# Mandatory corporate reporting on the internet: An empirical study of the listed non- financial companies in Bangladesh

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**Abstract:**

*The aim of this study is to determine the extent and trend of mandatory reporting practices on the internet by the listed non-financialcompanies in Bangladesh. It also identifies the factors that influenced the mandatory reporting on the internet. The final sample consists of 141non financial companies listed in the Dhaka Stock Exchange, Bangladesh. This study used self- constructed checklists of 103 items based on acts and laws relating to mandatory reporting. Current study observed that the mean of the total mandatory disclosure score for the sample is about 60.57% with highest disclosure in the telecommunication sector which is 85.44% whereas tannery sector discloses the lowest with only 37.86% of mandatory information posted on the internet. The result of the regression analysis found that the total mandatory disclosure has significant positive association with audit firm's international link, multinational parent, number of independent director in the board, and dual leadership structure whereas significant negative association with the firms leverage. However, firm size, profitability, multinational parents, liquidity, market categories, board size, ownership structure and company age have no significant association with mandatory reporting on the internet.*

**Keywords:** *Internet reporting, Mandatory disclosure, Non-financial companies.*

## 1. Introduction

Corporate reporting on the internet is a new approach for outside decision makers to access relevant accounting information. It is a technology that has the potential to exhibit distinctive and attractive information features, which makes it a more efficient and cost effective than the traditional methods of print media (Garg and Divya 2010). It plays an important role in companies, because it reflects the efficiency and effectiveness of the management of the company and the work undertaken by the company (Sakarneh 2011). Companies around the globe are making increased use of internet financial reporting (Khlifi 2007; Pervan 2006; and Oyelere et al. 2003) as they are now operating in a global market for capital, making the market more competitive. Operating in such an environment has pressurised companies into having the 'highest international standards of disclosure' (Myners 1998, p. 27).

There are many surveys and empirical studies related to corporate financial reporting on the internet in different developed countries. In contrast, very little is known about the disclosure of financial information on the internet by companies in developing countries. As a result

there is an increasing need to describe the current situation of financial reporting on the internet in the developing world. The purpose of this study is to investigate the determinants and extent of mandatory disclosure on the internet by the listed non-financial companies in Bangladesh. It provides an understanding of the present state of delivery of business information on the internet in Bangladesh. The research finding is essential as it assists in informing regulators about the characteristics of companies that are, and that are not, satisfying national and international investors' demand for online information.

The remainder of this paper is organised as follows. Importance of the study highlighted in section 2. Section 3 discusses the literature on mandatory reporting on the internet. Section 4 highlights relevant theories and determinants of the study. Data, research design, and hypotheses measurement techniques have been outlined in section 5. After that analysis and findings are presented in section 6. Finally the implications of the results obtained and its limitations are highlighted in section 7.

## 2. Institutional background

The economy of Bangladesh is a rapidly developing capitalist economy (UNPF 2009).Based on the promising growth performance and future potential, Investor Chronicle, a UK based research organization on market and investment, listed Bangladesh as one of the hottest emerging markets along with Kazakhstan, Ukraine, Pakistan, Egypt, UAE and Nigeria (Stevenson 2008). JP Morgan included Bangladesh in their “Frontier Five” group of countries along with Kenya, Nigeria, Vietnam and Kazakhstan (Bloomberg News 2008 as cited Abdullah et al. 2011). Goldman Sachs, a US-based investment banking and securities firm, put Bangladesh in its “Next Eleven”, a group of nations having promising economic growth potential after BRIC (Brazil, Russia, India and China) (BOI Handbook 2007).

In Bangladesh, the corporate sector is at a cross roads as far as the legal structure and internal management, control and administration of corporations is concerned. The current system in Bangladesh does not provide sufficient legal, institutional and economic motivation for stakeholders to encourage and enforce corporate governance practices; hence the failure in most of the constituents of corporate governance witness in Bangladesh (Islam et al. 2010). Against this backdrop, one solution could be through ensuring the digitalisation process in every sector. Instead of manual dissemination, information and all types of reporting should be performed through the digital process so that people can gain information free of cost and without any kind of political influence or manipulation. This will drastically reduce the opportunity for corruption and ensure transparency in every sector. Both planning and monitoring need proper accounting information systems that are in line with international standards.

The practice of using the internet for disseminating corporate information is relatively new in Bangladesh. However, given the growing importance of the internet and its evident relevance to corporate reporting, it has become important to investigate the type of corporate reporting practices that have been adopted by Bangladeshi companies. In particular, lack of a comprehensive study of corporate reporting on the internet in Bangladesh, an important developing country, is the primary motivator for this study. At present, financial disclosures on corporate web sites are mainly voluntary and unregulated in Bangladesh. Voluntary in the sense that until now there are no rules in the Company Act of 1994 and unregulated in the sense that there are no set of regulations that

either require or forbid the disclosure of any specific data on web sites. Since existing financial reporting rules apply equally to financial reporting on the web: the wide range of variation observed in web based financial reporting in Bangladesh would probably draw one to conclude that some companies are violating the existing financial reporting regulations (Khan et al. 2009). It is quite shocking that the stock market crashes in 1996 and 2011 also revealed the same picture of the traditional culture not providing enough information to investors and insider information being the key to gain abnormal returns (Nurunnabiand Monirul 2012).

## 3. Review of the literature

### *3.1 Theoretical framework*

There is a range of theories that can be employed to explain why a company may disclose information in the internet. In this study agency theory and signalling theory have been employed to develop the hypotheses.

**Agency theory**

Agency theory has been widely used in disclosure literature (Chow and Wong-Boren 1987; Cooke 1989, 1991, 1992; Firth 1980; Hossain et al. 1994; Nurunnabi and Monirul 2012; Bhuiyan et al. 2007; Akhtaruddin 2005; Aljifri 2008; Marston and Annika 2004). This theory provided a necessary explanation of why the selection of particular accounting methods might matter, and hence was an important facet in the development of positive accounting theory (Deegan 2010). Agency theory attempts to explain accounting practices and standards. According to Deegan (2010), this theory focused on the relationships between principals and agents, a relationship which, due to various information asymmetries, created much uncertainty. Corporate internet reporting can enhance the monitoring role of accounting by providing investors with easier, faster and more cost-effective access to accounting data on corporate performance. It may possible that in this classic set-up model a risk adverse agent may voluntarily and frequently provide information through internet reporting in order to reduce monitoring costs and to encourage outside investors to invest in the company. Thus it helps to reduce the adverse effect of information asymmetry which is an important driver of investors' uncertainty.

**Signalling theory**

Firms may use internet disclosure to keep pace with other firms in the same industry. Craven and Marston (1999, p. 323) stated that: “the very use of the internet might itself be a signal of high quality. It implies that the firm is modern and up-to-date with the latest technology rather than old fashioned and conservative.” It is also argued that managers of profitable firms increase the level of disclosure to signal to investors that the firm is profitable and to support their continuation and compensation (Oyeler et al. 2003, p. 36). Debreceny et al (2002), Ettredge et al. (2002) also indicated that a company generally tries to distinguish itself from others by signalling its specific qualities to investors. Like to agency theory, the signalling theory also recognises the separation of ownership and management and recognises that the market pressures motivate managers to disclose information.

