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Corporate Governance and Intellectual Capital Reporting in Corporate Annual Reports of Emerging Economies: An Empirical Investigation of Listed Companies in Bangladesh

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CORPORATE GOVERNANCE AND INTELLECTUAL CAPITAL REPORTING IN CORPORATE ANNUAL REPORTS OF EMERGING ECONOMIES: AN EMPIRICAL INVESTIGATION OF LISTED COMPANIES IN BANGLADESH

PhD. DISSERTATION

BY

MD. MAHABBAT HOSSAIN

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DECLARATION

I do hereby declare that the dissertation titled "CORPORATE GOVERNANCE AND INTELLECTUAL CAPITAL REPORTING IN CORPORATE ANNUAL REPORTS OF EMERGING ECONOMIES: AN EMPIRICAL INVESTIGATION OF LISTED COMPANIES IN BANGLADESH" submitted to the INSTITUTE OF BUSINESS ADMINISTRATION, University of Rajshahi, Bangladesh for the degree of DOCTOR OF PHILOSOPHY in Accounting and Information System is exclusively my own and original work. No part of it, in any form, has been submitted to any other university or institute for any degree, diploma or other similar purpose.

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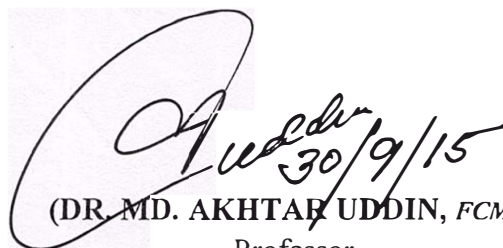Email: iba.rajshahiuniversity@gmail.com

CERTIFICATE

This is to certify that the dissertation titled "CORPORATE GOVERNANCE AND INTELLECTUAL CAPITAL REPORTING IN CORPORATE ANNUAL REPORTS OF EMERGING ECONOMIES: AN EMPIRICAL INVESTIGATION OF LISTED COMPANIES IN BANGLADESH" is a record of bona fide research carried out by MR. MD. MAHABBAT HOSSAIN under my direct guidance and supervision. As far as I know, this is the candidate's own achievement and is not a conjoint work.

I also certify that the draft and final version of the dissertation, which is being submitted to the INSTITUTE OF BUSINESS ADMINISTRATION, University of Rajshahi, Bangladesh, has been carefully read by me for its material and language and is to my entire satisfaction. The dissertation is worthy of consideration for award of DOCTOR OF PHILOSOPHY in Accounting and Information System.

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ABSTRACT

Intangible resources are not less important than physical or financial resources. It is expected that these resources support organizational activities along with financial and physical resources and, therefore, we may call these as intellectual capital (IC). Generally, a firm possesses three types of capital – physical capital, financial capital, and IC. IC includes an organization's collective knowledge and learning, leadership talent, the values that shape its culture, routines and processes and the collaborative relationships. It is the need of the era that organizations maximize their value through efficient utilization of their IC. It is agreed that IC plays an increasingly important role in sustaining competitive advantages and creating corporate value and, thus, companies have increased their investments in this type of capital. In a knowledge based economy, it is indispensible for organizations to identify, maximize and utilize their IC to stay in a competitive environment. It is expected that in order to take advantage of a rapidly changing environment, an enterprise will enhance the accumulation of its IC and go through the corporate governance to improve its organizational performance. IC should be reported in the financial statements of a firm for proper communication to stakeholders. An entity can enjoy competitive advantages by disseminating such information. Simultaneously, stakeholders may take pragmatic decisions on the basis of this information. This is also important for the investors to judge the profitability, potentiality and sustainability of the organization.

IC includes human capital (HC), structural capital (SC) and relationship capital (RC). Extensive studies have been carried out to ascertain the status of IC reported by firms in developed countries, though, very few studies have been carried out in a developing country while there is a dearth of research on the intellectual capital reporting (ICR) practices of firms in Bangladesh. Prior research found that the disclosure level of Bangladeshi listed companies is generally poor. The results indicate that companies in general have not responded adequately to the mandatory disclosure requirements of the regulatory bodies. There are some studies on the Bangladeshi companies to show the voluntary disclosure status and disclosure level is not satisfactory. Conventional accounting does not recognize all of the components of IC as assets. IC reporting in the financial statements is not obligatory for the listed companies in Bangladesh. Thus, it is high time to examine the IC reporting practices by the Bangladeshi firms.

There is no study in Bangladesh covering all three components of intellectual capital i.e. HC, SC and RC based on all types of listed companies. Besides, none of the existing study on the Bangladeshi companies conducted perception survey of different stakeholders of the listed companies, which has been done for the current study. Furthermore, the present study investigates the relationship between corporate governance and extent of intellectual capital reporting in corporate annual reports of the listed companies in Bangladesh. The regulatory authorities, like the Bangladesh

Securities and Exchange Commission (BSEC), Bangladesh Bank (BB), are working for ensuring good governance in Bangladesh. Without adequate reporting mechanisms, shareholders and others cannot be confident that the affairs of the company are being run in a prudent manner for their benefits. Besides, extent of IC reporting may be influenced by different corporate attributes. In addition, a company may change its reporting pattern and extent with the passage of time. Therefore, the study poses some research questions: to what extent are Bangladeshi listed companies reporting IC in their annual reports; what are the influencing determinants for IC reporting; do IC reporting practices differ among industries and over years and what are the perceptions of stakeholders regarding IC reporting. In connection with these research questions, the study sets some specific objectives vis-à-vis to examine the intellectual capital reporting (ICR) practice by listed companies in Bangladesh; to investigate empirically some corporate attributes including corporate governance as determinants of ICR; to compare the ICR level among various industries and years; and to summarize the perceptions of different stakeholders regarding ICR. Descriptive and empirical analyses have been conducted by the researcher to fulfill the objectives of the study. The study covers 149 annual reports of the listed companies for the years 2008 and 2011. Sample covers non-financial institution (NFI), insurance (INS), non-banking financial institution (NBFI) and banking financial institution (BFI). There are 37 intellectual capital items in the ICR checklist namely human capital (HC) 19, structural capital (SC) 9 and relationship capital (RC) 9. Perception survey has been conducted on 265 stakeholders grouping as supplier of information, direct user of information and indirect user of the information. For the

purpose of regression analysis, "Total Intellectual Capital (TIC)" reporting index has been used as dependent variable. Independent variables are classified into three categories vis-à-vis corporate governance (COG), status in share market (MKT) and corporate attributes (COA) and there are three variables in each category. Moreover, industry type (IND) is also used as an explanatory variable. Four regression models have been developed with these variables.

Results show that IC items are not sufficiently reported by the listed companies. Two reasons may have behind this – they do not have sufficient IC in their firms or they do not address stakeholders' information needs. BFIs, in general, and some other firms are reporting more IC items in annual report and other organizations, who are not providing such information, may follow the style of their presentation of information. Stakeholders are expecting more information in CAR for taking informed decision. Present study confirms that there is a positive association between the number of members on audit committee and IC reporting. As IC reporting is cost effective, that perceived by the stakeholders, comparatively lower capitalized firms may follow the reporting pattern of higher capitalized firms. The study also validates that there is a positive association between PNPAT and TIC. If all of the concerned bodies take synchronized approaches from their end, it may be expected that IC reporting status will be improved in days to come.

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ABBREVIATIONS

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
AASB	Accounting and Auditing Standards Board
AGM	Annual General Meeting
AR	Annual Report
ARCBS	Australian Red Cross Blood Service
AusFinCo	Australian Financial Services Company
BAS	Bangladesh Accounting Standard
BB	Bangladesh Bank
BCBS	Basel Committee on Banking Supervision
BFI	Banking Financial Institution
BFRS	Bangladesh Financial Reporting Standard
BIBM	Bangladesh Institute of Bank Management
BIS	Bank for International Settlements
BPA	Best Presented Annual Report
BRPD	Banking Regulation and Policy Department
BSEC	Bangladesh Securities and Exchange Commission
CAR	Corporate Annual Report
CAR	Corporate Annual Report
CAT	Share Category
COA	Corporate Attribute

COG	Corporate Governance
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CSE	Chittagong Stock Exchange
CV	Coefficient of Variation
df	Degrees of Freedom
DFIM	Department of Financial Institutions and Markets
DSE	Dhaka Stock Exchange
EPS	Earnings Per Share
FAF	Financial Accounting Foundation
FASB	Financial Accounting Standard Board
GAAP	Generally Accepted Accounting Principles
HC	Human Capital
IAIS	International Association of Insurance Supervisors
IAS	International Accounting Standard
IASB	International Accounting Standard Board
IASC	International Accounting Standard Committee
IBA	Institute of Business Administration
IC	Intellectual Capital
ICAB	Institute of Chartered Accountants of Bangladesh
ICD	Intellectual Capital Disclosure
ICMAB	Institute of Cost and Management Accountants of Bangladesh
ICR	Intellectual Capital Reporting

ICS	Internal Control System
ICT	Information and Communication Technology
IDRA	Insurance Development and Regulatory Authority
IFAC	International Federation of Accountants
IFI	Islamic Financial Institution
IFRS	International Financial Reporting Standards
IFSB	Islamic Financial Services Board
IND	Industry Type
INS	Insurance
JHRCA	Journal of Human Resource Costing & Accounting
MCAP	Market Capitalization
MFI	Micro Finance Institution
MKT	Status in Capital Market
MoC	Ministry of Commerce
MoF	Ministry of Finance
MRA	Micro-credit Regulatory Authority
NBFI	Non-Banking Financial Institution
NFI	Non-Financial Institution
NFT	Not-for-Profit
NGO	Non-Governmental Organizations
NGO-MFI	Non-government Organizations and Microfinance Institution
NIND	Number of Independent Director
NPAT	Net Profit After Tax

OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Square
OTC	Over-The-Counter
P/E	Price Earnings Ratio
PASSET	Proportion of Total Assets
PER	Market Performance
PMCAP	Proportion of Market Capitalization
PNPAT	Proportion of Net Profit After Tax
PNPAT	Proportion of Net Profit After Tax
PSALES	Proportion of Sales
RBCA	Risk Based Capital Adequacy
RC	Relationship Capital
RJSCF	Registrar of Joint Stock Companies and Firms
ROA	Return on Assets
RQ	Research Question
S/N	Serial Number
SACOM	Size of Audit Committee
SAFA	South Asian Federation of Accountants
SBOARD	Size of Board of the Firm
SC	Structural Capital
SD	Standard Deviation
SEC	Securities and Exchange Commission
SEO	Securities and Exchange Ordinance

SER   Securities and Exchange Rules

SIE   Small Innovative Enterprise

Sig.   Significance

SME   Small and Medium-Sized Entity

SPSS   Statistical Package for the Social Sciences

SSE   Shanghai Stock Exchange

TecK   Technology and Knowledge-based

TIC   Total Intellectual Capital

Chapter One

INTRODUCTION

Chapter Outline

Chapter One

INTRODUCTION

1.1 Background of the Study

Intangible resources are not less important than physical or financial resources. It is expected that these resources support organizational activities along with financial and physical resources and, therefore. we may call these as intellectual capital (IC). Generally, a firm possesses three types of capital – physical capital (e.g. equipment), financial capital (e.g. cash), and intellectual capital (IC). IC includes an organization's collective knowledge and learning, leadership talent. the values that shape its culture, routines and processes and the collaborative relationships (Alwis, 2004). Money, machine, material may not work effectively and efficiently without having intellectual capital. So, presence of quality IC is the prerequisite of maximum utilization of physical resources. At present, every industry is facing mounting competition and to cope up with this intense competition, there is no alternative to building up IC within the organization.

