in environment, nature and timing of company's response
43	Regulation and legislation affecting segment
F. Company trends information (06)	
44	Beneficial or detrimental circumstances that may cause increase or decrease future cash flows
45	Opportunities and risks including those resulting from key trends
46	Reason(s) for changing in financial position
47	Reason(s) for changing in company's financial flexibility
48	Explanation of relationships and changes among the data
49	Prospective information about forecasting the data
G. Customer/Client satisfaction Information (06)	
50	Customer satisfaction and retention information
51	Product innovation/new product information
52	Product safety/quality Information
53	Diversity information
54	Marketing program effectiveness
55	Market reputation and brand perceptions
H. Human Capital Information (05)	
56	Employee engagement and retention information
57	Information about organizational culture
58	Employee training/Human Capital Development
59	Human rights information
60	Occupational health and safety information
I. Supply chain information (03)	
61	Supplier relationships information
62	Information about manufacturer warranty
63	Product defects/repairs and returns information

This study constructed a disclosure index of each of the companies (Table 3). A dichotomous approach to scoring the items was adopted, in which an item scores one if disclosed and zero if not disclosed. This procedure is conventionally termed the

unweighted approach, and it was adopted for the study as other researchers have used it successfully (see Cooke, 1992; Ahmed and Nicholls, 1994).

Table 3: Nonfinancial Information Disclosure Score (in percentage)

No.	Name of the Company	Score	No.	Name of the Company	Score
1	ACI Formulations Ltd.	37	12	KEYA Cosmetics Ltd.	38
2	Advanced Chemical Industries	60	13	KEYA Detergent Ltd.	40
3	Al-Amin Chemical Industries	41	14	Kohinoor Chemical Co.	38
4	AMBEE Pharmaceutical Ltd.	54	15	LIBRA Infusions Ltd.	44
5	Bangla Process Industries Ltd.	16	16	MARICO Bangladesh Ltd.	51
6	Bangladesh Chemical Ind.	48	17	ORION Infusion Ltd.	41
7	BAXIMCO Pharmaceutical	56	18	Rahman Chemicals Ltd.	46
8	BEXIMCO Synthetics Ltd.	35	19	Reckitt Benckiser Bang.	65
9	IBN SINA Pharmaceutical Ind.	46	20	RENATA Ltd.	68
10	IMAM Button Industries Ltd.	21	21	SQUARE Pharmaceutical	63
11	JMI-Bangla Co. Ltd.	24	22	Therapeutics (Bangladesh)	33

Thus, the unweighted disclosure method measures the nonfinancial information disclosure (NID) score of a company as additive (suggested by Cooke, 1992) as follows:

$$NID = \sum_{j=1}^n \frac{d_j}{n}$$

d_j = 1 if item j is disclosed

= 0 if item is not disclosed

n = number of items.

The score of nonfinancial information disclosure is presented in Table 3. It is documented that RENATA Ltd. (a group company) is ranked first (68%), followed by a multinational company, Reckitt

Benckiser Bangladesh (65%) and leading pharmaceutical company, SQUARE Pharmaceutical Ltd. (63%). However, the lowest score (16%) is obtained by a local chemical company, i.e. Bangla Process Industries Ltd.

Model Development

The following ordinary least square (OLS) regression model is to be fitted to the data in order to assess the effect of each variable on the disclosure level:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Where Y = total nonfinancial information disclosure score received for each company

β_0 = the intercept

e = the error term.

Table 4: Proxies and predicted signs for explanatory variables

Hypotheses	Predicted signs	Proxies
Size	+	Logarithm of total assets
Age	+	Age of the companies in years

Table 4 reports the proxies used for independent variables and the predicted direction of the relation with nonfinancial information disclosure extent for each hypothesis.

Univariate Analysis

Level of Disclosure

Table 5 reports the descriptive statistics of the nonfinancial

information disclosure scores (dependent variables). The mean score of nonfinancial information disclosures of pharmaceutical and chemical companies is 27.64 out of 63 i.e. on an average 43.87% of nonfinancial information are being disclosed by the companies.

Table 5: Descriptive Statistics of Nonfinancial Information Disclosure Score and Company Characteristics

	Mean	Std. Deviation	N
Nonfinancial Score	27.64	8.781	22
Logarithm of total assets	8.8223	.74991	22
Age of the company in years	29.36	12.982	22

Bivariate Analysis

Based on analyzing the average data for variables of the study as

shown in table 5, correlations were calculated to examine the impact of independent variables on the dependent variable.