### 3.2 Prior empirical evidence

The literature, with regard to internet financial reporting, has covered many developed countries e.g. Petravick and Gillet 1996 (USA); Lymer and

Anders 1997 (Finland and the UK); Lymer 1997 (UK); Koreto 1997 (Ireland); Deller et al. 1999 (US, UK and Germany); Hussey and Sowinska1999 (UK); Gowthorpe and Amat 1999 (Spain); Hedlin 1999 (Sweden); and Abdelsalam et al. 2007 (UK) while some of these studies covered emerging countries (e.g. Xiao et al. 2004; Momany and Al-Shorman 2006; Al-Shammari 2007; Mohamed et al. 2009; Mohamed and Oyelere 2009; and Desoky 2009). However, as discussed in Dixon, Guariglia, and Vijayakumaran (2015), there is high level of information asymmetries in emerging markets. Emerging markets are an important yet highly understudied subject, as noted in recent surveys of the state of research on corporate governance in emerging markets (Claessens and Yurtoglu 2013) and there is a dearth of research on the internet financial reporting practices of firms located in the context of emerging economies like Bangladesh.

Gibbins et al. (1992) argued that organisations may disclose information to support the efficiency of exchange and production, but they also disclose information to establish their compliance with the social values reflected in regulations and informal norms. The most important publishing variant is represented by the compulsory disclosure. The aim of mandatory disclosure is to satisfy the users' informational needs, ensuring quality control through the laws and standards' observance (Adina and Pares 2008).Mandatory disclosure refers to those aspects and information which must be published as a consequence of the existence of some legal or statutory stipulations, capital markets, stock-exchanges commissions or accounting authorities regulations. Most of the studies exploring various determinants of the mandatory disclosure practices are on the basis of printed annual report; there are a very few studies regarding the determinants of corporate mandatory disclosure on the internet. Some authors distinguished between mandated and non-mandated disclosed items (Ettredge et al. 2002; Xiao et al. 2004).

Ettredge et al. (2002) found that the presence of required items is significantly associated only with size and a proxy for information asymmetry. Xiao et al. (2004) also found that there is a significant and a positive relation between mandatory and voluntary disclosure. They further show that the presentation format of internet corporate disclosure is associated with the employment of a Big-5 auditor and whether the firm is in the information technology industry or not. Mendes-da-Silva and Theodore (2004) found that firm size, liquidity in the stock exchange and the corporate governance of companies has significant positive association and company performance has a significant negative association with the level of disclosing mandatory and information on the internet. The study did not consider financial firms for their sample and also ignore non-financial information when developing their disclosure checklist. In case of French listed companies Boubaker et al. (2012) found that web sites are more suited for non-mandatory information. Their findings also revealed that internet corporate reporting increases with firm size, audit firm size and ownership dispersion and is more important for IT industry firms and for firms having issued bonds or new shares. However, the study does not cover all information provided on web sites, particularly those about the impact of IFRS on companies' accounts.

The overall corporate internet reporting practices of listed companies in Bangladesh were investigated by Bhuiyan et al. (2007), Dutta and Bose (2007) and Nurunnabi and Monirul (2012). According to Bhuiyan et al. (2007) only 40.24% listed companies have websites among which

33.33% companies provide information on the web while Dutta and Bose (2007) found that only 38.81% of the listed companies had a website and 61.54% reported at least one financial item on the web site. But these studies did not examine any determinants or factors influencing the disclosure of information on the web. Only Nurunnabi and Monirul (2012) examined empirically some company characteristics as determinants of such practice. They found that only 29.12% companies had web sites and only 33.34% companies' provided financial information on the internet. Moreover the study found that only big four audit firms and non-family ownership variables were significantly associated with the levels of internet disclosure. Though the study published in 2012, they used the data from 2009.

Khan et al. (2009) selected the top 30 companies on the Chittagong Stock Exchange as their sample and found that only 75% of the companies having website disclose financial statements on the internet. They analysed the issues relating to financial reporting on the internet in Bangladesh through focus group discussions with different stakeholders and the responses to a structured questionnaire. This review supports the assertion that there is no detailed study about how much mandatory information are disclosed on the internet in Bangladesh. There are some studies regarding the extent of mandatory disclosure in the printed annual report (Akhteruddin 2005; Karim and Jamal 2005; Hasan et al. 2008, Das et al. 2015) but there is no single study which considers the extent of mandatory information on the internet. So there is a gap in the literature as to what extent do Bangladeshi companies disclose mandatory information on the internet and what are the determinants that affect this disclosure level. In order to remove this gap, the current study not only considers the extent of mandatory information on the internet but also tries to identify the determinants of such disclosure. Moreover, this study will focus the mandatory disclosure and their different categories, and the area where the major noncompliance occurs.

## 4. Hypothesis development

On the basis of theories and previous literature the following hypothesis have been developed for the current study.

### *4.1 Firm size*

With low incremental costs, large firms are more likely to supplement traditional financial disclosure with internet reporting to benefit from decreasing agency costs. The benefits of such disclosures increase with firm size (Oyelere et al. 2003). According to Bonson and Thomas, (2002) large companies may be more able to access financial markets if they disclosed more information online. These firms have an increased need for external capital. As a result, by disclosing more information in internet financial reporting, the managers will reduce the agency cost to appear trustworthy to the shareholders (Nurunnabi and Monirul 2012). Many of the empirical studies investigate the relationship between the size of the companies and online disclosure and found a positive association. For example, Debreceny et al. (2002), Ettredge et al. (2002), Marston (2003), Marston and Annika (2004), Oyelere et al. (2003), Xiao et al. (2004), Bonson and Thomas (2006), and Al-Shammari (2007), Desoky (2009), Garg and Divya (2010): however, there are a number of notable exceptions, e.g., Malone et al. (1993); Ahmed and Nicholls (1994); and Ahmed (1996).Therefore, the hypothesis is:

H1: There is significant positive association between firm size and the level of mandatory disclosure on the internet.

### 4.2 *Profitability*

Signalling theory suggests that profitable companies have an incentive to disclose more information, to signal the firm's profitability to investors to support management continuation of their positions and levels of compensation (Oyeler et al. 2003), and to raise capital at the lowest price (Marston and Annika 2004). Agency theory also suggests that managers of profitable companies have an incentive to disclose more information in order to boost their compensation (Abd El Salam 1999). While some studies show a significant positive association between profitability and disclosure (such as, Ng and Tai 1994; Patton and Zelenka 1997; Owusu-Ansah 1998; Haniffa and Cooke 2002; Naser et al. 2002, Ali et al. 2004; andDesoky 2009) other studies report a negative association between profitability and disclosure (such as: Wallace and Naser 1995; Inchausti 1997; Chen and Jaggi 2000; and Xiao et al. 2004). Therefore, the hypothesis is:

H2: There is significant positive association between firm's profitabilityand the level of mandatory disclosure on the internet.

### 4.3 *Audit firm's international link*

The audit firm responsible for reporting to shareholders can significantly influence the amount of information disclosed in the corporate annual report (Ahmed and Nicholls 1994, and Owusu-Ansah 1998). Therefore, auditing firms may support and encourage their clients to comply with mandatory disclosure requirements (Ahmed and Nicholls 1994; Inchausti 1997; Abd El Salam 1999). In prior research, a positive association between audit type and disclosure has been found (Ahmed and Nicholls 1994; Raffournier 1995; Bonson and Thomas 2006; Nurunnabi and Monirul 2012). Other researchers found non-significant association (Abd El Salam 1999; Wallace et al.1994; Ali et al. 2010; Alali and Romero 2012). Based on these arguments, this study hypothesises that:

H3: There is a significant positive association between firms audited by a local audit firm with international affiliations to the Big 4 and the level of mandatory disclosure on the internet.

### 4.4 *Multinational parents*

As foreign listing status extends the dispersion of shareholders, which, in turn, increases the information asymmetry between managers and shareholders, it is generally believed that Multinational Corporation (MNC) affiliation status affects the level of information disclosure. Ahmed and Nicholls (1994) found that subsidiaries of multinational companies showed a higher degree of compliance to disclosure requirements. In another study on Bangladeshi companies Ahmed (1996) found that multinational affiliation is the significant predictor of disclosure levels while Karim and Jamal (2005) found negative significant association. MNC's are expected to demand more information because of various reasons associated with emerging economies (Owusu-Ansah, 1998). Based on these arguments, this study hypothesises that

H4: There is significant positive association between the multinational company influence and the extent of mandatory disclosure.