Intellectual capital (IC) is becoming a major part of companies' value in today's knowledge-based economy (Rentala, Shaban, and Kavida, 2014). Factors such as globalization, new technology, relatively free capital, increased competition, changes in customer demands, the demand for innovation and changes in economic and political structures and the growing role of the State in supporting knowledge economies, are constantly reshaping the way that business is carried out (Abeysekera, 2007). Similar

statement is given by Alwis (2004) as the pace of change, advanced technology, highly dispersed operations and the knowledge-intensity of goods and services have created a growing need for organizations to change their business models and many of these changes involve the substitution of intangible assets for physical assets in order to adapt to the challenges and opportunities presented by the new knowledge economy. To face the present challenges and to avail of the opportunities, a firm should have experienced employees, suitable infrastructure, wide networking system, faultless information system, innovativeness in product and services, brand image, etc. To cope up the opportunities and meet the challenges, an organization should offer innovative products and services. Economists assert that IC is a vital asset that helps organizations to create value in present economic syndrome and enables the organizations to be innovative (Karchegani, Sofian and Amin, 2013).

It is the need of the era that organizations maximize their value through efficient utilization of their intellectual capital (Kharal, Zia-ur-Rehman, Abrar, Khan, and Kharal, 2014). Bollen, Vergauwen and Schnieders (2005) agree that IC plays an increasingly important role in sustaining competitive advantages and creating corporate value and, thus, companies have increased their investments in this type of capital. In the same way, Vandemaele, Vergauwen and Smits (2005) opine that companies now-a-days increasingly rely on IC in their value creation process rather than on physical and financial capital. That is why Edvinsson and Sullivan (1996) define IC as the knowledge which can be converted into value. These assets became very important for the companies because of their increasing wealth creation role (Waterhouse, 1999). Earlier

firms had relied heavily on tangible assets to determine value but, more recently, in the emerging knowledge economy, value can be increasingly seen to reside in IC (Abeysekera and Guthrie, 2004). That means the companies are focusing more on intangible assets than tangible assets. For that reason, Kavida and Sivakoumar (2009) stated that land, labor and capital were considered to be the most valuable factors of production in traditional economics, whereas in the knowledge economy, intellectual capital eclipsed these traditional factors. Thus, in a knowledge based economy it is indispensible for organizations to identify, maximize and utilize their intellectual capital to stay in a competitive environment (Khalique, Shaari, Isa and Ageel, 2011)

IC is increasingly acknowledged as the most important asset for business performance and the foundation for market leadership and differentiation (Davey, Schneider and Davey, 2009). Goh and Lim (2004) believe that, around the world, increasing recognition and utilization of IC helps companies to be more efficient, effective, productive and innovative. According to resource-based theory, IC is the main source to improve business performance (Ahmad and Mushraf, 2011). It is expected that in order to take advantage of a rapidly changing environment, an enterprise should enhance the accumulation of its IC and go through the corporate governance to improve its organizational performance (Wu, Lee and Wang, 2012). Xinyu (2014) conducted a study on the impacts of IC of China's public pharmaceutical companies' performance and showed that both financial capital and human capital were positively correlated with firm performance. It is argued that enhancement in IC causes improvement in progression (Sami, Arshad and Ashraf, 2014) and the improvement in intellectual capital not only enhances the organization's worth but also helps it to earn extra profit (Anon, 2005). It is

also proved in the context of Malaysian firms that IC has a positive relationship with organizational performance (Khalique, Isa and Nassir bin Shaari (2013).

Strategically, important IC should be reported on the financial statements of a firm for proper communication to stakeholders. An entity can enjoy competitive advantages by disseminating information regarding IC along with physical and financial resources. Simultaneously, stakeholders may take pragmatic decisions on the basis of this kind of information. This is also important for the investors to judge the profitability, potentiality and sustainability of the organization. No company should ignore the importance of disclosure of such precious assets to the stakeholders. Through the present study, the researcher tries to examine the present status of IC reporting in corporate annual report of the listed companies in Bangladesh.

1.2 Scope of the Study

In the emerging knowledge economy, value can be increasingly seen to reside in intellectual capital (Abeysekera and Guthrie, 2004). IC includes human capital, structural capital and relationship capital. Information regarding IC may be reported in the annual report of the firm for general users of information. Failures to provide relevant information about IC may lead to a deterioration of the company's financial position and a loss of competitiveness in the long run (Canibano, Covarsi and Sanchez, 1999). Abeysekera and Guthrie (2005) opine that a firm's IC is 'unaccounted capital' in the traditional accounting system. The failure to report intangibles due to the limitations of traditional accounting has seen an emerging interest amongst stakeholders to seek out

non-financial information, especially "soft assets" (IC), through which the long-term value-generating ability of a company might be ascertained (Robb, Single and Zarzeski, 2001). Without IC information the capital market shows inefficiency (Ali, Khan and Fatema, 2008). IC information helps the stakeholders to predict efficiency, effectiveness, innovativeness, etc. of the firm. Besides, disclosure of IC in annual reports helps to make capital markets more efficient by reducing information asymmetry between "insiders" and investors (Abeysekera, 2008). Additionally, IC disclosure helps the capital market to provide a more accurate market capitalization of firms (Guthrie, Petty, Ferrier and Wells, 1999). IC disclosure may affect a firm's cost of fund and thus contribute to its value creation. This also increases transparency which ensures corporate governance.

Different factors, local and global, may intervene in determining IC disclosure of firms, and the level of economic development in a country, whether it is a developed, moderately developed, or developing country could be one of them (Abeysekera, 2008). For instance, in 1998, Singapore implemented a regulatory framework on a disclosure philosophy to encourage greater disclosure by firms listed on Singapore stock exchange (Cheng, Fok and Low, 2002). During the same period, Sri Lanka amended the long overdue Code of Intellectual Property Act No. 52 of 1979 to help firms to build a foundation for a knowledge-based economy (Wickremaratne, 2000). If it is not mandatory to report IC in the annual report, company may report this information voluntarily. This type of assets may be reported in the annual report qualitatively and/or quantitatively. By disclosing more positive information about IC, company may derive competitive advantages. Besides, disclosure extent, pattern, format of a firm may be

changed with the passage of time with a view to fulfilling current need of users. Moreover, disclosure aspects may differ from industry to industry. The present study covers IC reporting practices in the corporate annual report of different types of firms at different periods.

1.3 Motivation of the Study

Intellectual capital (IC) is an important asset of a company because it provides competitive advantages to the company who possess this. An improvement of this capital means an increase of the knowledge base of the company (F-Jardón and Martos, 2009). The increasing importance of intellectual assets for value creation is reflected in corporate expenditure, whereby investment in intangible assets appears to be approaching levels comparable to investment in tangibles (OECD, 2008). Since IC provides a guarantee for prosperous future of a company as well for society (Boekestein, 2009), it is now-a-days the object of particular attention by managers, investors, economic institutions and governments along with researchers (Zéghal and Maaloul, 2010). Extensive studies have been carried out to ascertain the status of IC reported by firms in developed countries, though, very few studies have been carried out in a developing country (Nurunnabi, Hossain and Hossain, 2011) while there is a dearth of research on the intellectual capital reporting (ICR) practices of firms in Bangladesh. Only a few studies (like, Ali, Khan and Fatima, 2008; Khan and Khan, 2010; Hossain, 2011; Nurunnabi et al., 2011) have been conducted in Bangladesh. Ali et al. (2008) conducted study with only 22 companies listed on DSE whereas the study of Khan and Khan (2010) is related to HC only. Hossain (2011) covers only listed fuel & power and engineering firms. None of these studies relates IC reporting with corporate governance. This study

attempts to report findings in relation to ICR practices in an emerging economy with special reference to Bangladesh. The author aims to examine the patterns of ICR of listed firms. The study also tries to know the relationship between corporate governance and the extent of ICR. The most popular corporate governance variables and firm specific corporate attributes are identified to show the relationship with IC reporting. The author thinks that the study has several contributions to the literature. The sample size of this study is larger than that of previous studies like, Ali et al. (2008); Khan and Khan (2010); Nurunnabi et al. (2011); Hossain (2011). A larger sample size may overcome some problems of earlier studies on the determinants of IC (Guthrie and Petty, 2000; Brennan, 2001). In addition to this, the study covers both financial and non-financial listed firms that will help to generalize the findings of the study. Besides, the study will cover data for the year 2008 and 2011, which have not been studied yet.

1.4 Justification of the Study

Several studies have been conducted to show the compliance with mandatory disclosure requirements for Bangladeshi companies. Karim (1995), Hossain (1999) and Hossain, Cooper and Islam (2006) found that the disclosure level of Bangladeshi listed companies is generally poor. Toha (1986) has made an empirical study of the practical application of IASs in Bangladesh and found that the application of IASs in Bangladesh is very limited. Correspondingly, Hye (1992) opined that the picture depicted by published accounts is not satisfactory despite the recommendation of the ICAB. Akter and Hoque (1993) comment that the disclosure and reporting in the banking sector of Bangladesh are not only inadequate but also biased and misleading. Hossain and Taylor (1998) found from their study that the mean score is 29.33%. As per Rahman (1999), no company of

Bangladesh discloses all mandatory information items in their annual reports. Hossain (2000) showed that the average compliance rate for disclosure was 69.05%. Akhtaruddin (2005) conducted an empirical investigation of mandatory disclosure by the listed companies in Bangladesh. The results indicate that companies in general have not responded adequately to the mandatory disclosure requirements of the regulatory bodies. He also said that, on average. companies disclose 44% of the items of information. Similarly, Islam (2006) found that the compliance with mandatory accounting standards by Bangladeshi companies is 71%. Ahmed and Dey (2009) empirically measured and analyzed the performance of disclosure items in Bangladeshi banks and found a greater variation of disclosure. A study by Pandit, Hossain and Khatun (2011) report that average disclosure score of mandatory items for the banking companies is 67.34%. On the contrary, Hossain (2011b) opines that banking companies of Bangladesh are complying with most of the regulations regarding disclosure. Hossain (2012) examines financial statements of all Shariah-based banks in Bangladesh and shows that the average compliance rate is 88.11% considering all required aspects of financial statements. Hossain and Khatun (2014) examine the disclosure compliance of Islamic banks in Bangladesh and their results show that the compliance level of disclosure as per local and international regulations are 94.20% and 64.22% respectively.

