

Intellectual Capital Disclosure: A Study on Banking and IT Companies of Bangladesh

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Abstract

The purpose of the paper is to examine the voluntary disclosure practices of information with regard to Intellectual Capital (IC) by bank and IT (Information Technology and Telecom) companies of Bangladesh. First, a survey of literature was performed to shortlist the related IC terminology and this research adopts the framework for IC items developed by Bontis (2003). Then disclosure of these terms is examined within the annual reports of the financial year 2011-12 of the selected listed companies. It is revealed that, only 13 terms, out of 39 terms, are disclosed and average IC disclosure by companies in both sectors remains low. Banking sector has performed better than IT sector in terms of number of companies reporting IC terms and average number of IC terms disclosed by a bank is found higher than that of an IT company. But statistical result shows that there is no significant difference in mean number of companies disclosing an item of IC and average number of IC terms disclosed by banking and IT companies at 5 percent level of significant.

Keywords: Intellectual Capital, Bangladesh, Content Analysis.

Introduction

Emergence of knowledge based society and economy has shifted organizational value driver from tangible assets to intangibles. In the knowledge-based economy or knowledge economy (KE), the main economic resources are no longer physical capital, natural resources and labor, but knowledge itself (Drucker, 1992). Consequently, the concept and interest in intellectual capital (IC) has come from the wide recognition that knowledge is important to organisations and that technology has allowed for greater dissemination of knowledge (Meritum Project, 2002; Unerman et al., 2007). With the growing awareness of the importance of IC, many managers attempt to disclose the intellectual capital of their companies in annual reports on a voluntary basis to reduce the information asymmetry and improve the transparency between management and various stakeholders (Guthrie and Petty, 2000; Pablos, 2002; Schneider and Samkin, 2008; Vergauwen et al., 2007). Importantly, various issues relating to measurement and recognition of intangibles and intellectual capital (IC) have been addressed, during the last decade, by a large number of accounting standards setting bodies, professional accounting organizations, and regulatory agencies over the world.

The term “IC” has been defined by different researchers differently. IC has been used interchangeably with intangibles, knowledge or knowledge resources (Oppenheim et al., 2003).

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IC can be defined from the perspective of wealth creation as “intangible resources and assets that an organization can use to create value by converting it into new processes, products, and services” (Al-Ali, 2003, p. 5). Sveiby (1997) divides IC into “internal structure; external structure; and employee competence”. OECD (1999) has also taken a resource-based view, categorizing IC as “economic value of two categories of intangible assets of a company i.e. organizational (structural) capital and human capital”. Edvinsson (2000) categorized IC as structural customer, structural organisational and human capital. External structure (structural customer capital or relational capital) consists of an organisation’s relationships with customers and suppliers, brand names and reputation (Guthrie and Petty, 2000b), whereas internal structure (structural organisational capital) is best described as the “embodiment, empowerment, and supportive infrastructure of human capital” (Edvinsson and Malone, 1997, p. 35).

A primary objective of corporate disclosure is to satisfy the information needs of users and the traditional financial reporting model is inadequate in meeting such needs (Francis and Schipper, 1999). Traditional financial reporting, based mostly on regulatory requirement, often proved inadequate for disclosing information about critical success factors, related performance indicators (Mouritsen et al., 2001) and those value creation drivers not represented in financial statements (Lev and Zarowin, 1999). Voluntary disclosure is considered to be vital in solving the alleged problems with traditional financial reporting (see, e.g. Burgman and Roos, 2007; Leadbeater, 2000). Voluntary disclosure is found to decrease information asymmetry which results in a lower average cost of both equity (Botosan and Plumlee, 2002; Richardson and Welker, 2001) and debt capital (Sengupta, 1998), decreased bid-ask spreads (Petersen and Plenborg, 2003; Welker, 1995), and increased stock liquidity (Healy et al., 1999; Diamond and Verrecchia, 1991). Thus, in order to overcome the insufficiency of financial statements and obtain the above benefits, companies are urged to improve their disclosure on intangible assets (Sriram, 2008; Burgman and Roos, 2007; Chen et al., 2005; Vandemaele et al., 2005) and also explain the roles these assets play in their value-creation strategies (Bismuth and Tojo, 2008).