### *4.5 Leverage*

According to Muhamad et al.(2009) highly leveraged firms have a wider obligation to disclose the information, especially financial information in order to convince their long-term creditors that they have enough sources to fund the business. Vijayakumaran (2015) argues that the use debt financing help align not only the interest of managers with that shareholders but also interest of controlling shareholders with that of minority shareholders. As debenture holders are able to "price-protect" themselves, managers and shareholders have an incentive to increase the level of monitoring, such as by increasing the disclosure of additional information about the firm activities (Myers 1977; Schipper 1981). Empirical evidence regarding the association between leverage and internet reporting is inconclusive. A positive association was found by Ismail (2002); Laswad et al. (2005) Momany and Al-Shorman 2006; Xiao et al. 2004 while Brennan and Hourigan (1999); Debreceny et al. (2002); Oyeler et al. (2003); Debreceny and Rahman (2005); Alvarez et al. (2008); Ezat and Ahmed (2009); Puspitaningrum and Sari (2012); Alali and Romero (2012) found non-significant association. So the hypothesis is:

H5: There is significant positive association between the leverage and the level of mandatory reporting on the internet.

### *4.6 Liquidity*

A high liquidity ratio is an indicator of good management performance. Accordingly, companies with higher liquidity ratios are expected to disclose more information. Abd El Salam (1999) argued that companies, according to signalling theory, will disclose more information if their liquidity ratio is high, to distinguish themselves from other companies with less favourable liquidity. On the other hand agency theory suggests that companies with a low-liquidity ratio may provide more information to satisfy the information requirements of shareholders and creditors. While Oyeler et al. (2003) found a positive relationship between company liquidity and use of internet reporting others have found no association between disclosure and liquidity (Ahmed and Courtis 1999; Garg and Divya 2010; Puspitaningrum and Sari 2012).

*H6: There is significant positive association between firm's liquidity and the level of mandatory disclosure on the internet*

### 4.7 Market category

Stock exchange security categories are all significantly associated with the extent of disclosure (Karim and Jamal 2005). Listed companies have been categorised on the basis of the regularity of their holding AGMs and/or payment of dividends. This variable was examined by Karim and Jamal (2005) and they found a significant negative association with the level of disclosure. This implies that the disclosure level was higher for a company whose security is not categorised as Z category securities.

H7: There is significant negative association between the 'Z' category company and the level of disclosing mandatory information on the internet.

### *4.8 Independent directors on the board*

Board independence is an important element in monitoring the corporate financial accounting process (Klein 2002) and affecting the reliability of financial reports (Anderson et al. 2004). A

high percentage of independent directors on the board enhances the monitoring of managerial opportunism and reduces management's chance of withholding information. Empirical evidence suggests a positive association between corporate disclosure and board independence. Beasley (1996),Adams et al. (1998), Chen and Jaggi (2000),Cheng and Courtenay (2006), andAbdelsalam and Donna (2007), found a positive relationship between a board with a higher proportion of independent directors and the disclosure level but Gul and Leung (2004) reported a negative association. Depending on the mixed results provided by previous studies, the next hypothesis is:

H8: There is significant positive association between the number of independent directors in the board and the level of mandatory reporting on the internet.

### *4.9 Dual leadership structure*

Role duality exists when the chief executive officer (CEO) is also the chairman of the board. From the point of view of agency theory, the efficacy and efficiency of the board can be compromised if the position of president and chairman of the board is held by the same person (Blackburn 1994). Though Nandi and Ghosh (2012) and Gao and Kling (2012) also found significant positive association, Haniffa and Cooke 2002 and Gul and Leung 2004found significant negative association. On the other hand, some studies conclude that role duality is not associated with the level of disclosure (Arcay and Vazquez 2005; Cheng and Courtenay 2006; Ghazali and Weetman 2006; Abdel-Fattah 2008; Ezat and Ahmed 2009).

H9: There is significant positive association between the role duality and the level of mandatory reporting on the internet.

### *4.10 Board size*

The number of directors on the company's board should play a critical role in monitoring of the board and in taking strategic decisions. Some studies argue that a large board assists in performing more monitoring, providing companies with the diversity that help them in providing critical resources and eliminate environmental uncertainties, alleviating the dominance of the CEO, and increasing the pool of expertise that yields from the diversity of the board (Singh et al. 2004; Yermack 1996). Other studies illustrate that a large board could cause more conflict between the members of the board and delay or avoid critical decisions. In addition, a large board causes poorer communication and processing of information (Huther 1997; John and Senbet 1998). However, a number of studies conclude that board size is not associated with the level of disclosure (Arcay and Vazquez 2005; Cheng and Courtenay 2006; Gandia 2008).

H10: There is significant positive association between the board size and the level of mandatory disclosure on the internet.

### *4.11 Ownership structure*

In term of equity's scope, there are two clusters: either the concentration or the dispersion of the ownership. Concentration of ownership refers to the group who has the most influence among the equity owners, while dispersion (diffusion) of ownership looks only at the separation of ownership between managers and equity owners as a group (Haniffa and Cooke 2002). The significance of ownership structure is mixed: some studies show no significant relationship between this variable and online disclosure (Abd El Salam and Donna 2007; Trabelsi and Labelle 2006), while others prove a significant positive

relationship (Debreceny and Rahman 2005; Marston and Annika 2004; Momany and Al-Shorman 2006; Oyelereet al. 2003; Ezat and Ahmed 2009; Nurunnabi and Monirul 2012). On the other hand, Ho and Wong (2001) find a negative relationship between family controlled firms and the level of voluntary disclosure. So the next hypothesis is:

H11: There is significant positive association between ownership structure and level of mandatory internet reporting in Bangladesh.

### *4.12 Company age*

According to Owusu-Ansah (1998) corporate age is related to its stage of development and growth. Older, well-established companies are likely to disclose much more information in their annual reports than younger companies. New companies do not have a disclosure 'track record' and therefore have diminished incentives to disclose. The results of the previous studies are inconclusive. While Owusu-Ansah (1998) found significant positive association, Akhteruddin (2005); Al-Shammari (2007); Nurunnabi and Monirul (2012) found non-significant association of company age with the level of disclosure. For this study, it is expected that company age is a critical factor in determining the level of corporate disclosure.

H12: There is significant positive association between company age and level of mandatory internet reporting in Bangladesh.

## 5. Methodology

### *5.1 Sample and data set*

The sample initially included all the listed non-financialcompanies on the Dhaka Stock Exchange (DSE) at 31 March, 2014 which was

Table 1: Sector Wise Population and Sample Size

| Sector | Population | Sample | Percentage |
|---|---|---|---|
| Cement | 7 | 7 | 100% |
| Ceramics | 5 | 5 | 100% |
| Engineering | 25 | 25 | 100% |
| Food and Allied | 18 | 15 | 83.33% |
| Fuel and Power | 15 | 14 | 93.33% |
| IT sector | 6 | 6 | 100% |
| Jute | 3 | 1 | 33.33% |
| Miscellaneous | 9 | 7 | 77.78% |
| Paper and printing | 1 | 1 | 100% |
| Pharmaceuticals and Chemical | 25 | 21 | 84% |
| Services and Real Estate | 3 | 3 | 100% |
| Tannery Industries | 5 | 3 | 60% |
| Telecommunication | 2 | 2 | 100% |
| Textile | 32 | 28 | 87.50% |
| Travel and Leisure | 3 | 3 | 100% |
| Total | 159 | 141 | 88.68% |

159. Out of these 159 companies only 141 companies (88.68percent) were found to have corporate websites. An overview of sector wise sample size is shown in table 1.