There are some other studies on the Bangladeshi companies to show the voluntary disclosure status. Hossain, Amirus and Al-Amin (2005) found that only 12% Bangladeshi companies disclosed several issues on corporate governance in their annual reports. Hossain and Khan (2006) found significant relationship between corporate governance

disclosures and corporate attributes. Hossain, Islam and Andrew (2006) shows that, on average, 8.33% Bangladeshi companies disclose social and environmental information in their corporate annual reports. As a voluntary disclosure, average corporate governance disclosure score of Bangladeshi listed companies is 56.04% (Bhuiyan and Biswas, 2007). Rouf and Hossain (2011) conducted a study on corporate social responsibility disclosure of listed non-financial Bangladeshi companies and their results showed that average disclosure score is only 25.64%. On an average, 53.57% non-financial companies in Bangladesh under different industries provide digital communication addresses in their corporate annual reports (Hossain, Mizan and Rana, 2013).

However, very few studies have been conducted in Bangladesh to show the IC reporting practices. IC reporting in the financial statements is not obligatory for the listed companies in Bangladesh. The companies disclose IC information in the annual report voluntarily. Ali, Khan and Fatima (2008) found that average IC disclosure score of Bangladeshi companies is about 36%. They consider only 22 listed companies. Based on 32 leading manufacturing and service sector listed Bangladeshi companies, Khan and Khan (2010) comment that the human capital (HC) reporting practices of these firms are not as low as projected in relation to the total list of items reported. Hossain (2011) found that average disclosure score of intellectual capital items by fuel, power and engineering firms in Bangladesh is 49.89%. Nurunnabi et al. (2011) reveal that the average voluntary IC disclosure score of Bangladeshi non-financial companies is only 23.02%. The present study covers all three components of intellectual capital i.e. HC, SC and RC. It also considers both financial and non-financial listed Bangladeshi companies for evaluating

the disclosure status. For better interpretation and generalization of the findings, the researcher included 149 listed companies in the sample. None of the existing study on the Bangladeshi companies conducted perception survey of different stakeholders of the listed companies, which has been done for the current study.

1.5 Conventional Accounting and Measurement of IC

The definition of IC has always been ambiguous and even now there is not a publicly acceptable definition (Taliyang, Latif and Mustafa, 2011). This weakness and failure in identifying IC indicates that this valuable asset does not meet qualifications necessary for being recognized and, therefore, this asset is not reflected in the balance sheet though it exists (Karami, Seyyedi and Ghaznavi, 2014). Consequently, there has been increasing dissatisfaction with traditional financial reporting and its ability to provide stakeholders with sufficient information on a company's ability to create wealth (Bozzolan, Favotto and Ricceri, 2003). The traditional financial statement model is unable to reflect new ways of creating business value (Oliveras, Gowthorpe, Kasperskaya and Perramon, 2008). Current accounting regulations do not permit inclusion of most of the intangible assets acquired or produced by a company (Elmer, 2001). International Accounting Standard (IAS) 38 prescribes the accounting treatment for intangible assets. As per IAS 38, an intangible asset is an identifiable non-monetary asset without physical substance. However, accounting regulation is conservative and restrictive in the extent to which it allows recognition and measurement of intangibles (Gowthorpe, 2009). International Accounting Standard Board (IASB) does not recognize all of the components of IC as assets. Financial accounting follows the double entry system for recording transactions.

The monetary unit assumption states that only transaction data that can be expressed in terms of money be included in the accounting records (Weygandt, Kimmel and Kieso, 2012). To be an asset in traditional accounting it is to be measured and expressed in terms of money. Wayne (2001) states that the problem facing the disclosure of the "new" intangibles (IC) is that they cannot be recognized in financial statements, as they do not meet the accounting definition of an asset. Though there has been a problem to measure and report intangible, the interest for those assets is increasing dramatically. Given the increased importance of IC in the economy but inadequate information on IC assets in the financial statements of firms, some researchers argue that the relevance of these statements have decreased over time (Francis and Schipper, 1999). Thus, intellectual capital is currently the focus of significant discussion and enquiry across the management disciplines (Roslender and Fincham, 2001). It is recognized that intellectual capital provides a crucial source of value for the contemporary business enterprise. But, present accounting standards do not require the recognition of IC in the financial statements and only a relatively insignificant number of firms disclose IC in their annual reports (FASB, 2001). As a result, there is a growing level of information asymmetry between companies and users of financial statements (Bruggen, Vergauwen and Dao, 2009).

For the purpose of valuation, Ortiz (2009) has proposed ten principal components that shape IC like - (i) knowledge component, (ii) spark component, (iii) clientele component, (iv) normative component, (v) management and technology component, (vi) industrial and intellectual property component, (vii) quality and recognition component, (viii) corporate culture and positioning component, (ix) adaptation component and (x) supplier

relationship component. While Sveiby (2010) proposed four approaches for measuring intangibles which are:

(i) direct intellectual capital methods. *estimate the value of intangible assets by identifying its various components and once these components are identified, they can be directly evaluated, either individually or as an aggregated coefficient;*

(ii) market capitalization methods, *calculate the difference between a company's market capitalization and its stockholders' equity as the value of its intellectual capital or intangible assets;*

(iii) return on assets (ROA) methods, *average pre-tax earnings of a company for a period of time are divided by the average tangible assets of the company. The result is a company ROA that is then compared with its industry average. The difference is multiplied by the company's average tangible assets to calculate an average annual earning from the intangibles. Dividing the above-average earnings by the company's average cost of capital or an interest rate, one can derive an estimate of the value of its intangible assets or intellectual capital;* and

(iv) scorecard methods, *the various components of intangible assets or intellectual capital are identified and indicators and indices are generated and reported in scorecards or as graphs. A composite index may or may not be produced.*

As traditional accounting does not recognize IC as assets, companies may be reluctant to disclose this type of assets in their annual reports although such type of disclosure may give them competitive advantages. Realizing this importance firms may provide such information voluntarily. However, there is lack of appropriate framework for disclosing intangible assets (IC) information in the annual reports (Chander and Mehra, 2011). The present research identifies the disclosure pattern of IC in the annual report of the company.

1.6 Corporate Governance

Cadbury (2002) defines corporate governance (COG) as the system by which business corporations are directed and controlled. Corporate governance refers to the internal relations within the corporate entity that determine decision-making power and accountability (OECD, 1999). Corporate governance has become an important issue in Asian region (Akhtaruddin, Hossain, Hossain and Yao, 2009). They believe that the East Asian crisis in 1997 raises questions about corporate governance, transparency and the disclosure environments in producing relevant and reliable information. To ensure COG, an entity should establish internal control system (ICS). The Committee of Sponsoring Organizations of the Treadway Commission (COSO) defines internal control as a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting and compliance (COSO, 2013). According to COSO (2013), there are three main objectives of the ICS– (a) efficiency and effectiveness of operation known as performance objective; (b) reliability, completeness and timeliness of financial and management information named as information objective; and (c) compliance with applicable laws and regulations known compliance objective. The sound ICS provides sufficient and accurate information to the stakeholders for their decision making which is a part of good COG. Corporate governance defines roles, responsibilities and accountabilities of different parties associated with an entity (IAIS and OECD, 2009). Good corporate governance thus underpins market confidence, integrity and efficiency and hence promotes economic growth and financial stability (OECD, 2004).

In Bangladesh. a number of attempts have been made on the part of different governmental and non-governmental institutions for ensuring better corporate governance (Bhuiyan and Biswas. 2007). The regulatory authorities, like the Bangladesh Securities and Exchange Commission (BSEC), Bangladesh Bank (BB), are working for ensuring good governance in Bangladesh. To enhance corporate governance in the interest of investors and the capital market, BSEC already issued a notification on February 20, 2006 (BSEC. 2006). Furthermore, to increase the transparency in the state of affairs of the companies and in the interest of investors and the capital market, BSEC issued another notification on June 4, 2008 (BSEC, 2008). Without adequate reporting mechanisms, shareholders and others cannot be confident that the affairs of the company are being run in a prudent manner for their benefits (Bhuiyan and Biswas, 2007). In case of the public limited company, ownership is separated from the management of the company where owners delegate the authority to operate the business and utilization of firm's assets for the best interest of the owners. Corporate governance can ensure that the firm's assets might be used for the benefit of the owners of the firm. In line with this view, Lin (2001) states that the corporate governance problem arises due to the existence of separation of ownership and control rights, information asymmetry, and incomplete or state-contingent contracts. John and Senbet (1998) note that corporate governance refers to those mechanical devices and structures that act as a check on managerial self-centered behavior. Akhtaruddin et al. (2009) investigates empirically the extent of corporate governance and voluntary disclosure by listed firms in Malaysia. Karim, Hossain, Nurunnabi and Hossain (2011) conducted a study to show the impact of corporate

governance on the extent of both mandatory and voluntary disclosure by listed commercial banks in Bangladesh. The present study investigates the relationship between corporate governance and extent of intellectual capital reporting in corporate annual reports of the listed companies in Bangladesh.

1.7 Research Question

The above discussions make it clear that intellectual capital (IC) is an important element of an organization. It creates value for the entity. It is also revealed that there is a positive relationship between intellectual capital and organizational performance. To take informed decision, stakeholders have to know the status of firms' intellectual capital. The stakeholders may get this information from different sources. Besides, some corporate attributes and corporate governance of the entity may act as determinants of extent of IC reporting. Moreover, a company may change its disclosure pattern and extent with the passage of time. All of the aspects may differ from country to country where a company is operating. Based on these facts the study framed the following research questions:

RQ1: To what extent are Bangladeshi listed companies reporting IC in their annual reports?

RQ2: Do IC reporting practices differ among industries and over years?

RQ3: What are the influencing determinants for IC reporting?

RQ4: What are the perceptions of different stakeholders regarding IC reporting?

