

CORPORATE INTELLECTUAL CAPITAL DISCLOSURE IN A NON-MANDATORY DISCLOSURE REGIME

Afzalur Rashid*

**School of Accounting, Economics and Finance
University of Southern Queensland**

* School of Accounting, Economics and Finance, University of Southern Queensland, Toowoomba, QLD 4350, Australia, **E mail:** afzalur_rashid@yahoo.com, **web:** www.usq.edu.au

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ABSTRACT

Purpose: The purpose of this paper is to present an overview of corporate discretionary intellectual capital reporting in Bangladesh.

Design/Methodology/Approach: From a sample of 136 listed companies with Dhaka Stock Exchange and by using the content analysis with codification of data, it examines the extent of intellectual capital reporting.

Findings: It is found that company's intellectual capital reporting practices is very limited and there is an increasing trend of such reporting over the years. Most notable disclosure attribute was the human capital reporting. It is noticed that unlike companies in many developed countries, companies in Bangladesh failed to disclose many areas of intellectual capital reporting.

Practical Implications: Although there is an increasing trend of firms' voluntary disclosure, the disclosure is made irrespective of the IC intensive industries.

Originality/ Value: The findings provide an insight and build knowledge on corporate intellectual capital reporting practices in a less developed country.

Keywords: Bangladesh, Content Analysis, Intellectual Capital, Human Capital, Knowledge.

Introduction

Since the industrial revolution, the key success (or competitive advantage) of a firm have been widely perceived to be in tangible assets, such as land, building, plant, and machinery (Stittle, 2004). However, such view on competitive advantage is challenged arguing "tangible assets no longer provide sustainable competitive advantage" (Perez and de Pablos, 2003, p 83). The drivers for long-term value creation in modern competitive environment and potential for success of a company (creating competitive advantage) lies more increasingly in effective management of intangibles or intellectual capital rather than in tangible or financial assets (Daley, 2001; Chen and Lin, 2004; Pedrini, 2007; Striukova *et al*, 2008; Abhayawansa and Abeysekera, 2009). The value created by intellectual capital prevailed over that created by tangible assets (Chen and Lin, 2004).

Accordingly, there is an increasing academic attention on corporate intellectual capital reporting in last two decades (Petty and Guthrie, 2000; Boedker *et al*, 2005; Abhayawansa and Abeysekera, 2009). Traditionally corporations make bottom line reporting (periodic disclosure of corporate financial performance and financial position) assuming the business is solely responsible to its shareholders. While some knowledge-based resources, such as patents, trademarks and brands, may be incorporated in financial reports through mandatory accounting regulations¹ (Striukova *et al*, 2008; Abhayawansa and Abeysekera, 2009), due to such shift of emphasis on value creation process, traditional financial reporting systems cannot fully evaluate and recognize many intangible resources (Pedrini, 2007; Abhayawansa and Abeysekera, 2009) and there is no provision of intellectual capital reporting or in short IC within the intangible assets in financial reporting system (Chen and Lin, 2004; Abeysekera, 2008a). Deficiency in intellectual capital disclosure by financial reporting systems may lead to an "unexplained" gap between the fair price and the reported value of the firm (Abeysekera, 2008a). It may finally lead to poor economic decision making by the investors and other stakeholders and such decision relevance may be challenged (Chen and Lin, 2004; Abeysekera, 2008a; Abhayawansa and Abeysekera, 2009). Further, following the mega corporate collapses in early 2000s, in particular, the collapses of Enron, WorldCom, HIH Insurance and Parmalat, has drawn public attention on responsible company behaviour (Pedrini, 2007) and providing relevant information to the investors (Clarke and Dean, 2007) and other stakeholders.

Due to such increased attention on company operations companies prepare triple bottom line reporting, such as Environmental and Social Reports and Sustainability Reports as part of their commitment to the stakeholders (Pedrini, 2007). Corporate responsibility reporting first took place following the employee reporting (which is an attribute of intellectual capital reporting) about 40 years back, and then it moved on to social reporting, environmental reporting (or triple bottom line reporting) and now what is known as sustainability reporting (Buhr, 2007). However, corporate responsibility (sustainability reporting or triple bottom line reporting) and intellectual reporting are two distinct phenomena even though recently convergence trends have been noted between these two reporting tools (Pedrini, 2007).