### *5.2 Index construction*

A disclosure index of 103 items was constructed based on a thorough and rigorous study of the existing regulatory frame work for listed companies and an examination of the IASs and IFRS adopted in Bangladesh until January 2010 (last updated in Bangladesh). The checklist would form a disclosure index revealing the level of mandatory corporate disclosure. The checklist is composed of different sections showing the whole mandatory disclosure categories. Different parts of mandatory reporting are shown in table 2. The disclosure level is measured using the percentage of the present items over the whole disclosure index items. The presence of the item in the internet corporate reports is represented by (1), while the absence of the item is represented by (0). This can be presented mathematically as follows:

Table 2 Distribution of the Index Items

| | Major Parts of Report | Total | Percentage |
|---|---|---|---|
| Mandatory Disclosure | General Information | 23 | 22.33 |
| | Directors Report | 8 | 7.77 |
| | Balance Sheet | 36 | 34.95 |
| | Profit and Loss Account | 36 | 34.95 |
| | Total | **103** | **100%** |

$UIx = [\sum T tx]/ nx$

Where, UIx is the unweighted index scored by company, x, $0 \leq Ix \leq 1$; Ttx is the information item disclosed by company x; nx is the maximum number of items expected to be disclosed by a company.

The following multiple linear regression modelisused to investigate the association between the determinants and mandatory disclosure requirements in Bangladesh:

$$ICRIM = \beta_0 + \beta 1\ LDASST + \beta 2\ ROA + \beta 3\ AUDITOR + \beta 4\ LEV + \beta 5\ MNC + \beta 6 CURRENT + \beta 7\ MKTCATE + \beta 8\ IND + \beta 9\ BOSIZE + \beta 10\ RODUAL + \beta 11\ SPONSOR + \beta 12\ LISYR + \beta 13\ ESTABYR + \epsilon$$

Where,

ICRIM = Internet corporate reporting Index for mandatory;

0 = Constant

β1- β13 = coefficients of explanatory variables

∈ = Error term

Table 3: Explanatory Variables and their Expected Sign

| Determinants | Variables | Variable Level | Expected sign |
|---|---|---|---|
| Firm size | Natural log of total asset | LDASST | + |
| Profitability | Return of Assets | ROA | + |
| Audit firm's international link | Audit firms link with Big Four Firm | AUDITOR | + |
| Leverage | Debt to equity ratio | LEV | + |
| Multinational parents | Subsidiary of a multinational company | MNC | + |
| Liquidity | Current ratio | CURRENT | + |
| Market Category | Market category of DSE, 1 for Z, 0 otherwise. | MKTCATE | - |
| Independent director in the board | Number of independent director on the board | IND | + |
| Dual leadership structure | Dummy variable 1 for CEO duality or role duality, otherwise 0. | RODUAL | + |
| Board size | Number of Board member | BOSIZE | + |
| Ownership structure | Sponsor hold 50% or more ownership | SPONSOR | - |
| Company Age | Company's establishment year and listing year | LISYR and ESTABYR | + |

## 6. Findings and analysis

### *6.1 Descriptive statistics*

To start our analysis, table 4 presents the descriptive statistics of total mandatory reporting and its categories for each year. From the table 4, it is observed that the mean of the total mandatory disclosure score for the sample is about 60.57% with a standard deviation of 32.04%.The table also suggests that the level of disclosure by the examined companies varies from 2.91% to 96.12%.

In order to gain a detailed understanding of corporate internet reporting practices, it is necessary to discuss sector wise performance of the listed companies in Bangladesh. It will help to identify the highest and lowest disclosing sector. From the table 5 it can be observed that the telecommunication sector discloses the most mandatory information at 85.44% followed by the service and real estate sector which discloses 74.76% mandatory information and then the IT sector, with 72.01%. The tannery sector discloses the lowest with only 37.86% of mandatory information posted on the internet.

Table 6 shows the descriptive statistics for the determinants of disclosing mandatory information on the internet by the non financial listed companies in Bangladesh. From the table it can be observed that there are 141 number of observation which indicates the sample size for non-financial companies. The firm size is about 9.23 with a minimum of 0.082 and a maximum of11.068. Firm's profitability measured by ROA is about 0.0494 with minimum of -0.308 and maximum of 0.475. It is also notable that only 16.31% companies are audited by Big four audit firms and only 14.18% companies have multinational parent. Also leverage which is measured by debt to equity ratio is 1.45:1 and the liquidity ratio measured by current ratio is 1.73. Only 18.44% non-financial companies are in the Z category. Regarding the number of independent director, the average is about 1.18 or 1 person, which varies from 0 to 4 persons whereas the

Table 4 Descriptive Statistics of Mandatory Disclosure

| Mandatory Disclosure | N | Mean | Median | Std. Deviation | Mini-Mum | Maxi-Mum |
|---|---|---|---|---|---|---|
| General Disclosure | 141 | 0.7194 | 0.9130 | 0.3135 | 0.0435 | 1 |
| Director Report | 141 | 0.4530 | 0.5000 | 0.3982 | 0 | 1 |
| Balance sheet | 141 | 0.5985 | 0.7778 | 0.3303 | 0 | 0.9722 |
| Profit and loss A/C | 141 | 0.5743 | 0.6944 | 0.3252 | 0.0278 | 1 |
| **Total Mandatory** | 141 | 0.6057 | 0.7767 | 0.3204 | 0.0291 | 0.9612 |

Table5 Sector Wise Disclosure Level

| Sector | Mandatory | Sector | Mandatory |
|---|---|---|---|
| Cement | 63.38% | Pharmaceuticals and Chemical | 72.77% |
| Ceramics | 56.50% | Services and Real Estate | 74.76% |
| Engineering | 55.42% | Tannery Industries | 37.86% |
| Food and Allied | 59.48% | Telecommunication | 85.44% |
| Fuel and Power | 68.03% | Textile | 48.27% |
| IT sector | 72.01% | Travel and Leisure | 64.08% |
| Miscellaneous, Jute and paper | 63.54% | | |

Table 6 Descriptive Statistics for Explanatory Variables

| | N | Mean | Median | Std. Deviation | Mini-Mum | Maxi-Mum | Skew-Ness | Kur-tosis |
|---|---|---|---|---|---|---|---|---|
| Firm Size | 141 | 9.2334 | 9.3379 | 1.070 | 0.082 | 11.068 | -4.546 | 39.402 |
| ROA | 141 | 0.0494 | 0.0387 | 0.081 | -0.308 | 0.475 | 0.551 | 11.522 |
| Audit Firm | 141 | 0.1631 | 0 | 0.371 | 0 | 1 | 1.824 | 4.325 |
| Multi Parents | 141 | 0.1418 | 0 | 0.350 | 0 | 1 | 2.053 | 5.215 |
| Leverage | 141 | 1.454 | 0.678 | 2.5572 | -6.38 | 12.26 | 2.203 | 9.9207 |
| Liqu.(Curr ratio) | 141 | 1.735 | 1.3048 | 1.455 | 0.0526 | 9.803 | 2.689 | 11.798 |
| Mkt Category | 141 | 0.1844 | 0 | 0.389 | 0 | 1 | 1.628 | 3.649 |
| Inde Director | 141 | 1.1844 | 1 | 0.789 | 0 | 4 | 0.275 | 3.117 |
| Board Size | 141 | 7.5106 | 7 | 2.0305 | 4 | 14 | 0.6755 | 3.3861 |
| Role Duality | 141 | 0.7943 | 1 | 0.406 | 0 | 1 | -1.456 | 3.121 |
| Owner Struc | 141 | 0.5106 | 1 | 0.502 | 0 | 1 | -0.043 | 1.002 |
| Listed Year | 141 | 15.7305 | 16 | 11.293 | 0 | 45 | 0.240 | 2.003 |
| Estab Year | 141 | 26.7518 | 23 | 19.684 | 1 | 190 | 4.160 | 34.592 |

average size of the board is about 7.46 or 7 person. It can also be observed that 79.43% of companies have dual leadership structure while 51.06% of companies are operating under sponsor ownership. The skewness and kurtosis of the different determinants indicates that the data of the different variables are not normally distributed and considered to be non parametric data.