1.8 Objectives of the Study

In consonance with the research questions posed above. objectives of the study have been finalized. The main purpose of this thesis is to examine the intellectual capital reporting (ICR) practice by listed companies in Bangladesh. On the basis of the main objective, the followings are the specific objectives of the study:

i. to examine the intellectual capital reporting (ICR) practices by listed companies in Bangladesh;

ii. to compare the ICR level among various industries and years;

iii. to investigate empirically some corporate attributes including corporate governance as determinants of ICR; and

iv. to summarize the perceptions of different stakeholders regarding ICR.

1.9 Limitations of the Study

The study focuses on intellectual capital reporting (ICR) practice by listed companies in Bangladesh. This study is not free from drawbacks and they are related with certain core parts of the study. Firstly, it contains four objectives which can be achieved by studying listed firms only. Nevertheless, it should include all types of firms in the sample, listed and non-listed. Secondly, this is a sample survey based on purposive sampling. Thus, an influencing attribute of a firm may be left from sample unit. Moreover, primary data have been collected from a limited number of respondents. Thirdly, focal point of the study is ICR not valuation or measurement of IC. Although there is a debate about valuation methods, there are some approaches for measurement of IC proposed by the researchers. Fourthly, ICR in the corporate annual reports is, generally, optional. Therefore, the used checklist may suffer from redundancy, inadequacy and/or certain bias. Besides, all of the

items in the checklist may not be applicable for firms equally. Furthermore. the study does not segregate the items included in the disclosure checklist as mandatory and voluntary. Fifthly. the research covers cross-section data for two different years only. Finally. the study has used the single coding process; hence there is possibility of certain errors. Besides. it follows unweighted approach for coding qualitative data in quantitative form. The results of the study should be interpreted keeping the above limitations in mind.

1.10   Structure of the Dissertation

The thesis is divided into eight chapters starting with introduction for addressing the main issues of this research. In this chapter background of the study, importance of intellectual capital (IC) has been elaborated. Presenting significance of IC disclosure in corporate annual reports for the stakeholders, scope of the study has been determined. Influencing by the growing interest on IC and rigorous studies of other countries, researcher has been motivated to conduct the study. For justifying the present study, status of mandatory and voluntary disclosure by the listed Bangladeshi firms has been presented. Limitations of the previous studies and planning for contributing in the particular field justify the need of present study. Accounting approach regarding IC and available techniques for measuring this capital have also been covered in introduction part. It presents corporate governance issue in relation with corporate disclosure as well. The study poses some research questions and sets some objectives. The researcher has identified some limitations and embrace in chapter one. The remainder of the thesis is outlined below:

Chapter two outlines the legal framework for the companies regarding disclosure in Bangladesh. It introduces some local and international regulators who regulate and promote disclosure aspect of the company. This chapter also summarizes some important provisions of different local and international regulations and guidelines.

Chapter three reviews some previous literatures in the area of intellectual capital. It summarizes the literatures categorized as developed country perspective. developing country perspective and Bangladesh perspective. It also presents the studies in a tabular form for comparing their key elements.

Chapter four conceptualizes the IC and develops hypotheses. The chapter summarizes different dimensions of IC for better understanding. IC framework as proposed by different researchers has also been presented in this part. Both dependent and independent variables have been identified and presented. The independent variables are grouped under corporate governance, status in capital market and corporate attributes. Some hypotheses have been drawn which are to be tested using some statistical techniques.

Chapter five demonstrates a research methodology followed for the study. It clarifies population, sampling unit and sample size. Research method, sources of data and process of data collection have stated in this section. Ways and approaches for data analysis have been pointed out in the part as well.

Chapter six covers analysis and interpretation of results. Some descriptive analyses have been made. In this part, the researcher presents status of IC reporting. An empirical investigation has also been presented in this chapter. For this purpose, regression results have been summarized. Hypotheses have been tested in this part, which were posed in previous chapter.

Chapter seven presents the results of perception survey of different stakeholders about IC reporting. The chapter includes perceptions about means of disseminating information and use of information by different stakeholders. Stakeholders' suggestions regarding IC reporting in CAR have also been summarized in this chapter.

Chapter eight presents summary of findings, conclusion and recommendations. This chapter outlined summary of major findings of the study based on the set objectives. It also presents a list of hypotheses and their results. The chapter also provides some recommendations based on the findings of this study. Finally, suggestions are made for further research in this area.

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Chapter Two

LEGAL FRAMEWORK FOR CORPORATE DISCLOSURE

Chapter Outline

Chapter Two

LEGAL FRAMEWORK FOR CORPORATE DISCLOSURE

2.1 Introduction

Different types of organizations are operating their activities in Bangladesh. These organizations are being regulated by several national and international regulatory authorities. A single firm may be regulated, directed and supervised by different regulators and agencies. Bangladeshi companies are thus to follow several rules, regulations, standards and directives issued by the external bodies along with their internal policies. The following parts of this chapter depict legal framework for the companies regarding their disclosure in Bangladesh.

2.2 National Regulatory Bodies

The extent and nature of corporate disclosure of Bangladeshi companies may be regulated by Ministry of Finance (MoF), Ministry of Commerce (MoC), Registrar of Joint Stock Companies and Firms (RJSCF), Bangladesh Securities and Exchange Commission (BSEC), Bangladesh Bank (BB), Insurance Development and Regulatory Authority (IDRA), Micro-credit Regulatory Authority (MRA), Dhaka Stock Exchange (DSE), Chittagong Stock Exchange (CSE), Institute of Chartered Accountants of Bangladesh (ICAB), and/or Institute of Cost and Management Accountants of Bangladesh (ICMAB).

The Bank and Financial Institutions Division of Ministry of Finance, Government of the People's Republic of Bangladesh, started its function in January 2010. Earlier the related activities had been conducted through a separate wing of the Finance Division. The division deals with the law and policy issues related to the banks, non-bank financial institutions, capital market, insurance sector and microcredit sector (www.bfid.gov.bd). The Ministry of Commerce (MoC), Government of the People's Republic of Bangladesh, is responsible for overall trade and commerce related activities of Bangladesh and deals with Companies Act, Partnership Act, Societies and Trade Organization Ordinance and Law of Insurance (www.mincom.gov.bd).

The Registrar of Joint Stock Companies and Firms (RJSCF) is the sole authority which facilitates formation of companies and keeps track of all ownership related issues as prescribed by the laws in Bangladesh. RJSCF deals with different types of entities like private companies, public companies, foreign companies, trade organizations, societies, and partnership firms. RJSCF accords registration and ensures lawful administration of the entities under the provisions of Companies Act 1994 (Government of the People's Republic of Bangladesh, 1994), Societies Registration Act 1860 (Government of the People's Republic of Bangladesh, 1860) and Partnership Act 1932 (Government of the People's Republic of Bangladesh, 1932) (www.roc.gov.bd). The Bangladesh Securities and Exchange Commission (BSEC) was established on 8th June, 1993 as the regulator of the country's capital market through enactment of the Securities and Exchange Commission Act 1993 (Government of the People's Republic of Bangladesh, 1993b).

The Commission has overall responsibility to formulate securities legislation and to administer as well (www.sec.gov.bd). Dhaka Stock Exchange. Chittagong Stock Exchange and Over-the-Counter Markets are operating under BSEC. BSEC categorizes listed companies as "A", "B". "G". "N" and "Z" based on their dividend payments, commercial activities, holding of annual general meeting, accumulated loss. etc. In FY 2012-2013, there were 250. 19. 0, 6 and 21 companies in Bangladesh categorized as A. B, G, N and Z respectively (BSEC. 2013).

Bangladesh Bank (BB). the central bank and apex regulatory body for the country's monetary and financial system, was established vide the Bangladesh Bank Order 1972 (The President of the People's Republic of Bangladesh, 1972). BB performs all the core functions of a typical monetary and financial sector regulator including regulation and supervision of banks and non-bank financial institutions (www.bangladesh-bank.org). The financial system of Bangladesh is categorized into three broad fragmented sectors e.g. (i) formal sector, *includes all regulated institutions like Banks, Non-Bank Financial Institutions (FIs), Insurance Companies, Capital Market Intermediaries like Brokerage Houses, Merchant Banks etc.; Micro Finance Institutions (MFIs)*; (ii) semi-formal sector, *includes those institutions which are regulated otherwise but do not fall under the jurisdiction of BB, IDRA, BSEC or any other enacted financial regulator. This sector is mainly represented by specialized financial institutions, non-governmental organizations (NGO) and discrete government programs*; and (iii) Informal Sector, *includes private intermediaries which are completely unregulated.* There are 56 banks, 31 non-bank financial institutions, 77 insurance companies, 599 micro finance institutions under

formal financial sector of Bangladesh (www.bangladesh-bank.org). The Insurance Development and Regulatory Authority (IDRA) was established in 2010 under IDRA Act 2010 (Government of the People's Republic of Bangladesh, 2010a) to protect the interest of the policy holders and other stakeholders under insurance policy, supervise and regulate the insurance industry effectively. ensure orderly and systematic growth of the insurance industry and for matters connected therewith or incidental thereto. There are 45 non-life insurance companies, 30 life insurance companies and 2 insurance companies in public sector (www.idra.org.bd). To bring Non-government Organizations and Microfinance Institutions (NGO-MFIs) under a regulatory framework, the government of Bangladesh enacted Microcredit Regulatory Authority Act 2006 (Government of the People's Republic of Bangladesh, 2006). Under this Act, the government established Microcredit Regulatory Authority (MRA) with a view to ensuring transparency and accountability of microcredit activities of the NGO-MFIs in the country (www.mra.gov.bd)

The Dhaka Stock Exchange (DSE) is registered as a public limited company (www.dsebd.org). The main functions of DSE are listing of companies and monitoring their activities. As many as 251 companies are listed on DSE as on June 30, 2013 (BSEC, 2013). The Chittagong Stock Exchange (CSE) began its journey on October 10, 1995. CSE works towards an effective, efficient and transparent market to serve and invest in Bangladesh (www.cse.com.bd). As on June 30, 2013, a total number of 220 companies are listed on CSE (BSEC, 2013). Both DSE and CSE may impose some disclosure requirements as a part of listing requirement or monitoring the activity.