There are host of studies on Corporate Intellectual Capital reporting in the context of developed economies (or knowledge based economies) and moderately developed economies, examining the various aspects of intellectual capital reporting. Ironically, such studies in the context of less developed and emerging economies are very sparse. The IC study of firms in developing countries has become increasingly important because of increasing competition of firms in developed countries due to rapid globalization, lower transactions costs, and more freely available capital (Abeysekera and Guthrie, 2005; Abeysekera, 2008b). Further, it would be

inappropriate to generalize the study results on IC disclosure of developed economies to emerging economies as the firms in the developed economies are either high tech companies or knowledge intensive or a combination of both, whereas firms in developing countries are less knowledge intensive (rather many firms of these countries are labour intensive²).

Given the increased interest on corporate intellectual capital reporting in the context of less developed and emerging economies and considering Bangladesh as a less developing country, this study aims at in-dept look at the extent of intellectual capital reporting by the listed companies in Bangladesh. This is done by analysing the listed companies' annual reports for a number of different sectors and for different years. The objective of this study is twofold. Firstly, to explore the types and extent of disclosure made by the firms and secondly, the trend of disclosure over the four year period.

Earlier studies on triple bottom line reporting in the context of Bangladesh mainly tackled the corporate social disclosure or sustainability reporting (such as, Imam, 1999, 2000; Belal, 1999; 2000; 2001; 2008, 2009; Belal and Owen, 2007; Islam and Deegan, 2008; Rashid and Lodh, 2008; Azim *et al*, 2009; Sobhani *et al*, 2009), even though human capital disclosures were dominant in many of these studies. For example Belal (2001) reports that 97% of the companies disclose at least one item related to human capital disclosure; Imam (2000) and Sobhani *et al* (2009) reports that 100% of the companies disclose at least one item related to human capital disclosure which is an attribute of intellectual capital. Despite this fact, there is a dearth of studies on corporate intellectual capital reporting in the context of Bangladesh.

This study may contribute to the literature and build knowledge on corporate intellectual capital reporting in the context of less developed and emerging economies. The remainder of the study is organized as follows: The section two discusses the Intellectual Capital; section three discusses the Corporate Intellectual Capital Reporting Context in Bangladesh; section four presents the review of literature; section five presents the research method, section six presents the empirical results; the final section makes the discussion and draws a conclusion.

Intellectual Capital

The concept of intellectual capital emerged following the 'resource based view theory' (such as, Barney, 1991; Peteraf, 1993) and 'knowledge based view theory' arguing essentially that success of a company is attributable to its intangible assets. It is defined as, the intellectual, or knowledge-based, resources of an organization (Striukova *et al*, 2008). Itami (1987) defined intellectual capital, as intangible assets which include particular technology, customer information, brand name, reputation and corporate culture that are invaluable to a firm's competitive power. It represents a subset of assets not recognized or 'accounted for' in financial statement (Abeysekera and Guthrie, 2005; Abeysekera, 2008a). Human capital (HC) is one of the dimensions of intellectual capital (IC) (Pedrini, 2007) which is the combination of factors possessed by individuals and the collective workforce of a firm and encompasses knowledge, skills, and technical ability (Abeysekera, 2008b). Chen and Lin (2004, p 119) define "human capital investment as input made by company in talents and technology that benefit competitive advantages".

There are many arguments in favour of disclosing intellectual capital. Disclosure of intellectual capital enhances the market value of firms (Abeysekera, 2008c; Abhayawansa and Abeysekera, 2009); it also helps to make capital market more efficient and by reducing information asymmetry between insiders and outsiders and even may contribute to better

corporate governance (Abeysekera, 2008a). Non-disclosing intellectual capital detracts from quality of information provide in the balance sheet (Lev, 2001).

The Corporate Intellectual Capital Reporting Context in Bangladesh

Bangladesh is a newly industrialized or emerging economy in Asia. The population of Bangladesh during the year ended September 2009 was approximately 160 million, making it the eighth most populous nation in the world and one of the most densely populated, with more than 1100 people per square kilometre (Index of Economic Freedom, 2010). Due to availability of cheap labour there is cost effectiveness on product and Bangladesh became the attractive destinations for foreign investors (Azim *et al*, 2009). The adult literacy rate in Bangladesh is currently 53.5% (United Nations Development Program, 2009). Although there are many high tech firms, firms in Bangladesh in general are labour intensive³ and this mass population and cheap labour play a significant role in creation of wealth in Bangladesh.