From the table 7 it can be observed that seven explanatory variables are significantly associated with the level of disclosing mandatory information on the internet under the Spearman correlation test. While profitability, audit firms international link, multinational parent, independent director, dual leadership structure and ownership structure are all positively and significantly associated with the level of mandatory disclosure, market category is significantly negatively associated with the disclosure level. This suggests that high profitability firms, the firms which are audited by Big four audit firms and who have independent director in the board, dual leadership structure in the board and sponsored companies are more willing to comply with the mandatory requirements.

It is also notable that firms' liquidity, board size and company age measured by both companies' listed year and establishment year have non-significant association with the mandatory disclosure level. Moreover, according to the Spearman test, firm size is significantly positively associated with the level of disclosing mandatory information on the internet. However, leverage has significant negative association with the disclosure level.

### 6.2 Multivariate Analysis

In this study; linearity, independence and normality of error, homoscedasticity and multicollinearity have been checked to justify the regression. The graphs for checking linearity of each independent indicate that most of the independent variables in the model do not have an obvious linear relationship with the dependent variable. It may be because of the presence of

## Table 7: Spearman's Correlation for Dependent and Independent Variables

| | Total Mand | Genera | Direct | Balsh | Income | Firm size | ROA | Audit firm | Multi nation | Lever age | Current ratio | Market Cate | Ind director | Board size | Dual leader | Owner ship | Listed yr | Estab yr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TotalMandator | 1.00 | | | | | | | | | | | | | | | | | |
| General | .893** | 1.00 | | | | | | | | | | | | | | | | |
| Director_repo | .891** | .825** | 1.00 | | | | | | | | | | | | | | | |
| Balancesheet | .943** | .830** | .794** | 1.00 | | | | | | | | | | | | | | |
| Incomestate | .946** | .802** | .785** | .875** | 1.00 | | | | | | | | | | | | | |
| Firm_size | .351** | .373** | .341** | .352** | .257** | 1.00 | | | | | | | | | | | | |
| ROA | .326** | .366** | .300** | .284** | .289** | .291** | 1.00 | | | | | | | | | | | |
| Auditfirm | .344** | .350** | .298** | .294** | .315** | .282** | .303** | 1.00 | | | | | | | | | | |
| Multinational | .340** | .298** | .283** | .288** | .326** | .115 | .253** | .151 | 1.00 | | | | | | | | | |
| Leverage | -.167* | -.145 | -.194* | -.157 | -.159 | -.098 | -.204* | .031 | .097 | 1.00 | | | | | | | | |
| Currentratio | .159 | .115 | .158 | .170* | .112 | .191* | .337** | .094 | -.098 | -.384** | 1.00 | | | | | | | |
| Marketcate | -.302** | -.288** | -.308** | -.277** | -.270** | -.293** | -.398** | -.210* | -.141 | -.036 | -.239** | 1.00 | | | | | | |
| Inddirector | .345** | .372** | .408** | .330** | .290** | .271** | .191* | .257** | .188* | .035 | -.022 | -.157 | 1.00 | | | | | |
| Boardsize | .157 | .087 | .097 | .145 | .161 | .284** | .175* | .350** | .074 | .014 | .071 | -.121 | .245** | 1.00 | | | | |
| Roleduality | .397** | .413** | .390** | .339** | .393** | .099 | .167* | .177* | .157 | .034 | .039 | -.301** | .238** | .099 | 1.00 | | | |
| Ownership | .186* | .205* | .206* | .170* | .165 | .201* | .122 | .317** | .235** | .203* | -.004 | -.120 | .242** | .262** | .239** | 1.00 | | |
| Listedyr | -.152 | -.221** | -.154 | -.114 | -.112 | -.333** | -.183* | .003 | .147 | .161 | -.091 | .131 | -.034 | .091 | -.064 | .039 | 1.00 | |
| Establishedyr | -.041 | -.126 | -.100 | -.017 | -.007 | -.133 | -.175* | .124 | .112 | .200* | -.057 | .004 | -.027 | .156 | .182* | .214* | .727** | 1.00 |

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

Table 8: OLS regression with Robust Standard Error

| | Mandatory | | General | | Director | | Balance Sheet | | Income Stat. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Coeff. | t value | Coeff. | t value | Coeff. | t value | Coeff. | t value | Coeff. | t value |
| Firm Size | 0.018 | 0.56 | 0.034 | 1.12 | 0.022 | 0.57 | 0.027 | 0.79 | -0.002 | -0.05 |
| Return on Assets | 0.411 | 1.61 | 0.397 | 1.55 | 0.567 | 1.73* | 0.496 | 1.75* | 0.300 | 1.18 |
| Audit Firm Size | 0.119 | 2.39** | 0.124 | 2.49** | 0.179 | 2.47** | 0.089 | 1.69* | 0.132 | 2.36** |
| Multina. Parents | 0.144 | 2.49** | 0.129 | 2.44** | 0.175 | 2.18** | 0.125 | 2.06** | 0.165 | 2.76*** |
| Leverage | -0.013 | -1.77* | -0.017 | -1.85* | -0.028 | -2.62*** | -0.012 | -1.52 | -0.008 | -1.1 |
| Liqui.-Curt ratio | 0.040 | 0.79 | 0.046 | 0.93 | 0.045 | 0.82 | 0.044 | 0.83 | 0.032 | 0.61 |
| Market Category | -0.086 | -1.24 | -0.076 | -1.14 | -0.149 | -2.11** | -0.078 | -1.01 | -0.086 | -1.25 |
| Inde. Director | 0.096 | 3.01*** | 0.092 | 3.2*** | 0.133 | 3.45*** | 0.100 | 2.93*** | 0.087 | 2.59** |
| Board Size | -0.013 | -1.13 | -0.017 | -1.68* | -0.018 | -1.25 | -0.013 | -1.08 | -0.008 | -0.71 |
| Role Duality | 0.250 | 3.51*** | 0.253 | 3.74*** | 0.246 | 3.2*** | 0.252 | 3.33*** | 0.246 | 3.39*** |
| Owner. Structure | 0.007 | 0.14 | 0.001 | 0.02 | 0.045 | 0.7 | 0.012 | 0.22 | -0.001 | -0.01 |
| Year-listed | -0.002 | -0.84 | -0.002 | -0.67 | -0.002 | -0.52 | -0.002 | -0.8 | -0.003 | -0.98 |
| Year–Estab | -0.001 | -0.51 | -0.001 | -0.89 | -0.002 | -1.54 | 0.000 | -0.41 | 0.000 | -0.06 |
| Constant | 0.231 | 0.74 | 0.251 | 0.86 | 0.081 | 0.21 | 0.131 | 0.4 | 0.352 | 1.1 |
| R | .629 | | .637 | | .666 | | .609 | | .602 | |
| R Square | .395 | | .406 | | .444 | | .371 | | .362 | |
| Adjusted $R^2$ | .323 | | .334 | | .377 | | .296 | | .286 | |

outliers or unusual observations. The P-P plot, Kernal Density estimate and Shapiro-Wilk *W* test for normality also indicates that errors and dependent variables are not normally distributed and this is mainly related to the skewness of the distribution.