There are two professional accountancy bodies in Bangladesh: (i) The Institute of Chartered Accountants of Bangladesh (ICAB) and (ii) The Institute of Cost and Management Accountants of Bangladesh (ICMAB). ICAB is the National Professional Accounting Body of Bangladesh established under the Bangladesh Chartered Accountants Order 1973 (The President of the People's Republic of Bangladesh. 1973) and regulates the accountancy profession and matters connected therewith in the country (www.icab.org.bd). ICAB adopts International Accounting Standards (IASs) and International Financial Reporting Standards (IFRSs) as Bangladesh Accounting Standards (BASs) and Bangladesh Financial Reporting Standards (BFRSs) respectively (ICAB, 2008). The Institute of Cost and Management Accountants of Bangladesh (ICMAB) is a leading professional body in Bangladesh and it offers professional qualification in cost and management accountancy, with a focus on accounting for business (www.icmab.org.bd). Table 2.1 presents the list of regulatory authorities and the companies under the supervision of the regulators.

Table 2.1: List of national regulatory bodies and concerned companies in Bangladesh

Regulator	Nature of Companies
1. Ministry of Finance (MoF)	1. Banks 2. Non-Bank Financial Institutions 3. Capital Market 4. Insurance Sector 5. Microcredit Sector, etc.
2. Ministry of Commerce (MoC)	Trade and commerce related activities of Bangladesh and deals with Companies Act, Partnership Act, Societies and Trade Organization Ordinance and Law of Insurance.

3.	Registrar of Joint Stock Companies and Firms (RJSCF)	1. Private Companies 2. Public Companies 3. Foreign Companies 4. Trade Organizations 5. Partnership Firms, etc.
4.	Bangladesh Securities and Exchange Commission (BSEC)	1. Listed Companies 2. DSE and its OTC Market 3. CSE and its OTC Market 4. Capital Market Intermediaries 5. Credit Rating Agencies, etc.
5.	Bangladesh Bank (BB)	1. Scheduled Banks 2. Non-scheduled banks 3. Non-Bank Financial Institutions, etc.
6.	Insurance Development & Regulatory Authority (IDRA)	1. Non-life Insurance Companies 2. Life Insurance Companies 3. Insurance Companies in Public Sector, etc.
7.	Microcredit Regulatory Authority (MRA)	1. Micro Finance Institutions (MFIs)
8.	Dhaka Stock Exchange Limited (DSE)	1. Companies Listed on DSE
9.	Chittagong Stock Exchange Limited (CSE)	1. Companies Listed on CSE

2.3 International Regulatory Bodies

Different international bodies issue regulations and guidelines regarding corporate disclosure. The IFRS Foundation is an independent, not-for-profit private sector organisation working in the public interest. The principal objectives of the IFRS Foundation are to develop a single set of high quality, understandable, enforceable and globally accepted International Financial Reporting Standards (IFRSs) through its standard-setting body, the International Accounting Standards Board (IASB); to promote the use and rigorous application of those standards; to take account of the financial reporting needs of emerging economies and small and medium-sized entities (SMEs); and to promote and facilitate adoption of IFRSs (www.ifrs.org). The International

Accounting Standards Board (IASB) is the independent standard-setting body of the IFRS Foundation. IASB. based in London. began operations in 2001. After 2001 the Accounting Standards issued by IASB are known as International Financial Reporting Standards (IFRSs). Before establishment of IASB, standards were issued by International Accounting Standard Committee (IASC) and those standards are known as International Accounting Standards (IASs). Up to 2001. a total of 41 IASs have been issued by IASC whereas a total of 15 IFRSs have been issued by IASB from 2001 to June 2014 (www.ifrs.org). Financial Accounting Foundation (FAF) is an independent, private sector organization responsible for the oversight, administration, and finance of the Financial Accounting Standards Board (FASB). FASB has been the designated organization in the private sector since 1973 for establishing standards of financial accounting that govern the preparation of financial reports by non-governmental organizations. These standards have been officially recognized as authoritative ones by the U.S. Securities and Exchange Commission (SEC) and the American Institute of Certified Public Accountants (www.fasb.org).

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) is an Islamic international autonomous non-for-profit corporate body that prepares accounting, auditing, governance, ethics and Shariah standards for Islamic financial institutions and the industry. AAOIFI was registered on March 27, 1991 in the State of Bahrain. Accounting and Auditing Standards Board (AASB) is the standards-setting body of AAOIFI. A total of 88 standards have been issued by AAOIFI - (a) 48 on Shariah standards, (b) 26 accounting standards, (c) 5 auditing standards, (d) 7 governance, and (e)

2 codes of ethics (www.aaoifi.com). Islami Bank Bangladesh Limited is a member of AAOIFI. The Islamic Financial Services Board (IFSB), based in Kuala Lumpur, started operations on March 10. 2003. It serves as an international standards-setting body of regulatory and supervisory agencies that have vested interest in ensuring the soundness and stability of the Islamic financial services industry. Bangladesh Bank is a member of IFSB. Up to June 2014, IFSB has published 16 standards, 5 guidance notes and 1 technical note (www.ifsb.org).

The Bank for International Settlements (BIS) is to serve central banks in their pursuit of monetary and financial stability, to foster international cooperation in those areas and to act as a bank for central banks. The BIS is the world's oldest international financial organization established on May 17, 1930. The Basel Committee on Banking Supervision (BCBS) is the primary global standards-setter for the prudential regulations of banks and provides a forum for cooperation on banking supervisory matters. The secretariat of BCBS is provided by the BIS (www.bis.org). There are additional disclosure requirements in guidelines issued by BCBS.

South Asian Federation of Accountants (SAFA) was formed in the year 1984 to promote and accelerate development of the accountancy profession in the South Asian Region and uphold its eminence in the world of accountancy (www.esafa.org). SAFA offers award for corporate governance disclosures based on Best Presented Annual Report (BPA) of listed companies. International Federation of Accountants (IFAC) is the global organization for the accountancy profession dedicated to serving the public interest by

strengthening the profession and contributing to the development of strong international economies (www.ifac.org). IFAC deals with international regulatory convergence, global adoption of high quality international reporting and professional standards, standard-setting in the public interest, sustainability and integrated reporting, public sector reporting and transparency, etc. Its formal policy positions are issued as Policy Position Papers. IFAC submits comment letters and recommendations to global and regional organizations including the IFRS Foundation.

2.4 National Regulations

Listed companies are to comply with different regulations for preparing their corporate annual reports. The Companies Act 1994 is expedient to consolidate and amend the law relating to companies and certain other associations (Government of the People's Republic of Bangladesh, 1994). The main provisions of the Companies Act 1994 regarding the financial reports have been laid down in sections 181 to 185. Section 185 provides the form and contents of balance sheet and profit and loss accounts. Schedule XI under this section is mentionable for disclosure issue. Besides, section 192 of this Act mentions that every company, being a limited banking company or an insurance company, has to prepare the statements in accordance with Schedule XII, or as near thereto. The limited companies, either private limited or public limited, have to follow the Companies Act 1994. The Bank Companies Act 1991 is expedient to make provisions for banking companies (Government of the People's Republic of Bangladesh, 1991). The main provisions of the Act regarding disclosure have been laid down in section 18 and 36 to 43. Among others, the most important section regarding preparation and presentation

of financial statements is section 38 of the said Act including the schedule thereof. In 2013, the Bank Companies Act has been amended (Act No. XXVII of 2013). The Financial Institutions Act 1993 (Government of the People's Republic of Bangladesh, 1993a) is to be followed by the non-bank financial institutions operating in Bangladesh. The Act is expedient to provide for the granting of licenses to financial institutions, their control and to make other incidental provisions relating thereto (Government of the People's Republic of Bangladesh, 1993a). As per section 23 of this Act, the directors of a financial institution shall submit a copy of the profit and loss account and balance sheet made as per the Companies Act to the BB. The partnership businesses are operated in Bangladesh under the Partnership Act 1932 (Government of the People's Republic of Bangladesh, 1932).

The Insurance Act 2010 (Government of the People's Republic of Bangladesh, 2010) is an Act to consolidate and amend the law relating to the business of insurance. It replaced the Insurance Act 1938 (Government of the People's Republic of Bangladesh, 1938). Insurance companies are to follow the provisions laid down in this Act. The important provisions regarding preparation and presentation of financial statements are depicted in section 26 to 42 of this Act. MRA ensures compliance with the Micro Credit Regulatory Authority (MRA) Rules 2010 (Government of the People's Republic of Bangladesh, 2010c) by NGO-MFIs. Among others, rule 43, *General rules for preparation of financial statements,* is the most important for disclosure issue. The Securities and Exchange Ordinance 1969 is expedient to provide for the protection of investors, regulations of capital markets and issues and dealings in securities and for matters ancillary thereto (The

President of the People's Republic of Bangladesh, 1969). Section 11 of this Ordinance states that an issuer of a listed security shall furnish to the Stock Exchange, to the security holders and to the BSEC an annual report of its affairs. The Securities and Exchange Rules (SER) 1987 (Government of the People's Republic of Bangladesh, 1987) is applicable to the companies that are trading on the stock exchanges in Bangladesh. According to Rule 12, the annual report to be furnished by an issuer of a listed security shall include a balance sheet, profit and loss account, cash flow statement and notes to the accounts and that collectively refer to the financial statements. It is also depicted in this rule that the financial statements of an issuer of a listed security shall be prepared in accordance with requirements laid down in the schedule of this rules and the International Accounting Standards as adopted by ICAB. Therefore, all listed companies are to comply with the IAS and IFRS as adopted by ICAB. There is a schedule prescribing disclosure requirements under rule 12 of SER 1987. As per the Listing Regulations of the Dhaka Stock Exchange (DSE, 1996) and the Listing Regulations of the Chittagong Stock Exchange (CSE, 1997), the Company shall make available financial statements to the Stock Exchange before expiry of three months from the end of each financial year.

Besides, there are some important circulars issued by the regulators regarding corporate disclosure in annual report. BSEC issued a notification (No. SEC/CMRRCD/2006-158/134/Admin/44[1]) on August 07, 2012 for better corporate governance within the listed companies. According to the requirements of the guidelines, the directors of the companies shall include some additional qualitative statements on the financial

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It replaced the previous circulars (No. SEC/CMRRCD/2006-158/Admin/02-08, dated February 20, 2006 ; No. SEC/CMRRCD/2008-181/53/Admin/03/28, dated June 4, 2008)

statements in the Director's Report prepared under section 184 of the Companies Act 1994 (BSEC, 2012). Bangladesh Bank issued a circular on June 25, 2003 (BRPD Circular No. 14) to amend the prescribed format of financial statements under section 38 of Bank Companies Act 1991 (BB, 2003). Acknowledging some basic differences in Shariah-based Islamic Banking and interest-based, BB issued separate guidelines (BRPD Circular No. 15) for Islamic banking on November 09, 2009 (BB, 2009). For prescribing formats of financial statements of non-bank financial institutions, BB issued another circular (DFIM Circular No. 11) on December 23, 2009 (BB, 2009b). There are some other important circulars issued by BB governing disclosure[2]. Table 2.2 portrays a list of regulations along with their important provisions concerning corporate disclosure issues.