Although Bangladesh is not a knowledge based economy, there are many driving forces, such as globalization, increased use of information technology and appearance of new media speeding up Bangladesh towards knowledge based economy. The concept of IC is absolutely a new concept in Bangladesh. As such there is no legislative guideline for IC disclosure in Bangladesh including the Companies Act 1994⁴. Bangladesh Accounting Standards 1 (BAS1) encourages the listed companies to make the disclosures of non-financial activities. Therefore, intellectual capital disclosure in Bangladesh is still voluntary. Management makes voluntary IC disclosure as long as there is a marginal benefit to be gained from reducing the information asymmetry in the market (Abhayawansa and Abeysekera, 2009). Although some companies in Bangladesh make such disclosure, these are not in an organized format. Further, companies do not address the eco-justice issues like child labor, equal opportunity and poverty alleviation due to fear of bad publicity and counting the cost (Belal and Cooper, 2007).

There are some legal provisions on Intellectual Property in the context of Bangladesh. The earliest IP legislation was the Patents, Design and Trade Marks Act 1883. It was repealed following the Patents and Design Act 1911 and the Trade Marks Act 1940. However, there is no legislative guideline in regard to copyright in Bangladesh. Stock Exchange Listing Requirement also does not require the companies to make IC disclosure.

Review of Literature

Due to globalization, rapid technological innovation and competition there is a shift of focus from traditional tangibles to intangibles. Furthermore, breaking down of geographic barriers, decreasing transaction costs, and more freely available capital have made intellectual capital more valuable (Abeysekera and Guthrie, 2005; Abeysekera, 2008c). Pedrini (2007) described seven phenomena which led interest to the intellectual capital; these being (1) the development of legal protection for patents, (2) increased competition, (3) increased connection among the actors in the market, (4) interest in company finance, (5) acceleration of information technology, (6) more interest in the individual and (7) development of consultancy institutions and company activities and economic features of intellectual capital.

There are host of studies on intellectual capital reporting around the world. Most of these studies are in the context of developed economies with knowledge based resources; such as Guthrie and Petty (2000), Kong and Thomson (2006), Guthrie et al (2008), Sujana and Abeysekera (2008), Brügggen et al (2009), Woodcock and Whiting (2009) in the context of Australia; Bontis (2003), Ng (2006), Bontis and Serenko (2009) in the context of Canada; Petty

and Cuganesan (2005) in the context of Hong Kong; Brennan (2001) in the context of Ireland; Olsson (2001) in the context of Sweden; Stittle (2004), El-Bannany (2008), Striukova (2008); Zeghal and Maaloul (2010) in the context of United Kingdom; Whiting and Miller (2008), Schneider and Samkin (2008) in the context of New Zealand; Williams (2004), Wang (2008) in the context of United States. Further, there are some comparative studies, such as Warn (2005) comparing New Zealand and Fijian firms; Vandemaele *et al* (2005) comparing Netherlands, Sweden and the UK firms; Nazari *et al* (2009), comparing Canada and Middle East firms; Guthrie *et al* (2006) comparing Hong Kong and Australian firms; Vergauwen *et al* (2007) comparing British and Danish firms; Bozzolan *et al* (2006) comparing Italy and UK firms; Abeysekera (2007) comparing Australian and Sri Lankan firms; Abeysekera (2008a) comparing Singapore and Sri Lankan firms. However, such studies in the context of developing countries are very rare except some handful studies in the context of Sri Lanka (such as, Abeysekera and Guthrie, 2004, 2005; Abeysekera, 2008b), Dulleck and Foster (2008) in the context of 55 developing countries; Ordonez de Pablos (2005) in the context of India; Mohiuddin *et al* (2006) and Ali *et al* (2008) in the context of Bangladesh. Therefore, there is a literature gap and this study provides an opportunity to fill this gap.

Research Method

Sample Selection

Traditionally company annual report is the only source of company's financial and non financial information, such as intellectual capital disclosure. Companies in Bangladesh are not exception to this. Companies in Bangladesh make most of the IC disclosure in the form of qualitative statements. Such disclosures are mainly found in the director's report, chairperson's address to the shareholders and other stakeholders and notes to the financial statement. No other form of disclosures, such as brochures, press releases, reporting on the web pages and separate reports are found in the Bangladesh corporate sector.