So, emergence of theory and practice of intellectual capital disclosure (ICD) has become increasingly important to identify theoretical and practical solutions to the recognition, measurement and reporting of intangible assets, processes and potentials not heretofore tracked by traditional accounting metrics (Abeysekera, 2006; Ducharme, 1998; Guthrie and Petty, 2000a; van der Meer-Kooistra and Zijlstra, 2001).

Statement of the Problem

This study stems from an interest in study and comparison of the “nature” and “extent” of voluntary intellectual capital disclosures (ICD) by IT (Information Technology and Telecom) and Banking companies of Bangladesh. Technological advancement has brought a paradigm shift in the economy with rapid growth of knowledge-based firms. Intangibles like intellectual property, technical know-how, patents, technology, human resources, etc. has gained remarkable importance over the tangible assets like land, plant and machinery etc. IC researchers opined that identifying, valuing, measuring IC is increasingly important for knowledge-intensive companies

(Bontis, 1996; Roos and Roos, 1997). The study have selected the IT, telecom, and bank industry, to compare them in terms of intellectual capital performance of companies, as all the sectors are of knowledge-intensive industries. It has already been observed that, the gap between the value of tangible assets and its market value increases, especially for service and high-technology companies. For example, Leadbeater (1999) mentioned that only about 7 percent of Microsoft's stock market value was accounted by tangible assets, whereas, the remaining portion (93 percent) of the company's value was due to intangible assets, such as, brands, research and development, and employees.

In recent years, financial institutions, especially those in the banking industry, have experienced a dynamic and competitive environment. With escalating global competition and its attendant rapid changes, banks have increasingly to provide superior product differentiation and value added services in order to remain competitive. Being aware of the inevitability of establishing sustainable competitive growth, the Bangladeshi banking sector has embraced a range of initiatives in a move towards knowledge-based resources. Raihan (2007) identified banks' upgrading of business processes into automated systems, the constant striving for efficient manpower creation, enhanced employees knowledge and competence, improved networks and offering value added services as examples of the necessary changes within the Bangladeshi banking industry. The banking industry not only appeared as one of the most knowledge-intensive industries in Bangladesh but also as a prime mover of economic growth on which functions of other business organizations are dependent. Similarly, accelerated pace of information technology (IT) has made a knowledge driven economic system essential to produce maximum benefit of utilizing mass human resources. So, all the sectors selected for this study bears extreme significance to examine to what extent the companies in these sectors presenting the intangible or intellectual assets to the stakeholders.

Objective of the study

The study mainly has been opted for an in-depth inquiry into the IC reporting practices in the selected listed companies in Bangladesh. This broad objective can be divided into the following sub-objectives:

- to examine the reporting practices in Bangladesh with regard to IC;
- to examine the information disclosed voluntarily with regard to IC;
- to make a comparison between the disclosure status of the samples of different sectors categorized as Bank, IT, and Telecom.

Methodology of the study

A survey of relevant literature reveals that a good number of studies were undertaken on Intellectual capital disclosure in general. But no specific study was done in the light of banking & IT companies in Bangladesh. Keeping this in mind The study has been conducted on three fastest growing sectors in the capital market of Bangladesh, namely, Bank, IT, and Telecom. (List of Appendix-1). There are 30 commercial banks listed in both Dhaka Stock Exchange (DSE) and

Chittagong Stock Exchange (CSE). The sample enterprises represent 26.67% (8 out of 30) of the listed commercial banks. There are 6 listed IT companies in Bangladesh. To bring uniformity in sample size of two competing sectors, the study included all listed companies in telecom sector with IT. Such inclusion was on the basis that, telecom companies are mainly IT based. As given in detail :

Dhaka Stock Exchange – DSE sector	No. of listed companies	Companies selected for the study (%)
Information Technology(IT)	6	6 (100)
Telecom (T)	2	2 (100)
Total	8	8 (100)

For the purpose of the study secondary data were mostly used & basic source of information was the Annual reports of the sample companies. Information collected from the Annual Reports was arranged and analyzed keeping in view the objective of the study.