Table 2.2: List of regulations for the concerned companies of Bangladesh

S/N	Name of Regulation	Important Provisions
1.	The Securities and Exchange Ordinance 1969	Sec. 2CC: Power to impose conditions Sec. 2E: Power to call for information Sec. 2F: False information Sec 6: Accounts, Annual Reports, Returns, etc. Sec. 11: Submission of Returns Sec. 12. Submission of Statements of Beneficial Owners Listed Equity Securities. Sec. 18: Prohibition of false statements, etc. BSEC Notification (No. SEC/CMRRCD/2006-158/134/Admin/44, dated August 07, 2012)
2.	The Securities and Exchange Rules 1987	Rule 5: Maintenance of accounts and audit Rule 7: Maintenance of books of accounts and other documents by stock exchange Rule 8: Maintenance of books etc. by members Rule 12: Submission of annual report by issuers Rule 13: Submission of periodical reports by issuer Rule 14: Mode of filing or submission of returns/reports

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[2] DFIM Circular Letter No. 04, dated February 02, 2010; DFIM Circular Letter No. 21, dated December 20, 2011

3.	The Companies Act 1994	Sec. 181: Books to be kept by company and penalty for not keeping them
		Sec. 182: Inspection of books of accounts, etc. of companies
		Sec. 183: Annual balance sheet
		Sec. 184: Board's report
		Sec. 185: Form and contents of balance sheet and profit and loss accounts
		Sec. 186: Balance sheet of holding company to include certain particulars as to its subsidiary
		Sec. 187: Financial year of holding company and subsidiary
		Sec. 189: Authentication of balance sheet, profit and loss accounts. etc.
		Sec. 190: Copy of balance sheet etc. to be filed with registrar
		Sec. 191: Rights of members to copies of accounts and reports
		Sec. 192: Statement to be published by banking and certain other companies
4.	The Bank Companies Act 1991	Sec. 18: Transaction related to directors should be disclosed
		Sec. 36: Half yearly returns
		Sec. 37: Power for publishing information
		Sec. 38: Accounts and balance sheets
		Sec. 39: Audit
		Sec. 40: Report submission
		Sec. 40: Sending balance sheet etc. to the registrar
		Sec. 42: Display of audited balance sheet by the banking company operating in Bangladesh
		Sec. 43: Accounting provisions not retrospective
		BB Circular (BRPD Circular No. 14/2003; BRPD Circular No. 15/2009)
5.	The Financial Institution Act 1993	Sec. 11: Balance sheet exhibition
		Sec. 12: Furnishing information
		Sec. 23: Accounts and audit submission to the bank (BB)
		BB Circular (DFIM Circular No. 11/2009)
6.	The Insurance Act 2010	Sec. 26: Separation of accounts and funds
		Sec. 27: Accounts and balance sheet
		Sec. 28: Audit
		Sec. 29: Special audit
		Sec. 30: Actuarial report and abstract
		Sec. 32: Submission of returns
		Sec. 34: Furnishing reports

		Sec. 36: Custody and inspection of documents and supply of copies
		Sec. 37: Powers of Chief Controller of Insurance regarding returns
		Sec. 39: Evidence of documents
		Sec. 40: Returns to be published in statutory
7.	The Partnership Act 1932	It is expedient to define and amend the law relating to partnership
8.	Micro Credit Regulatory Rules 2010	Rule 13: Bookkeeping and other activities Rule 41: Maintaining register and records Rule 43: General rules for preparation of financial statements Rule 46: Internal audit of accounts Rule 47: External audit Rule 48: Submission of statements, reports, returns, etc.
9.	The Listing Regulations of Dhaka Stock Exchange Limited	Listing Regulation no. 36 titled Continuing Listing Requirements
10.	The Listing Regulations of the Chittagong Stock Exchange Limited	Listing Regulation no. 36 titled Continuing Listing Requirements

2.5 International Regulations

Along with local regulations, listed companies of Bangladesh are to comply with a number of international regulations. International Financial Reporting Standards (IFRSs) have been issued by IASB whereas International Accounting Standards (IASs) had been issued by IASC. IFRSs and IASs have been adopted in Bangladesh by ICAB as Bangladesh Financial Reporting Standards (BFRSs) and Bangladesh Accounting Standards (BASs) respectively. Status of IASs (BASs) and IFRSs (BFRSs) in Bangladesh as on January 1, 2013 is depicted in Table 2.3. All of the listed companies are to maintain these standards for preparing their financial statements. Bangladeshi companies are also following some US GAAP (Generally Accepted Accounting Principles) issued by FASB.

More than 150 Statement of Financial Accounting Standards (FAS) have been issued by FASB. In July 2009. FASB released Accounting Standards Codification codifying all authoritative US GAAP in one spot with roughly 90 topics (FAF, 2014). There are some other non-authoritative US GAAPs as well.

Islamic financial institutions (IFIs) like bank, insurance, non-bank financial institutions have to follow standards issued by AAOIFI. Among others, Financial Accounting Standard No. 1: *General Presentation and Disclosure in the FSs of Islamic Banks and Financial Institutions* is more relevant for the preparation of financial statements. As per BB guidelines, Islamic banks are to comply with Shariah rules issued by AAOIFI. The IFSB, an international standard-setting organization, issues standard, guidance note and technical note. IFSB-4: *Disclosures to Promote Transparency and Market Discipline for Institutions offering Islamic Financial Services,* is more relevant with preparation of financial statements of banks under Islamic Shariah. Pillar-3, *Market Discipline,* of Basel-II issued by the Basel Committee on Banking Supervision (BCBS) requires additional disclosure. In line with Basel II, BB has issued a revised guideline for banks titled "Guidelines on Risk Based Capital Adequacy (RBCA)" in December 2010. RBCA has come fully into force from January 01, 2010 with its subsequent supplements/revisions (BB, 2010b).

Table 2.3: Status of IASs (BASs) and IFRSs (BFRSs) in Bangladesh

BAS/ BFRS	BAS/BFRS Title	BAS Effective Date
BAS 1	Presentation of Financial Statements	on or after 1 January, 2010
BAS 2	Inventories	on or after 1 January, 2007
BAS 7	Statement of Cash Flows	on or after 1 January, 1999
BAS 8	Accounting Policies, Changes in Accounting Estimates and Errors	on or after 1 January, 2007
BAS 10	Events after the Reporting Period	on or after 1 January, 1999
BAS 11	Construction Contracts	on or after 1 January, 1999
BAS 12	Income Taxes	on or after 1 January, 1999
BAS 16	Property, Plant & Equipment	on or after 1 January, 2007
BAS 17	Leases	on or after 1 January, 2007
BAS 18	Revenue	on or after 1 January, 2007
BAS 19	Employee Benefits	on or after 1 January, 2013
BAS 20	Accounting of Government Grants and Disclosure of Government Assistance	on or after 1 January, 1999
BAS 21	The Effects of Changes in Foreign Exchange Rates	on or after 1 January, 2007
BAS 23	Borrowing Costs	on or after 1 January, 2010
BAS 24	Related Party Disclosures	on or after 1 January, 2007
BAS 26	Accounting and Reporting by Retirement Benefit Plans	on or after 1 January, 2007
BAS 27	Separate Financial Statements	on or after 1 January, 2013
BAS 28	Investments in Associates and Joint Ventures	on or after 1 January, 2013
IAS 29	Financial Reporting in Hyperinflationary Economics	on or after 1 January, 2015
BAS 31	Interest in Joint Ventures	on or after 1 January, 2007
BAS 32	Financial Instruments: Presentation	on or after 1 January, 2010
BAS 33	Earnings per Share	on or after 1 January, 2007
BAS 34	Interim Financial Reporting	on or after 1 January, 1999
BAS 36	Impairment of Assets	on or after 1 January, 2005
BAS 37	Provisions, Contingent Liabilities and Contingent Assets	on or after 1 January, 2007
BAS 38	Intangible Assets	on or after 1 January, 2005
BAS 39	Financial Instruments: Recognition and Measurement	on or after 1 January, 2010
BAS 40	Investment Property	on or after 1 January, 2007
BAS 41	Agriculture	on or after 1 January, 2007
BFRS 1	First-time adoption of International financial Reporting Standards	1 January, 2009
BFRS 2	Share-based Payment	1 January, 2007
BFRS 3	Business Combinations	1 January, 2010
BFRS 4	Insurance Contracts	1 January, 2010

BFRS 5	Non-current Assets Held for Sale and Discontinued Operations	1 January, 2007
BFRS 6	Exploration for and Evaluation of Mineral Resources	1 January, 2007
BFRS 7	Financial Instruments: Disclosures	1 January, 2010
BFRS 8	Operating Segments	1 January, 2010
IFRS 9	Financial Instruments	NA (Not yet adopted but under review process)
BFRS 10	Consolidated Financial Statements	1 January, 2013
BFRS 11	Joint Arrangements	1 January, 2013
BFRS 12	Disclosure of Interests in other Entities	1 January, 2013
BFRS 13	Fair Value Measurement	1 January, 2013
IFRS 14*	Regulatory Deferral Accounts	1 January, 2016 (Not yet adopted by ICAB)
IFRS 15*	Revenue from Contracts with Customers	1 January, 2017 (Not yet adopted by ICAB)

Source: www.icab.org.bd; *www.ifrs.org

2.6 Conclusion

From the above discussion, it is clear that a listed company of Bangladesh is to be regulated by a number of national and international regulators regarding disclosure issue. Quite a lot of regulations regarding disclosure have been issued by these regulators. Besides, a company may have its own policy regarding preparation of corporate annual reports. Some companies also try to make the annual report more informative to achieve national and international awards offered by ICAB, ICMAB, SAFA, etc. SAFA has developed evaluation criteria for general companies, banks, insurance, NGO, etc. ICAB uses the same criteria for awarding companies of the best published accounts and reports. Listed companies may be encouraged to report intellectual capital items in their corporate annual reports in addition to the regulatory requirements.