The current study employs two numerical methods for testing heteroscedasticity; Breusch-Pagan / Cook-Weisberg and White's test; and Cameron & Trivedi's decomposition of IM test. The results point out that error has non-constant variance (heteroscedastic). However, the results of VIF and correlations coefficients under both Spearman and Pearson confirm that there is no multicollinearity. Therefore, we use OLS with robust standard error.

Table 8 represents the results of OLS regression with robust standard error for the mandatory disclosure. From the table it can be observed that the total mandatory disclosure have significant positive association ($p \leq 0.05$) with audit firm and multinational parents while it has significant negative association ($p \leq 0.05$) with firm's profitability. In addition, independent directors in the board and dual leadership structure have significant positive association ($p \leq 0.01$) and leverage has significant negative association ($p \leq 0.10$) with the level of mandatory disclosure. The positive association means that the total mandatory disclosure increases if the firm is audited by a Big 4 audit firm, have multinational parent, high number of independent directors in the board and the existence of dual leadership in the board. On the other hand, negative association means that highly levered firms disclose less mandatory information on the web.

In addition, firm size, profitability, liquidity, and ownership structure has positive non significant association: market category, board size, number of listed year and company's establishment year have non-significant negative association with the level of mandatory disclosure on the internet. The adjusted R square of the model explains how much of the changes in the dependent variable are explained by the changes in the independent variables. The value of the adjusted R square is 0.323 i.e. 32.3% which means that 32.3% of the changes of total mandatory disclosure are explained by the changes in its examined determinants for non-financial companies.

Referred to the different categories of mandatory disclosure, there is a significant positive association of audit firm, multinational parent, and number of independent director and dual leadership structure with all categories of mandatory disclosure on the internet. Moreover, Firm size and firms liquidity have non-significant positive association with all the parts of mandatory disclosure while company age measured by both number of yeas listed and number of years established are negatively non significant with all the categories of mandatory disclosure. Firm's profitability is significantly positively associated with the disclosure of director's report and balance sheet. Firm leverage has significant negative association with general disclosure and director's report. Market category has significant negative association only with director's report and board size has significant negative association only with general disclosure. Ownership structure has positive non-significant association with all the categories of mandatory disclosure except income statement where it has non-significant negative association.

The result of the regression analysis agrees with our research hypotheses concerning the existence of positive significant relationship between the total mandatory disclosure and audit firm's international link (hypothesis H3), multinational parent (hypothesis H4), number of independent director in the board (hypothesis H8) and dual leadership structure (hypothesis H9). On the other hand, the regression result found significant negative association of total mandatory disclosure with firms leverage (hypothesis H5). However, the study found non-significant association of firm size (hypothesis H1), profitability (hypothesis H2), multinational parent (hypothesis H4), liquidity (hypothesis H6), market category (hypothesis H7), board size (hypothesis H10), ownership structure (hypothesis H11), and company age (hypothesis H12) with the level of disclosing mandatory information on the internet.

## 7. Conclusion and recommendation

This paper includes two phases of analysis. First, examine the extent of mandatory reporting on the internet; finally, scrutinize the factors association with mandatory reporting on the internet. The study revealed that many company do not meet the disclosure requirements of the regulatory bodies in Bangladesh. The low level of overall compliance with mandatory disclosure by Bangladeshi firms can be attributed to organizational culture, poor monitoring, and lapsein enforcement by the regulatory body. This study identified the determinants of mandatory on the internet through correlation, bivariate and multivariate analysis. The result of the regression analysis found that the total mandatory disclosure has significant positive association with audit firm's international link, multinational parent, number of independent director in the board, and dual leadership structure and significant negative association with the firms leverage.

This study presents a snapshot of internet financial reporting of Bangladeshi companies from December 2013 to March 2014. This study could not examine the longitudinal data of internet reporting, and so is limited to a cross-sectional study. However, this study provides abase for future longitudinal studies of internet reporting in Bangladesh. The explanatory power in the multiple regression analysis ranged between 30% and 50%; although this percentage is considerable, it might indicate that other variables that were not included in the model affect the level of disclosure. Some variables are excluded in this study because of their unavailability, for example, the qualification of accountants, the attitude of management to IT, audit committee, and the technological infrastructure. Therefore, future studies might usefully employ other variables, which could affect internet financial reporting and disclosure in Bangladesh.

The result of the study will provide beneficial insights for legislators, accounting professionals and researchers to assess the current status of corporate internet reporting in Bangladesh and the characteristics of the companies that are, and that are not, satisfying national and international investors' demand for online information. In macro level, it also helps regulators to assess the necessity of developing a framework and guidelines for corporate internet reporting which will reduce the information asymmetry and increase investors' confidence.

**References**

Abdel-Fattah, T. M. H. (2008).Voluntary Disclosure Practices in Emerging Capital Markets: The Case of Egypt. Un published doctoral thesis, Durham University, Durham.

Abdelsalam, O.H., Bryant, S.M. and Donna, L. S. (2007). An Examination Compreh - ensiveness of Corporate Internet Reporting Provided by London-Listed Companies, Journal of International Accounting Research, 6(2), 1-33.

Abd El Salam, O.H. (1999). The introduction and application of international accounting standards to accounting disclosure regulations of a capital market in developing country: the case of Egypt. PhD thesis, Heriot-Watt University, Edinburgh.

Abdelsalam, O. H., and Donna, L. S. (2007).Corporate governance and the timeliness of corporate internet reporting by UK listed companies *Journal of International Accounting. Auditing and Taxation*, *16*(2), 111-130.

Abdullah, A., Stephen, B. and Carmen, J. (2011). Cultural factors in workforce management: the case of multinational companies operating in Bangladesh. *International Review of Business Research Papers*, *7*(2), 196-211.

Adams, C., Hill, W. and Roberts, C. (1998). Corporate social reporting practices in Western Europe: legitimizing corporate behavior? *British Accounting Review*, 30(1): 1-21.

Adina, P., and Pares, I. (2008).Aspects regarding corporate mandatory and voluntary disclosure. *Annals of the University of Oradea: Economic Science*, *3*(1), 1407-1411.

Ahmed, K. (1996). Disclosure Policy Choice and Corporate Characteristics: A Study of Bangladesh. *Asia-Pacific Journal of Accounting*, 3(1), 183-203.

Ahmed, K. and Courtis, J. (1999). Associations between corporate characteristics and disclosure levels in annual reports: A meta-analysis.*The British Accounting Review,* 31(1), 35-61.

Ahmed, K. and Nicholls, D. (1994). The impact of non-financial company characteristics on mandatory disclosure compliance in developing countries: the case of Bangladesh. *International Journal of Accounting,* 29(1), 62-77.

Akhtaruddin, M. (2005). Corporate mandatory disclosure practices in Bangladesh.*The International Journal of Accounting*, 40, 399 422.

Aljifri, K. (2008). Annual report disclosure in a developing country: the case of UAE. *Advances in Accounting. Incorporating Advances in International Accounting*, 24: 93-100.

Ali, J.M., Ahmed, K. and Henry, D. (2004).Disclosure Compliance with National Accounting Standards by Listed Companies in South Asia. *Accounting and Business Research,* 34(3), 183-199.

Ali Khan, M.N.A. and Ismail, N.A. (2010).A Study on the Index of Internet Financial Reporting. International Journal of Postgraduate Business.

Alali, F., and Romero, S. (2012). The use of the Internet for corporate reporting in the Mercosur (Southern common market): The Argentina case. *Advances in Accounting*, *28*(1), 157-167.

Al-Shammari, B. (2007).Determinants of internet financial reporting by listed companies on the Kuwait Stock Exchange. *Journal of International Business and Economics*, 7(1),1-16.

Álvarez, I. G., Isabel, M.G.S. and Luis, D.L.R. (2008). Voluntary and compulsory information disclosed online: The effect of industry concentration and other explanatory factors. *Online Information Review*, 32(5), 596-622.