Statistical methods like average, standard deviation, co-efficient of variance, T- test & Mann-Whitney (Wilcoxon)W-test were used.

Much of the accounting IC literature focuses on describing voluntary IC disclosure in annual reports of companies across the world (Olsson, 2001; Bontis, 2003; Abeysekera and Guthrie, 2005). As part of secondary data sources, annual reports of 16 listed companies (8 banking companies and 8 IT and telecom companies) for the year 2011-12 were taken. For the purpose of identifying the magnitude of IC disclosures, these annual reports have been examined to reveal the disclosure status. The choice of annual reports as a source of information for IC research was made for several reasons. First, managements regularly signal important issues using this reporting mechanism, annual reports also representing the corporate concern in a comprehensive and compact manner (Abeysekera and Guthrie, 2005). Second, annual reports are considered the most prevalent and acknowledged document regularly produced by the companies in Bangladesh.

This research adopts the framework for IC items developed by Bontis. First, a survey of literature was performed to shortlist the related IC terminology. According to Bontis (2003), “A panel of researchers from the World Congress on intellectual capital summarized the list of IC items into a collection of 39 terms that encompassed much of the intellectual capital literature”. Though, some other lists were used by other researchers (for example, Guthrie, Petty, Yongvanich & Ricceri, 2004), the list used by Bontis (2003) was considered comprehensive for the preliminary survey results. Importantly, the same list has been applied for content analysis of IC disclosure by Kamath (2008) and Joshi, Ubha & Sidhu (2012) for comparing and analyzing of IC disclosure.

The final lists of terms is reported in Table 1 –

Table 1: Intellectual Capital Search Terms

Business Knowledge	Employee Skill	Intellectual Resources
Company Reputation	Employee Value	KM
Competitive Intelligence	Knowledge Assets	Expert Networks
Corporate Learning	Expert Teams	Knowledge Management
Corporate University	Knowledge Sharing	Human Assets
Cultural Diversity	Knowledge Stock	Human Capital
Customer Capital	Management Quality	Human Value
Customer Knowledge	IC	Organizational Culture
Economic Value Added	Information Systems	Organizational Learning
Employee Expertise	Relational Capital	Intellectual Assets
Employee know-how	Intellectual Capital	Structural Capital
Employee Knowledge	Intellectual Material	Supplier Knowledge
Employee Productivity	Intellectual Property	

Source: Bontis (2003)

In the study, content analysis method is used to measure the extent of intellectual capital disclosure in annual reports. Content analysis “involves codifying qualitative and quantified information into predefined categories in order to derive patterns in the presentation and reporting of information” (Guthrie and Petty, 2000b, p. 244). It is deemed to be a systematic, objective and reliable approach to determining the meaning of the content of written publications (not just a word search) and can be used to make replicable and valid inferences (Krippendorff, 2004; Guthrie and Petty, 2000b).

Findings and Analysis

The total analysis has been conducted by using 2011-2012 published annual report of the selected companies available on their website in adobe acrobat reader (pdf) format.