The sample companies in this study were selected from the listed companies on the Dhaka Stock Exchange. The data is collected from the annual reports of these selected companies for the financial years 2005-2009. The objective of this study is to explore the extent of discretionary IC disclosure. Therefore, the sample consists of only non-financial firms and excludes the financial industry as this industry is highly knowledge intensive. There were 282 listed companies as of 30 June, 2009. The companies which are not existed for entire 5 years were excluded. The companies which annual reports were not available for entire 5 year period were also excluded. After complying with all of the above considerations, 136 companies were selected and a total of 680 observations were made for the sample companies. The sample selection procedure is shown in table 1

Please insert table 1 about here

The digitalized soft and hard copies of companies' annual reports were collected from the library of the Dhaka Stock Exchange. A field trip was made in the year 2007, 2008 and 2009 to collect data. The sample consists of variety of industries: Cement, Ceramic, Engineering, Food and Allied, Fuel and Power, Pharmaceuticals and Chemicals, Service and Real Estate, Tannery Industries, Textile and Miscellaneous.

Defining IC Categories

Over the past years attempts was made to find better means of measurement of IC. Consistent with prior studies (such as, Abeysekera and Guthrie, 2004, 2005; Guthrie *et al*, 2004; Striukova *et al*, 2008; Abeysekera, 2008a), this study defines IC in three broad categories such as:

- (1) Internal (or structural) capital
- (2) External (or relational) capital and
- (3) Human capital.

Internal capital attributes includes the intellectual properties, organizational processes and organizational culture (Ross *et al*, 1997; Guthrie, 2001; Abeysekera and Guthrie, 2004; Striukova *et al*, 2008; Abeysekera, 2008a). External capital can be proprietary, such as brand, licence or favourable business contract or non-proprietary, such as relationship with the customer or other stakeholders (Abeysekera, 2008a). Abeysekera (2008a) argues that non-proprietary attributes creates economic value to the firm and should be measured and reported in the balance sheet. Human capital includes the employee education, knowledge, skills, training, expertise and experiences (Abeysekera and Guthrie, 2004; Striukova *et al*, 2008; Abeysekera, 2008a). Many of the human capital attributes in this study were drawn from Guthrie (2001), Abeysekera and Guthrie (2004), Striukova *et al* (2008), Abeysekera (2008a). Further, following Pedrini (2007), this study draws many indicators from 'labour practices and decent work' in the GRI guidelines (Global Reporting Initiative, 2006) as human capital attributes. The indicator of IC disclosure is shown in table 1.

Measure of IC Disclosure

This study uses the content analysis as it is the most common method of measuring a corporate intellectual capital reporting in annual reports (Yamagami and Kokubu, 1991; Abeysekera, 2008a). Content analysis is a method of codifying the text (or content) of a piece of writing into various groups (or categories) depending on selected criteria (Weber, 1985; Guthrie and Petty, 2000; Abeysekera, 2008a). Following coding, quantitative scales are derived to permit further analysis (Milne and Adler, 1999). Content analysis relies on the assumption that the extent of disclosure can be taken as some indication of the importance of an issue to the reporting entity (Krippendorff, 1980). Content analysis requires objectivity and the specification of variables so that any item can be judged consistently as falling or not falling into a particular category (Guthrie and Mathews, 1985).

Consistent with earlier studies on Corporate Intellectual Capital Reporting (such as, Abeysekera, 2008a; Striukova, 2008), a checklist as shown in table 1 is constructed to assess the extent of intellectual capital reporting in annual reports. Also, a dichotomous procedure was applied whereby a company is awarded a 1 if an item included in the checklist is disclosed (irrespective of the length of a sentence), otherwise a 0 is awarded. As there is no IC disclosure requirement in the context of Bangladesh, the IC disclosure made by the companies represents the discretionary IC disclosure indicating the level of management commitment towards IC disclosure (Abeysekera, 2008a). The intellectual capital disclosure index was derived by computing the ratio of actual scores awarded to the maximum score attainable by that company (Haniffa and Cooke, 2005; Ghazali, 2007). More specifically, the disclosure index was calculated in three areas of intellectual capital reporting, such as internal capital, external capital

and human capital. The overall intellectual capital disclosure index was calculated by using the following equation:

$$\text{ICDI}_i \text{ Index} = \frac{\sum_{j=1}^{n_j} X_{ij}}{n_j}$$

Where,

ICDI_i index = Intellectual capital disclosure index for *i*th firm

n_i = Maximum number of attributes expected for *i*th firm, which may not exceed 33