Anderson, R. C., Mansi, S. A., and Reeb, D. M. (2004). Board characteristics, accounting report integrity, and the cost of debt. *Journal of accounting and economics*, *37*(3), 315-342.

Arcay, R.; and Vazquez, F. (2005).Corporate Characteristics, Governance Rules and the Extent of Voluntary Disclosure in Spain. *Advances in Accounting*, 21, 299-331.

Beasley, M. (1996).An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud.*The Accounting Review*, 71, 443-465.

Blackburn, V. (1994).The effectiveness of corporate control in the US corporations. Corporate Governance: An International Review. 2(4), 196202.

BOI Handbook (2007).Bangladesh Investment Handbook. 3rd Edition, Board of Investment, Dhaka, Bangladesh.

Bonson, E. and Thomas, E. (2002). A Survey on Voluntary Disclosure on the Internet: empirical Evidence from 300 European Union Companies. *The International Journal of Digital Accounting Research*, 2(1), 27-51.

Bonson, E. and Thomas, E. (2006). Digital reporting in Eastern European: An empirical study. International Journal of Accounting Information System, 7, 299-318.

Boubaker, S., Faten, L.And Mehdi, N. (2012).The determinants of web-based corporate reporting in France. *Managerial Auditing Journal*, *27*(2), 126-155.

Bhuiyan, M. H. U., Pallab, K. B. and Suman, P. C.(2007). Corporate Internet Reporting Practice in Developing Economies:

Evidence from Bangladesh. Cost & Management.35(5).

Brennan, N. and Hourigan, D. (1999).Corporate Reporting on the Internet by Irish Companies. *Irish Accounting Review*, Vol. 7, No. 1, 37-68.

Craven , B. M. & Marston, C. L. (1999).Social and environmental reporting on the internet by leading UK companies. European Accounting Review 8(2): 321-323.

Chen, C. and Jaggi, B. (2000).Association between Independent Non-Executive Directors. Family Control and Financial Disclosures in Hong Kong. *Journal of Accounting and Public Policy*, 19, 285-310.

Cheng, E.C.M. and Courtenay, S.M. (2006).Board Composition, Regulatory Regime and Voluntary Disclosure. *The International Journal of Accounting*, 41(3), 262-289.

Chow, C.W. and Wong-Boren, A. (1987).Voluntary disclosure by Mexican corporations. The Accounting Review 62(3):533-541.

Claessens, S., and Yurtoglu, B. B. (2013).Corporate governance in emerging markets: A survey. *Emerging markets review*, *15*, 1-33.

Cooke, T.E. (1989).Disclosure in the corporate annual reports of Swedish companies.*Accounting and Business Research,* 19(74): pp. 1l3-124.

Cooke, T.E. (1991).An assessment of voluntary disclosure in annual reports in Japanese corporations. *International Journal of Accounting,* 26, 174-189.

Cooke, T.E. (1992).The impact of size, stock market listing and industry type on disclosure in the annual reports of Japanese corporations. *Accounting and Business Research,* 22(87), 229-237.

Das, S., Dixon, R. and Michael, A. (2015). Corporate Mandatory Reporting: A longitudinal Investigation of Listed Companies in Bangladesh. Global Review of Accounting and Finance, 6,(1), 64-85.

Debreceny, R., Gray, G.L. and Rahman, A. (2002).The determinants of internet financial reporting. Journal of Accounting and Public Policy, 21( 4-5), 371-394.

Debreceny, R. and Rahman, A. (2005).Firm-specific determinants of continuous corporate disclosure. The International Journal of Accounting, 40, 249-78.

Deegan, C. (2010).*Financial Accounting Theory. 3rd edition,* Australia: McGraw-Hill.

Deller, D., Stubenrath, M. and Weber, C. (1999).A survey on the Internet for investor relations in the USA, UK and Germany. *The European Accounting Review*, 8(2), 351-346.

Desoky, A. M. (2009).Company characteristics as determinants of internet financial reporting in emerging markets: the case of Egypt. *Research in Accounting in emerging Economies*, *9*, 31-71.

Dixon, R., Guariglia, A., & Vijayakumaran, R. (2015). Managerial ownership, corporate governance and firms' exporting decisions: Evidence from Chinese listed companies. The European Journal of Finance, (ahead-of-print), 1-39:

Dutta, P. and Bose, S. (2007). Web based Corporate Reporting in Bangladesh: An Exploratory Study.*The Cost and Management*, 35(6).

Ettredge, M., Richardson, V.J., and Scholz, S. (2002).Dissemination of information for investors at corporate Web sites.

*Journal of Accounting and Public Policy*, 21, 357-369.

Ezat, A., and Ahmed, El-Masry, (2009). The impact of corporate governance on the timeliness of corporate Internet reporting by Egyptian listed companies. Managerial Finance, 34(12), 848867.

Firth, M. (1980). Raising Finance and Firms Corporate Reporting Policies. ABACUS, 16 (2), 100-115.

Gandía, J. L. (2008).Determinants of internet-based corporate governance disclosure by Spanish listed companies.*Online Information Review*, 32(6), 791 817.

Gao, L. and Kling, G. (2012).The impact of corporate governance and external audit on compliance to mandatory disclosure requirement in China. *Journal of International Accounting, Auditing and Taxation*, 2 (1), 17-31.

Garg, M. C., and Divya, V. G. (2010).Web-Based Corporate Reporting Practices in India. *The IUP Journal of Accounting Research & Audit Practices*,*9*(3), 7-19.

Ghazali, N., and Weetman, P. (2006). Perpetuating Traditional Influences: Voluntary Disclosure in Malaysia following the economic crisis. *Journal of International Accounting, Auditing and Taxation*, 15, 226-248.

Gibbins M., Richardson A.J., Waterhouse J. (1992). The management of financial disclosure: Theory and perspectives. Research monograph no. 20, Vancouver: The Canadian certified general accountants' research foundation.

Gowthorpe, C. and O. Amat (1999).External reporting of accounting and financial information via the Internet in Spain.*The European Accounting Review,*8(2), 365-371.

Gul, F. A., and Leung, S. (2004).Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, 23, 351379.

Hasan, T., Waresul, K. and Shakil, Q. (2008). Regulatory change and the quality of compliance to mandatory disclosure requirements: Evidence from Bangladesh. *Research in Accounting Regulation* 20, 193-203.

Haniffa, R. M., and Cooke, T. E. (2002).Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38(3), 317348.

Hedlin, P. (1999).The Internet as a vehicle for investor relations: the Swedish case. *The European Accounting Review,*8(2), 373-381.

Ho, S. S. M., and Wong, K. S. (2001).A study of corporate disclosure practices and effectiveness in Hong Kong. *Journal of International Financial Management and Accounting*, 12(1), 75101.

Hossain, M., L. M. Tan, and M. Adams (1994). Voluntary Disclosure in an Emerging Capital Market: Some Empirical Evidence from Companies Listed on the Kuala Lumpur Stock Exchange. *The International Journal of Accounting*, 29, 334-351.

Hussey, R. and M. Sowinska (1999).The risks of financial reports on the Internet. *Accounting and Business*, March 18-19.

Huther, J. (1997). An empirical test of the effect of board size on firm efficiency. *Economics Letters,* 54, 259-64.

Inchausti, A. (1997).The influence of company characteristics and accounting regulation on information disclosed by Spanish firms. European Accounting Review, 6(1): 45- 68.

Ismail.T.H.(2002). An Empirical Investigation of Factors Influencing Voluntary Disclosure of Financial Information on the Internet in the GCC Countries. Working Paper Series, Social Sciences Research Network

Islam, M. S., Chowdhury, A. Al-Hossienie., and Chowdhury, A. Al- Baki. (2010). Corporate Governance and Voluntary Information Disclosure: A Study of Listed Financial Companies in Bangladesh. *AIUB Journal of Business and Economics*, *9*(1), 81-96.