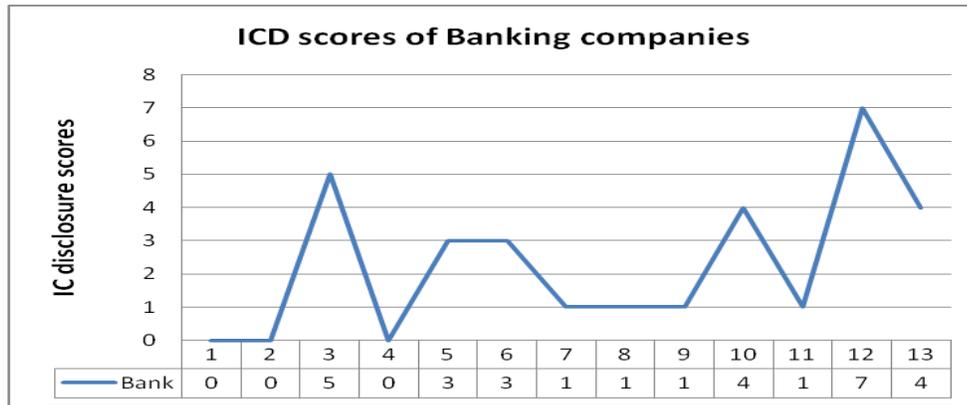
Table 2: Disclosure of Intellectual capital items

SL No.	Items of intellectual capital	No. of disclosing companies in Bank	No. of lines disclosed by Banking Companies	No. of disclosing companies in IT	No. of lines disclosed by IT companies
1.	Business knowledge	0	0	1	1
2.	Customer capital	0	0	1	2
3.	Economic value added	5	10	0	0
4.	Employee expertise	0	0	1	1
5.	Employee knowledge	3	3	0	0
6.	Employee skill	3	4	4	4
7.	Employee value	1	1	1	1
8.	Expert teams	1	1	1	1
9.	Knowledge sharing	1	1	1	1
10.	Information systems	4	7	2	2
11.	Intellectual property	1	1	0	0
12.	Human assets	7	23	5	5
13.	Human capital	4	7	0	0

Source: Annual reports of the sample companies

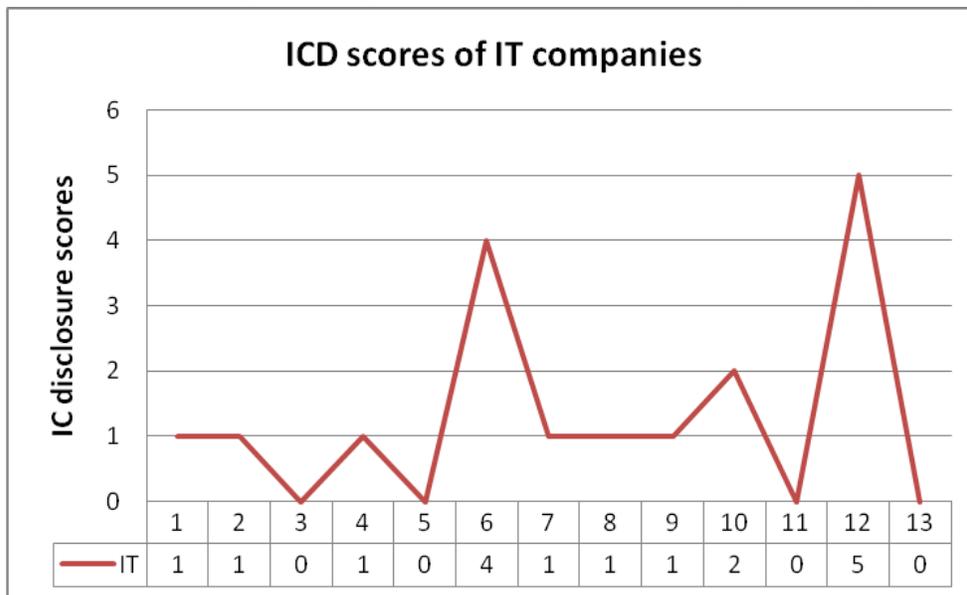
The table highlights that out of 39 items, banking companies disclosed 10 items (77%) whereas in comparison the IT companies reported only 9 items (69%). There are 26 common items (67%) which were not disclosed by the companies from both the categories. In case of banking companies, the highest disclosed item was “Human Assets”–23 times (40%) which were reported by 7 companies (88%). The second best disclosure is “Economic Value Added”– 10 terms (17%) which were disclosed by 5 companies (63%). However, in case of IT companies, the term “Human assets” has been disclosed by 5 companies (63%) followed by the disclosure of the term “Employee skill” by 4 companies (50%). The count of no. of disclosure for the same comes to be only 5 times (28%) and 4 times (22%) respectively. The theme term of the paper “Intellectual capital” was not reported by any of the companies in both sectors. Figure 1 below show IC disclosure of 8 companies:

Figure -1: IC disclosure by 8 Banking Companies



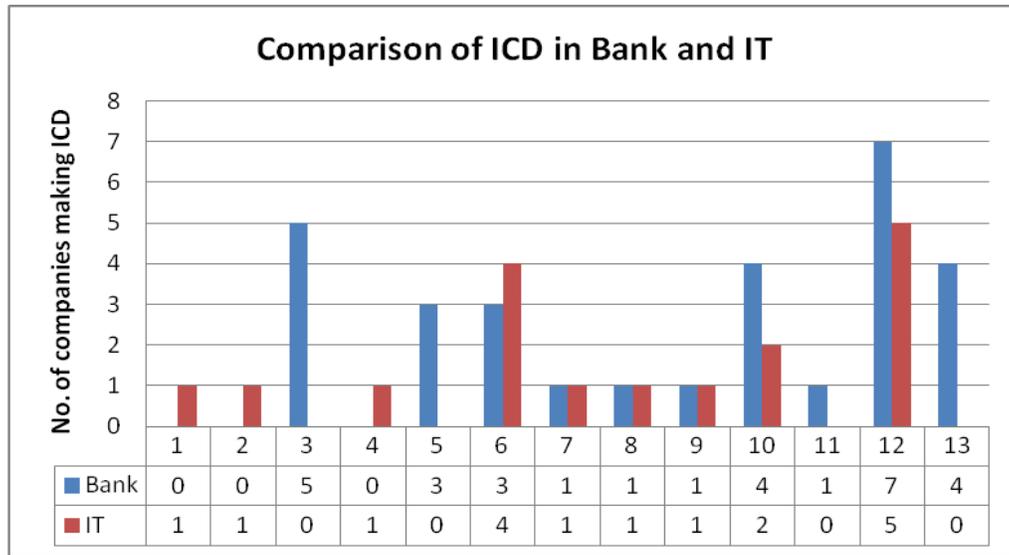
The above graph shows-disclosure Human Assets ranked first, followed by economic value added, Information systems & Human capital, employee, employee knowledge & skill respectively. Only one sample bank disclosed Employee value, Expert teams, Knowledge sharing & Intellectual property. On the other hand, none of the sample banking companies disclosed- Business knowledge, Customer capital & Employee expertise.

Figure -2: Figure shows below IC disclosure by 8 IT companies-



The disclosure of Human assets ranked first followed by Employee skill & information system respectively. Only one of the sample companies disclosed- Business knowledge, Customer capital , Employee expertise , Employee value, Expert teams & Knowledge sharing.

Figure – 3: The figure 3 shows comparison of ICD in bank & IT Companies.



The above graph shows disclosure by the sample companies of Human Assets ranked first, followed by Employee skill & Information systems respectively.

Table 3: Statistical comparison of average number of companies disclosing IC terms

Sector	Average	SD	CV(%)	t-test	Mann-Whitney (Wilcoxon) W-test
Bank	2.3077	2.2130	95.89	t= 1.335 p-value = 0.196	W = 155.50 p-value = 0.286
IT	1.3077		118.41		

Taking a sample of 8 companies, the difference between the means of the number of companies disclosing an item of IC has been calculated for both sectors. On an average, an item of IC is disclosed by 2 companies (2.31 companies rounded) in Bank and 1 company (1.31 company rounded) in IT sector. Standard deviation shows that IC disclosure in IT is less volatile to IC disclosure in Bank. But Coefficient of variation shows that in IT companies, the variation in IC disclosure is high relative to IC disclosure by banking companies.