X_{ij} = 1, if *j*th items are disclosed for firm *i*, otherwise 0

Results

The results of intellectual capital disclosure index based on 33 attributes are presented in table 2, 3 and 4. Table 2 presents the mean disclosure index in the sample firms. It is revealed that many attributes of IC is absent within this disclosure (table 2). From table 2, it is noticed that employee thanked is the most disclosed sub-category of intellectual capital reporting. Financial relation, employee number and focus on customer are also notably disclosed sub-category. It can be concluded that firms in general recognize the contribution made by the workers in creation of value. Firms also keep a close relation with financial institution. This is very usual if most of the firms' tangible resources are financed by banks. Firms failed to make any disclosure in the areas of patent, copyrights, trademarks, corporate culture, research and development, know-how, vocational qualifications, entrepreneurial spirit, union activity, employee involvement in the community. Similar studies in the context of Australia, a developed country, reveals that employee entrepreneurial spirit is the most frequently disclosed items (Guthrie *et al*, 1999; Guthrie and Petty, 2000). However, this is surprising as similar trend is noted in the context of other developing countries, such as Sri Lanka (Abeysekera and Guthrie, 2004).

Please insert table 2 about here

Table 3 presents the overall IC disclosure index in the sample firms. It is noticed that there is an increasing trend in IC disclosure in every aspect of disclosure and human capital is most notably disclosed (table 2).

Please insert table 3 about here

Table 4 presents the industry wise disclosure of intellectual capital and the rank of such disclosure. While it is argued that IC intensive industries will engage more in IC disclosure than industries rely on tangible physical assets (Woodcock and Whiting, 2009), surprisingly, it is noticed that many IC intensive industries (for example IT sector) ranks almost lowest and non-IC intensive industries (for example Cement) ranked first.

Please insert table 4 about here

One possible explanation is that there is a less development of IC intensive industries in Bangladesh which is also evident from lower IT firms in the sample. Further, many large firms and many multi-national corporations (MNCs), which may be in non-IC intensive industries, are probably making more disclosure. In the previous studies on non-financial disclosure in the context of Bangladesh reveal that large firms make more disclosure (Imam, 2000). This is also consistent with the previous studies that the forms of disclosure vary across firms and sectors (Striukova *et al*, 2008).

Discussions and Conclusion

This paper presents an overview of corporate discretionary intellectual capital reporting in Bangladesh. It is noticed that there is an increasing trend in IC disclosure in every aspect of disclosure and human capital is most notably disclosed. The industry wise disclosure of intellectual capital reveals that many IC intensive sectors lagging behind (ranked lower) to make such disclosure. Where in many developed countries, external capital is the most disclosed category in annual report with exception to New Zealand (Abeysekera 2008a; Woodcock and Whiting, 2009), the disclosure of external capital ranks second. In this study human capital is most disclosed attribute which is consistent with many developed countries which place the greatest emphasis on the disclosure of human resources (Gray *et al*, 2001). However, unlike many developed countries, the companies in Bangladesh failed to disclose many areas, such as equal opportunities, employee share ownership, and including the sensitive areas, such as trade union activities, redundancy schemes, and costs (Adams and Harte, 1998; Adams *et al*, 1998). The companies in Bangladesh also failed to disclose many important attributes of intellectual capital reporting, such as trade mark and brand.

While Bangladesh is working to improve its corporate governance best practices, there is a little pressure on firms to disclose their non-financial activities. Being the emerging sector, IT sector ranked almost lowest in exposing IC disclosure, which means knowledge based firms failed to disclose their employees' talent. Nevertheless, companies in Bangladesh need to expose their hidden and most important assets: the talents of their employees. Companies should also do this to gain competitive advantage, such as to retain talented people, to access funds and finally to enhance the market value of the firm.