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Chapter Three

LITERATURE REVIEW

Chapter Outline

Chapter Three

LITERATURE REVIEW

3.1 Introduction

Generally, new economy, characterized by the globalization and the new technologies, highlights the prevailing IC (González-Loureiro and Dorrego, 2012). The growth of new economy has led to an increased interest in intellectual capital (IC) (Iazzolino, Migliano and Gregorace, 2013). With this rapid growth, IC has already replaced traditional production factors (such as land, capital, raw materials and labor) to become strategically important resource (Xinyu, 2014). Hence, IC is considered as a technique of attaining the competitive advantage on other rivals (Sami, Arshad and Ashraf, 2014). According to the resource-based theory, the IC is a main source to improve business performance (Ahmad and Mushraf, 2011). In a knowledge-based economy, it is indispensible for organizations to indentify, maximize and utilize their intellectual capital to stay in a competitive environment (Khalique, Shaari, Isa and Ageel, 2011). For that reason, the interest of the researchers in the role that IC plays within organizations has developed one main research stream, known as intellectual capital (Bueno, 2000). IC becomes a major part of companies' value in today's knowledge-based economy and thus its reporting concept in recent years has been gaining increased importance (Rentala, Shaban and Kavida, 2014). Consequently, a number of studies have been conducted in the field of IC, its measurement, impact on performance and disclosure. The remaining part of this chapter summarizes key aspects of some previous studies sorting out as developed country, developing country and Bangladesh perspective.

3.2 Developed Country Perspective

Guthrie and Petty (2000)

In this paper the authors examine Australian annual reporting of intellectual capital. They perform content analysis to examine the extent to which the various categories of intellectual capital are represented in the annual reports of the sample 20 largest listed companies as at December 1998 on the basis of market capitalization. Total 24 items of IC were coded from three IC categories as internal capital (nine), external capital (nine) and human capital (six). The result shows that internal capital 30%, external capital 40% and human capital 30% of total IC are disclosure by the companies. The researchers argue that Australian companies do not compare favorably with several European firms in their ability to measure and report their intellectual (IC) capital in the annual report.

Brennan (2001)

The caption of the study is "Reporting intellectual capital in annual reports: evidence from Ireland". The author performed content analysis of annual reports for the year 1999 of 11 knowledge-based Irish listed companies. IC framework includes 24 items across three IC categories (internal capital nine, external capital nine and human capital six). For the purpose of coding, author used 0 for the item did not appear in the annual report, 1 for the item appeared in annual report in narrative form, 2 for the item was given a numerical value in the annual report, and 3 for the Item was given a monetary value in the annual report. The study shows that the level of disclosure of IC attributes by the companies is low. He thinks that Irish companies are currently making little progress in measuring these assets. Such assets are rarely referred to in annual reports and, when referred to, it is in the most qualitative terms.

Olsson (2001)

The objective of the study is to analyze the annual reporting practices about human resources in corporate annual reports in major Swedish companies. For this purpose the author used content analysis method. Olsson (2001) focused on a sample of 18 largest listed Swedish companies. The study finds low level of information disclosure about human resources.

Bozzolan, Favotto and Ricceri (2003)

The study of Bozzolan et al. (2003) aims to answer two research questions namely - what is the amount and content of IC disclosure; and what are the factors that influence different voluntary reporting behaviors. They used content analysis as a research method and estimated using OLS regression. They studied annual report as at December 31, 2001as a source of data. A stratified sampling procedure was adopted. A total of 30 organizations were chosen from the non-financial companies listed in the Italian Stock Exchange. IC items covered internal structure 8, external structure 9, and human capital 5. Sentences were chosen as the recording unit. Each sentence was coded as a score of 0 if providing no information; with a score of 1 if providing qualitative information; and a score of 2 if providing quantitative information. Result shows that there is an extensive disclosure of external capital. Regarding the factors that can explain different voluntary reporting practices, authors suggest that industry and size are not important in determining the content of information disclosed. With regard to the amount of disclosure, results show that the average number of IC elements disclosed is 51. This figure suggests that Italian companies, on average, are aware of the importance of IC. Concerning the content of disclosure, the findings indicate that most of the information reported (49 per cent) is related to external

structure: 30 per cent is related to internal structure and the remaining 21 per cent concerns with human capital.

Petty and Cuganesan (2005)

Petty and Cuganesan (2005) conducted a study on "Voluntary disclosure of intellectual capital by Hong Kong companies: examining size, industry and growth effects over time". They applied content analysis on annual report of 53 listed companies for the year 1992, 1998 and 2002. In their study, IC items include structure capital (SC) 9, relationship capital (RC) 9 and human capital (HC) 6. Study shows that industry type, company size, growth and time influence disclosure level of the companies.

Shareef and Davey (2005)

Shareef and Davey (2005) performed content analysis for their study. They selected 52 intellectual capital items from three categories; internal, external and human capital. Sample firms were chosen from a single industry, which comprise 19 British listed football clubs. The authors examined the effect of size and performance on intellectual capital disclosure (ICD) practices. This paper shows that there is a positive correlation between size and performance with ICD. It is also reported that the most reported category is external capital.

Vandemaele, Vergauwen and Smits (2005)

Vandemaele, Vergauwen and Smits (2005) conducted a study to investigate ICD over three years. A total of 180 annual reports from the Netherlands, Sweden and the UK are analyzed in order to make inter company comparison. 20 annual reports from each

country for the year 1998, 2000 and 2002 selected for content analysis. Sentences were considered as the recording unit. They score 0 for non disclosure, 1 for qualitative disclosure and 2 for quantitative or graphical disclosure of IC items. In the disclosure index, SC items are 8, RC items are 9 and HC items are 5. The study reveals that the Swedish companies disclose more that of Dutch and UK companies. It also shows that there is an upward trend in the average amount of ICD over the periods under study.

Wong and Gardner (2005)

Content analysis method was performed by the authors based on a sample of 60 New Zealand companies. Sample consists of 30 hi-tech and 30 manufacturing companies. ICD was measured using a 24-item index dividing into three IC categories: internal, external and human capital. Wong and Gardner (2005) have found that industry sector has little influence on intellectual capital disclosure (ICD).

Oliveira, Rodrigue and Craig. (2006)

This paper seeks factors that influence the voluntary disclosure of intangibles information in annual reports of Portuguese listed companies. Research method was content analysis of annual reports. A total of 56 listed companies in Portugal (49 listed on the main market and 7 on the second market of Euronext Lisbon) as at December 31, 2003 were sample firms for the study. IC framework comprises 8 structural capital, 14 relationship capital and 10 human capital i.e., a total 32 items. They gave a score 2 to each item reported in quantitative terms, a score 1, if the item is reported in qualitative terms and a score zero, if the item is not referred to. The finding of the paper reports minimum disclosure 5.75%, maximum 72.22% and

average 30.3%. The voluntary reporting of intangibles is found to be influenced significantly by size, ownership concentration, type of auditor, industry and listing status in univariate analysis; and by size, industry, type of auditor, and ownership concentration (and listing status to a lesser extent) in multivariate analyses.

Guthrie, Petty and Ricceri (2007)

Guthrie, Petty and Ricceri (2007) conducted a research named "Intellectual Capital Reporting: Lessons from Hong Kong and Australia". They took top 50 of Australian companies and top 100 of Hong Kong companies by market capitalization as their sample. Content analysis of annual report was applied as research method. Annual reports of the sample companies for the year 2002 were the source of data. They used unweighted coding system. i.e., score 0 for not reported item and 1 for reported item. They considered the frequency of occurrence of the IC items for scoring. There are 18 items in the disclosure index (6 structural capital, 7 relationship capital and 5 human capital). In Hong Kong, minimum, maximum and average score are 2, 29 and 13.2 respectively. In the same way, minimum 0, maximum 105 and average 31.6 items are reported in one report of an Australian company. They reported that nearly 90% of IC information is discursive rather numerical term.

Sujan, and Abeysekera (2007)

Using the content analysis of annual reports of the top 20 firms listed on the Australian stock exchange in 2004, Sujan and Abeysekera (2007) describes the state of IC reporting practices in Australia. The sample firms were selected on the basis of market capitalization. Weighted coding system was used in this study, i.e., score 0 for non disclosure, 1 for qualitative disclosure, 2 for numerical disclosure and 3 for fiscal

disclosure of IC items. Nine structural capital, nine relationship capital and seven human capital items are included in IC framework. The result shows that out of total IC disclosure, structural capital is 28%, relationship capital is 53% and human capital is 19% where disclosure is mostly qualitative in nature. The study also compares the results with a previous Australian study conducted by Guthrie and Petty (2000) and confirms that reporting of IC is yet to be done within a consistent framework.

Striukova, Unerman and Guthrie (2008)

By this paper the authors report the results of an empirical investigation into the IC reporting practices of UK companies in four distinct sectors; ICT/software, pharma/biotech, retail, and real estate/utilities. Content analysis was performed to web page, annual report and accounts, annual review, interim report, analyst presentation, preliminary report, and other CSR report. The final sample comprises 15 companies across four broad sectors. IC items were selected from the three IC categories as internal (structural) capital category 7; external (relational) capital category 8; human (employee) capital category 5 and total 20 items. The size of disclosure was measured as a proportion of A4 page. The study reveals that the score of internal capital is 17%, external capital is 61% and human capital is 22% of total ICD.

Oliveras, Gowthorpe, Kasperskaya and Perramon (2008)

In this study the authors tried to contribute to the growing literature field of intellectual capital (IC) by analyzing corporate ICD by 12 leading Spanish firms. They performed content analysis of annual reports of a three-year period from 2000 to 2002. The IC framework comprises three categories: internal (structural) capital, external (customer/relational) capital and employee competence (human capital).

Each category was identified with several sub-category attributes. such as intellectual property. patents and copyrights. This study utilizes a software tool, rather than the manual coding adopted previously. They reported that the average of three years' ICD follows internal capital 18.5 %, external capital 59.6%, and employee competence 21.9 % of total ICD. There is a greater volume of communication in the area of external (customer/relational) capital than in either internal or employee capital.

Dumay (2009)

The purpose of this study is to critically investigate intellectual capital (IC) measurement. This paper is presented as a case study of Australian financial services company (AusFinCo). Case study of AusFinCo was performed for internal and external documents including annual reports and social impact report. Total 25 IC items were selected (relational capital 9, structural capital 8, human capital 8). The author argues that trying to "fit" existing popular frameworks to gather IC measurements inside organizations has little relevance to understanding the value-creation process. The study reveals that IC measurement has relied heavily on "accountingisation" and that alternate methods to understand IC need to be developed. The paper highlights that academics and practitioners need to develop new skills.

Bruggen, Vergauwen and Dao (2009)

The authors examined the determinants of decision to disclose IC in annual reports by Australian firms. They used content analysis of annual reports for the year 2002, 2003, 2004 and Ordinary Least Square (OLS) regression model was used to test the set hypotheses. Final sample consists of 125 firms publicly listed on Australian stock exchanges with an average asset size of 3.7 million AUS$. Intellectual capital

framework includes 36 items (general terms 9, human capital 10, structural capital 12 and relational capital 5). Bruggen et al. (2009) count the IC related words as the unit and frequencies of occurrence to determine the quantity of IC disclosure. Results show as human capital 3%, structural capital 92%, relational capital 0% and general terms 5% of total ICD. The paper reveals that industry type plays a key role as a determinant for the disclosure of intellectual property in annual reports. In addition, firm size is another determinant for intellectual capital disclosure of firms.