To find out the significant difference between mean values of IT and banking companies, the study conducted t-test. The result of t-test, t = 1.335, p value > 0.005, shows that there is no significant difference in mean number of companies disclosing an item of IC. Mann-Whitney test results (W = 155.50, p value = 0.286 > 0.05) also shows that there is no statistically significant difference between the medians at the 95.0 percent confidence level.

Table 4: Statistical comparison of average no. of IC terms disclosed

Sector	Average	SD	CV(%)	t-test	Mann-Whitney (Wilcoxon) W-test
Bank	4.4615	6.4371	144.28	t = 1.675	W = 153.50
IT	1.3846	1.5566	112.42	p-value = 0.117	p-value = 0.244

Table 4 displays that the average number of IC terms disclosed by the banking companies is 4 (4.46 terms rounded) as compared to just 1 terms (1.38 terms rounded) by IT companies. Standard deviation and coefficient of variation show that in Bank, the variation in IC disclosure is high relative to IC disclosure by IT companies.

In terms of mean value of disclosure of the number of IC terms, the t-values = 1.675 with $p = 0.117 > 0.05$, indicates that there is no significant difference between average number of IC terms disclosed by banking and IT companies at 5 percent level of significant. The result is further supported by Mann-Whitney test with $W = 153.50$ and $p > 0.05$, to represent that there is no significant difference noticed in the medians of two distributions.

Conclusion

The purpose of the study is to recognize the nature of the practice of the voluntary disclosure about intellectual capital in annual reports of listed bank and IT companies in Bangladesh. Though IC disclosure by companies in both sectors remains relatively low, banking companies have performed better than IT companies in terms of no. of companies reporting IC terms and average no. of IC terms disclosed by a company. But statistical result shows that there is no significant difference between means of number of companies disclosing an item of intellectual capital.

The goal of IC disclosure is to create linkages between a company's strategy, governance, and financial performance and the social, environmental and economic context within which it operates. The IC disclosure shows that new competencies and initiatives are necessary and tells how a company acts in order to meet the challenges of emerging changes in the business

environment. The lack of IC disclosures in the financial statements results a sizeable difference between the market and book value of a company (Roslender and Fincham, 2001; Guthrie et al., 2006). Traditional accounting systems are insufficient to report IC of the firm; therefore there is a need for the implementation of a new model of IC management for its functioning. Dissatisfaction related to traditional financial reporting has further motivated companies to report voluntary non-financial information to include social and environmental information, IC and corporate governance disclosures (Mention, 2011). Thus it can be said that IC disclosure should be used as supplements to the traditional financial reporting. Voluntary practice of IC disclosure can substantially improve the credibility of financial reporting as a source of relevant information to users. This will not only add to the quality of information but also the stakeholders will be able to make an assessment of the true value of a firm.

There are many driving forces like globalization, the increased use of information technology, the recent announcement of “Digital Bangladesh” and the consistent growth of the capital markets, which are pushing Bangladesh towards knowledge based economy. So, it has become increasingly important to disclose the use and value of knowledge assets for the company. The study urges for clear set of legislative guidelines including the Companies Act 1994 to improve disclosure practices. At the same time, it is important to implement a copyright guideline and to change the Stock Exchange Listing Requirements to require companies to make ICD in their prospectuses and annual reports. Regulations may be necessary to develop best practice guidelines for ICD and to encourage compliance with such guidelines in enhancing the disclosure of IC information. Further research can be carried out by incorporating data of several years and by expanding the sample size and including more corporate attributes, which may produce a more comprehensive understanding of ICD practice in Bangladesh.

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Appendix -1:

The list of the sample enterprises are as follows:

Banking Companies	IT Companies
Al-Arafah Islami Bank Limited	Aamra Technologies Limited
Brac Bank Limited	Agni System Limited
First Security Islami Bank Limited	BD Com Online Limited
Jamuna Bank Limited	Bangladesh Submarine Cable Limited
Mutual Trust Bank Limited	Daffodil Computer Limited
One Bank Limited	Grameen Phone Limited
Standard Bank Limited	Information Service Network Limited
Trust Bank Limited	Intech Online Limited