This study may be subject to some limitations. Firstly, this study is purposefully confined to the disclosure attributes within the designated areas and many attributes, such as disability policies, pay awards are ignored. Secondly, this study used the content analysis method. Content analysis method is heavily reliant on the integrity of the coder or researcher (Abhayawansa and Abeysekera, 2009). Although integrity is beyond the question and a high level of cautious is maintained during the coding process, a major limitation of this study is the subjectivity or judgement associated in the coding process, which may influence this study. Further study may be carried out examining the factors of corporate governance (mechanisms) influencing the intellectual capital disclosure practices in the context of Bangladesh. Further study may be carried out comparing the extent of disclosure in Bangladesh, a developing economy, with that of developed economies.

Notes:

¹ For example 'IAS 38 Accounting for Intangibles'.

² In this context labour meant the process workers who may not have substantial knowledge and/or technical expertise.

³ The current taxation legislation (Income Tax Ordinance 1984) provides many incentives to the labour intensive firms.

⁴ This is the law of the 'Ministry of Commerce' and only law for corporate governance in Bangladesh.

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List of tables

Table 1: Sample selection procedures

	2005	2006	2007	2008	2009
Number of listed companies	239	256	259	271	282
Newly listed/not listed for the entire period	0	17	20	32	43
Balance of companies	239	239	239	239	239
Financial Services Company	65	65	65	65	65
Balance (non-financial companies)	174	174	174	174	174
Annual reports not available for entire 5 year	38	38	38	38	38
Number of companies selected	136	136	136	136	136

Table 2: Intellectual capital disclosure by the listed companies

Internal Capital Disclosure Attributes	Mean disclosure index
<i>Intellectual properties</i>	
Patents	0
Copyrights	0
Trade marks	0
<i>Business processes and organizational culture</i>	
Management philosophy	0.07
Corporate culture	0
Management processes	0.15
Information systems	0.02
Networking systems	0.02
Financial relations	0.65
External Capital Disclosure Attributes	
<i>Proprietary</i>	
Brand	0.04
Favourable contract/ Licensing agreements/Franchising agreements	0
Business collaborations	0.02
Marketing network/distribution channels	0.25
Research and development	0
<i>Non-proprietary (relational)</i>	
Focus on customer	0.53
Customer satisfaction and loyalty (customer award/rating received)	0.03
Company name and reputation (including product quality and safety)	0.05
Relationship with the investors	0.67
Human Capital Disclosure Attributes	
<i>Employee measurement</i>	
Number of employees	0.29
<i>Training and development</i>	
Know-how	0
Education	0.05
Training	0.18

Vocational qualifications	0
Work related knowledge/ competencies	0.08
Entrepreneurial spirit, innovativeness, proactive and reactive abilities, changeability	0
Employee relations	
Union activity/ collective bargaining agreements	0
Employee involvement in the community	0
Employee thanked	0.74
Employee welfare	
Occupational health and safety	0.05
Employee profit sharing	0.07
Employee share scheme	0.01
Employee any other benefit (provident fund, gratuity and group insurance scheme)	0.60
Equity	
Diversity and Opportunity (such as, employment irrespective of disability, race and gender and ethnic group)	0.01

Table 3: Overall IC disclosure by the listed companies

IC Category	Mean disclosure index					
	2004	2005	2006	2007	2008	Overall
Internal Capital	0.72	0.73	0.82	1.12	1.13	0.90
External Capital	1.48	1.46	1.53	1.74	1.73	1.59
Human Capital	1.96	1.97	2.07	2.19	2.19	2.08
Overall	4.16	4.15	4.41	5.04	5.04	4.56

Table 4: Sector wise total IC disclosure by the listed companies

Sector	Number of non-financial companies listed with DSE*	Number of companies in the sample	Mean Disclosure Index	Rank
Cement	10	7	5.83	1
Ceramics	4	3	4.53	8
Engineering	23	18	5.77	2
Food and Allied	32	24	3.67	10
Fuel and Power	10	3	4.07	9
IT Sector	6	4	2.95	12
Jute	3	3	5.53	3
Paper and Printing	5	5	2.87	13
Pharmaceuticals and Chemicals	22	20	4.80	6
Service and Real Estate	8	4	4.90	5
Tannery Industries	6	6	3.63	11
Textile	34	32	4.66	7
Miscellaneous	11	7	4.94	4
Total	174	136	4.56	

* Source: Dhaka Stock Exchange and consistent with the sample in table 1