John, K. and Senbet, L.W. (1998).Corporate governance and board effectiveness. *Journal of Banking and Finance*, 22, 371-404.

Karim, A. K. M. W. and Jamal U. A. (2005). Determinants of IAS disclosure compliance in emerging economies: Evidence from exchange-listed companies in Bangladesh. Working Paper series, Victoria University of Wellington, PO Box 600, Wellington, New Zealand.

Khan, M.H., A.T. Muzaffar, and A.K. Namzul, (2009).*An Enquiry into the Practices of Corporate Financial Reporting on Internet in Bangladesh*. AIUB Journal of Business and Economics, 8( 2), 165-188.

Khlifi, Foued (2007).Determinants of Internet Financial Reporting. Association for Business Communication Annual Meeting, Washington, D.C., USA.

Klein, A. (2002). Economic Determinants of Audit Committee Independence. *The Accounting Review*, 77, (2), 415-433.

Koreto, R. J. (1997). When the Bottom Line is Online. *Journal of Accountancy,*183, 6365.

Laswad, F., Richard, F. and Peter, O. (2005).Determinants of voluntary Internet financial reporting by local government authorities. *Journal of Accounting and Public Policy*, *24*(2), 101-121.

Lymer, A. (1997).Corporate Reporting via the Internet A Survey of Current Usage in the UK and Discussion of Issues. Paper presented at the First Financial Reporting and Business Communication Conference, Cardiff, 1997.

Lymer, A. and Anders.T. (1997). Corporate Reporting and the Internet- A Survey and Commentary on the Use of the WWW in Corporate Reporting in the UK and Finland. Paper presented at the European Accounting Conference (EAA), Graz, April.

Malone, D. Fries, C. and Jones,T. (1993).An Empirical Investigation of the Extent of Corporate Financial Disclosure in the Oil and Gas Industry. Journal of Accounting, Auditing & Finance, 8 (3), 249-275.

Marston, C. (2003). Financial reporting on the internet by leading Japanese companies. Corporate Communication: An International Journal. 8(1), 23-34.

Marston, C. and Annika, P. (2004).Corporate reporting on the Internet by German companies. *International Journal of Accounting Information System*, 5, 285-311.

Momany, M.T., and AL-Shorman, S. (2006). Web-based Voluntary Financial Reporting of Jordanian Companies. International Review of Business Research Papers, 2(2), 127-139.

Myers, S. C. (1977).Determinants of corporate borrowing. *Journal of financial economics*, *5*(2), 147-175.

Mendes-da-Silva, W., and Theodore, E. C. (2004).Determinants of voluntary disclosure of financial information on the internet by brazilian Firms. *Available at SSRN 638082*.

Mohamed, E.K. and Oyelere, P. (2009).A survey of internet financial reporting in Bahrain. *Studies in Business and Economics*, 14(1), 31-49.

Mohamed, E.K., Oyelere, P. and Al-Busaidi, M. (2009).A survey of internet financial reporting in Oman. *International Journal of Emerging Markets*, 4(1), 56-71.

Momany, M.T. and AL-Shorman, S. (2006).Web-based Voluntary Financial Reporting of Jordanian Companies. *International Review of Business Research Papers*, 2(2), 127-139.

Myners, P. (1998). Improving Performance Reporting to the Market in Carey, A. and Sancto, J. (eds.), *Performance Measurement in the Digital Age Adding Value to Corporate Reporting*, London: The Institute of Chartered Accountants in England and Wales, 2, 27- 31.

Nandi, S., and Ghosh, S. (2012). Corporate governance attributes, firm characteristics and the level of corporate disclosure: Evidence from the Indian listed firms. *Decision Science Letters*, 2(1), 45-58.

Naser, K., Alkhatib, K. and Karbhari, Y. (2002). Empirical evidence on the depth of corporate information disclosure in developing countries: the case of Jordan. *International Journal of Commerce & Management*, 12, 122-134.

Ng, P.P.H. and Tai, B.Y.K., (1994). An empirical examination of the determinants of audit delay in Hong Kong.*British Accounting Review*, 26(1), 43−59.

Nurunnabi.M., and Monirul. A. H., (2012).The voluntary disclosure of internet financial reporting (IFR) in an emerging economy: a case of digital Bangladesh.*Journal of Asia Business Studies*, 6(1), 17 42.

Owusu-Ansah, S. (1998). The Impact of Corporate Attributes on the Extent of Mandatory Disclosure and Reporting by Listed Companies in Zimbabwe. *The International Journal of Accounting*, 33, 605-631.

Oyeler, P. Laswad, F. and Fisher, R. (2003).Determinants of Internet Financial Reporting by New Zealand Companies. *Journal of International Financial Management and Accounting*. Vol. 14(1), pp. 37-63.

Patton, J., and I. Zelenka (1997).An Empirical Analysis of the Determinants of the Extent of Disclosure in Annual Reports of Joint Stock Companies in the Czech Republic. *The European Accounting Review*, 6, pp. 605-626.

Pervan, I. (2006). Voluntary Financial Reporting on the Internet- Analysis of the Practice of Stock- Market listed Croatian and Slovene Joint Stock Companies. *Financial Theory and Practice*, 30(1), 1-27.

Petravick, S., & Gillett, J. (1996).Financial reporting on the World Wide Web. Management Accounting, 26-29.

Puspitaningrum, D., and Sari, A. (2012).Corporate Governance Mechanism and the Level of Internet Financial Reporting: Evidence from Indonesian Companies. *Procedia Economics and Finance*, *2*, 157-166.

Raffournier, B. (1995).The determinants of voluntary financial disclosure by Swiss Listed companies. European Accounting Review 4(2), 261-280.

Sakarneh, K. A. H. I. (2011). A study on the internet financial reporting disclosure: a case of companies listed at Amman Stock Exchange. Jordan Unpublished thesis UUM Graduate School of Business.

Schipper, K. (1981).Discussion of Voluntary corporate Disclosure. The Case of Interim Reporting. *Journal of Accounting Research*, Supplement, 19, 85-88.

Singh, M., Mathur, I. and Gleason, K.C. (2004). Governance and performance implications of diversification strategies: evidence from large US firms. *Financial Review*, 39, 489-526.

Stevenson D. (2008).The Seven Hottest Emerging Markets. Investor Chronicle Report.

Trabelsi, S. and Labelle, R. (2006). Evidence that corporate websites is a part of the firm's overall disclosure package. Working paper, Brock University, St Catherines: http:// accounting. uwaterloo.ca/ seminars/old_papers/TrabelsiLabelleWP-may2-2006.pdf

UNPF (2009). Reproductive Health and Rights is Fundamental for Sound Economic Development and Poverty Alleviation. United Nations Population Fund, 2009.

Vijayakumaran, R. (2015). Capital structure decisions, agency conflict and corporate performance: Evidence from Sri Lankan listed manufacturing companies. International Journal of Accounting and Business Finance, 1(1), 1-14.

Wallace, R. S. O. and K. Naser (1995). Firm Specific Determinants of the Comprehensiveness of Mandatory Disclosure in the Annual Corporate Reports of Firms Listed on the Stock Exchange of Hong Kong. *Journal of Accounting and Public Policy*, 14, 311-368.

Wallace, R. S. O., K. Naser and A. Mora (1994). The Relationship between the Comprehensiveness of Corporate Annual Reports and Firm Characteristics in Spain. *Accounting and Business Research*, 25, 41-53.

Xiao, J.Z., Yang, H. and Chow, C.W. (2004).The determinants and characteristics of voluntary Internet-based disclosures by listed Chinese companies. *Journal of Accounting and Public Policy,* 23(3), 191-225.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40, 185-211.

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