Table 6: Correlations

		Nonfinancial Score	Logarithm of total assets	Age of the company in years
Nonfinancial Score	Pearson Correlation	1		
	Sig. (2-tailed)	.		
	N	22		
Logarithm of total assets	Pearson Correlation	.615(**)	1	
	Sig. (2-tailed)	.002	.	
	N	22	22	
Age of the company in years	Pearson Correlation	.636(**)	.266	1
	Sig. (2-tailed)	.001	.231	.
	N	22	22	22

** Correlation is significant at the 0.01 level (2-tailed).

The result of correlation analysis showed that existence of positive correlations between dependent variable as nonfinancial score and the independent variables as total assets as well as age of the company at 1% level of significance. Here, strong positive correlations are observed as correlation coefficients are more than 60% in both cases (table 6).

Multivariate Analysis

The study performed an ordinary least square (OLS) regression model for all variables; the results are presented in Table 7. About 61.8% variation of dependent variable is explained by independent variables as coefficient of multiple regression (R square) is 0.618. Independent variables correlate with dependent variable as R is more than 60% i.e. 78.6%. The adjusted coefficient of determination (R squared) indicates that the model explains 57.8%

of the variation in the dependent variable of nonfinancial information disclosure score by the independent variables of total assets and age after adjusting degrees of freedom. The equation is statistically significant as sig. value of calculated F (15.376) is less than 0.001. The coefficients representing logarithm of total assets (company size) and age of the company in years are statistically significant at 1 level. Moreover, t values of logarithm of total assets and age of the company in years are more than 2.58. Here, the extent of explaining dependent variable by the independent variable of total assets is more than by the independent variable of total assets as the beta coefficient of total assets is more than that of age (5.618 > .344). However, age of the company in years is suggested as an important factor as Beta value of the factor is more than that of other independent factor of total assets (.508 > .408).

Table 7: Regression Output of the Model

<i>Regression Results</i>		<i>Model Summary</i>			
Coefficient of multiple regression R Square (R ²)		.618			
Coefficient of determination (R)		.786			
Adjusted R Square (R ²)		.578			
Std. Error of the Estimate		5.705			

<i>Analysis of variance</i>		<i>ANOVA^b</i>			
	Sum of Squares	df	Mean Square	F	Sig.
Regression	1000.777	2	500.388	15.376	.000 ^a
Residual	618.314	19	32.543		
Total	1619.091	21			

a. Predictors: (Constant), Logarithm of total assets (Size), Age of the company in years (Age),
 b. Dependent Variable: Nonfinancial Score

<i>Variables in the equation</i>	<i>Coefficients^a</i>				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-32.018	14.739		-2.172	.043
Logarithm of total assets	5.618	1.722	.480	3.262	.004
Age of the company in years	.344	.099	.508	3.453	.003

a. Dependent Variable: Nonfinancial Score

Discussion of Regression Results

Both size by assets and age in years are statistically related to the level of nonfinancial information disclosed by the pharmaceutical and chemical companies in their annual reports. Here, size and age are significant at 1% level as the sig. value of .004 and .003 are less than .01. Though the extent of the size is higher, the age is the more important factor in explaining dependant variable of disclosing nonfinancial information. The variables of company size (log of assets) and age (in years) were significantly positive and in line with the results from previous research as mentioned.

Conclusion and Limitation

The nature and focus of the present research is quite interesting and different from other studies. First, this study is focused on pharmaceutical and chemical companies in Bangladesh. Second, there has been very little study in these types of companies on nonfinancial information disclosure and also the developing country perspective. Third, the outcome of the study provides the status of the level of nonfinancial information of the companies in developing country like Bangladesh. Finally, the study finds out one of important characteristics of the companies in Bangladesh that influences on disclosing nonfinancial information reporting practice. In order to maintain high quality disclosure as well as build up investors' confidence, it is imperative to comply with the rules and regulations of the regulatory authorities and also to provide nonfinancial information. Bangladesh, in this case, has achieved at least a level (i.e. on an average 43.87%) of disclosing nonfinancial information. However, some nonfinancial information such as general corporate information, corporate strategy and corporate governance related nonfinancial information has been disclosed in the annual reports in the Bangladeshi companies to an acceptable level. The study has given an idea of how the developing countries in general, especially Bangladesh, and the pharmaceutical and chemical sector in particular, perform nonfinancial information reporting practices. Ideally, increased transparency through the disclosure of nonfinancial information should enable a company to access capital markets more efficiently. More broadly, market discipline based on this information should contribute to the efficient allocation of capital and provide incentives for companies to operate efficiently and to manage and control their risk exposures prudently. The limitation of the study is that it has been limited to one specific sector. As this study represents only pharmaceutical and chemical companies' nonfinancial information disclosure practices, the conclusions drawn on the findings would not be more realistic ignoring other sectors such as banking and insurance.

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