Davey, Schneider and Davey (2009)

The aim of this paper is to examine the nature and extent of intellectual capital disclosure among fashion companies, specifically to compare intellectual capital (IC) disclosure between European and orth American fashion companies as well as between fashion industry sectors. They made content analysis of the sample of accessible 2005 annual reports based on a check list of 34 items (internal capital 9; external capital 14 and human capital 11). Sample includes the top 15 European companies and the top 15 North American companies. Unweighted coding score 0 and 1 was followed for sentence as the coding unit. Result indicates that internal capital is 34%, external capital is 50%, human capital is 16% of total IC reporting. The results report that fashion companies do not value the role of the consumer in the brand value dynamic, customer satisfaction, nor customer loyalty as intellectual capital assets.

Guthrie, Steane and Farneti (2009)

The paper attempts to study annual reports (AR) and intellectual capital reports (ICR) of Australian Red Cross Blood Service (ARCBS) and compares with an earlier study

as well. The ARCBS is one of the few non-for-profit organizations producing ICR in Australia. This article compares the AR and ICR produced over the three years (2002/2003, 2003/2004 and 2004/2005). Content analysis research method of annual reports (AR) and intellectual capital reports was performed. Several interviews were conducted with a number of key ARBCS staff during 2006 to identify why and how they reported IC information. Internal capital 8, External capital 10, Human capital 14 were selected as IC items. This study counted the frequency with which different IC elements occur in these reports. It considered only the quantum of information disclosure, not the type of disclosure by examining the form of the disclosure (that is monetary, non-monetary and declarative). It comprises of internal capital 37%, external capital 33%, human capital 30% of total ICR whereas internal capital 43%, external capital 40%, human capital 17% of total AR were reported. The findings indicate a greater focus on internal and external capital with less focus on human capital. It shows that AR addressed the concerns of multiple stakeholder groups, whereas the ICR are more targeted towards specific audiences.

Orens, Aerts and Lybaert (2009)

In their paper the authors try to examine empirically the impact of web-based IC reporting on firm's value and its cost of finance. The authors have used content analysis of corporate web sites and simultaneous regression modeling. This study covers four continental European countries (Belgium, France, Germany and The Netherlands) to examine the presence of IC information. The data show that cross-sectional differences in the extent of ICD are positively associated with firm's value. Greater ICD in continental Europe is associated with lower information asymmetry,

lower implied cost of equity capital and lower rate of interest paid. The results show that firms tend to benefit economically from better IC disclosure.

Tovstiga and Tulugurova (2009)

Tovstiga and Tulugurova (2009) aim to present the findings of an empirical study that examines and compares the competitive impact of intellectual capital on enterprise performance in small innovative enterprises (SIE) situated in four geographical regions. The survey was set up in the form of an e-survey whereby respondents were invited to access and respond to the survey via an electronic link. Sample includes a total 122 (St Petersburg of Russia 42. Medicon Valley of Denmark 22, Black Forest of Germany 40, Silicon Valley of USA 18). Total IC items are 62. The research findings suggest that intellectual capital practices and their impact on enterprise performance are more similar than different across the regions studied, and that the firms' intellectual capital constitutes the more important determinant of enterprise performance relative to external factors. The research provides evidence that intellectual capital is perceived to be the most important factor driving competitive performance in all the regions.

Joshi, Ubha and Sidhu (2010)

Joshi, Ubha and Sidhu (2010) have done a research on the top 20 software and IT Australian companies which were selected based on market capitalization. Data were collected form the annual report for the year 2008 using content analysis method. Unweighted coding system was used in this study. There are 39 IC items in the disclosure index. According to their finding, the level of ICD is found to be low and reported in qualitatively.

3.3 Emerging Economy/Developing Country Perspective

April, Bosma and Deglon (2003)

April et al. (2003) investigated the intellectual capital measurement, reporting and management of the South African mining industry. Content analysis of annual reports as at March 2001 and interviews with senior individuals in mining companies were executed. Sample comprises 20 largest South African listed companies by market capitalization. Data were analyzed in accordance with a selected intellectual capital framework consisting 24 indicators across the three categories – internal, external and human capital. Only a "0" and a "1" were used, with a value of "1" indicating that the attribute was reported in some form and the number of occurrences was ignored. i.e. a value of "1" was chosen to mean that the attribute was mentioned at least once. Their findings of IC reporting are maximum 75% and minimum 3% and average 36%. Results show that mining companies tend to report fewer intellectual capitals attributes than other companies and tend to focus more on external attributes such as business collaborations and favorable contracts. They also showed that mining companies rated intellectual capital highly, but appear to be lacking in the measurement and reporting that capital. The mining companies value intellectual capital but there is a lack of appropriate systems and structures to manage intellectual capital meaningfully.

Abeysekera and Guthrie (2004)

Abeysekera and Guthrie (2004) studied on human capital reporting practices taken from a sample firms in Sri Lanka. Researchers have performed content analysis of annual reports for the period of 1998/1999 and 1999/2000 of 30 listed companies on the Colombo Stock Exchange based on market capitalization. Authors checked

frequency of line regarding 25 IC items. Featuring employee contribution was the most notable HC attribute found in the annual reports and 'entrepreneurial spirit' was one of the least reported items in Sri Lanka. It also reports that Sri Lankan firms invest a substantial amount into training their workforce.

Goh and Lim (2004)

The authors performed contents analysis for 20 most profitable companies listed on Malaysian Stock Exchange. Intellectual capital was classified as internal capital, external capital and human capital. The IC framework contains 24 individual IC attributes allocated across the three IC categories. They found that IC disclosure is highly in qualitative nature. Among the three IC categories, the most reported IC items belong to external capital.

Abeysekera and Guthrie (2005)

The purpose of the paper is to examine the 2-year trend of intellectual capital identification and codification as demonstrated in the annual reports. Annual reports for the years ending 31 December 1998 and 31 December 1999 of top 30 listed firms on the Colombo Stock Exchange by market capitalization were examined using content analysis. The external capital category comprises 10 intellectual capital items, the human capital category comprises 25 intellectual capital items, and the internal capital category comprises 10 intellectual capital items. Line counting and frequency of occurrence were followed for the selected items. The findings indicate that the most reported IC category during this period is external capital and the second most reported IC category is human capital. It is noted that the individual intellectual

capital items of each capital category reported by firms in Sri Lanka differ from those found in other countries.

Abeysekera (2007)

The author intended to examine the patterns of intellectual capital reporting (ICR) of listed firms in a developing nation. The aim of this paper was to highlight the differences in ICR practice between developing and developed nations. IC items comprise 25 items of human capital, 10 items of external capital, and 10 items of internal capital. The study began by examining each of the top 30 firms by market capitalization listed on the Colombo stock exchange during 1998/1999 and 1999/2000. Performing the content analysis method, it reviews the annual reports of these firms to determine the types of intellectual capital (IC) items reported in Sri Lanka. The findings highlighted the need for a uniform ICR definition and a reporting framework that provides comparative and consistent reporting under the auspices of a regulatory body. ICR differences were identified between Sri Lankan and Australian firms, and it was argued that these differences can be attributed to economic, social and political factors.

Abeysekera (2008)

The study investigated the intellectual capital (IC) disclosure trends and disclosure level in a developing nation, Sri Lanka, and moderately developed nation, Singapore. Annual reports of top 20 firms listed on Colombo Stock Exchange for three years from 1998 to 2000 were examined using content analysis method. The study on Sri Lankan firms included ten items in internal capital (seven in Singapore study), ten items in external capital (eight in Singapore study), and 25 items in human capital

category (six in Singapore study). Following frequency Count weighted scoring was as qualitative appearance of IC disclosure denoted 1; numerical (non-fiscal) appearance of IC disclosure denoted 2; and monetary (fiscal) IC disclosure denoted 3. The study depicts IC disclosure differences between Sri Lankan and Singapore firms, and indentifies reasons for differences from country perspectives. Researcher highlighted the need for a uniform methodology in intellectual disclosure framework to establish consistent disclosure practices. It also highlighted the need to undertake a uniform methodology for financial disclosure under International Financial Reporting Standards that can mobilize uniform IC disclosure practices globally.

Kamath (2008)

Kamath (2008) tries to study the extent of voluntary intellectual capital disclosers in Indian emerging information, communication and technology sector and the relationship between the size of the firm and the extent of disclosures. The study follows content analysis method using software for searching 39 IC terms. Annual reports for 2005-2006 in adobe acrobat format are the source of data and sample size covers a total of 30 technology, entertainment, communication and other knowledge (TecK) companies listed on the Bombay Stock Exchange. Here, technology indicates information technology, entertainment indicates media and publishing, communication indicates telecom and other knowledge-based industry indicates companies not falling in any of the three sectors. The annual reports, available in adobe acrobat format, were searched for selected key words for their presence or absence. The terms found and their counts were then tabulated. The results reveal that information technology industry's disclosures are more than that of the other sectors' disclosures and closely followed by the telecommunication industry. Entertainment

industry shows the minimal disclosures. Only a very small percentage of the total firms studied actually report IC items in their annual reports.

Xiao (2008)

Xiao (2008) examined the annual reports to know the extent the disclosure of intellectual capital in China using content analysis method. The study used annual reports for the year ending December 31, 2007. Top 50 firms listed on the Shanghai Stock Exchange (SSE) by market capitalization were selected as sample. Researcher's disclosure index comprised a total of 18 informational items (internal capital 6, external capital 7, and human capital 5). A score of zero was given to a sentence if it provided no IC information, a score of 1 was given if the sentence provided qualitative information and a score of 2 if provided quantitative information. If information is repeated in the annual report it is considered only once. Result shows that the maximum score is 16, minimum score is 4 and on average, companies disclose only 8.6 elements of IC information. In addition, human capital information disclosure comes in last, and the highest level of disclosure is performed by internal capital.

Chander and Mehra (2011)

Chander and Mehra (2011) conducted a study on intangible assets disclosure of 243 Indian companies for two periods 2003-04 and 2007-08. The annual reports of these companies were analyzed using content analysis. The results show that external capital is the most disclosed intangible asset category with a disclosure score of 37.90% and 35.83% in the years 2003-04 and 2007-08 respectively. They opine that the reporting of intangible assets is unorganized and unsystematic and there is a lack

of appropriate framework for disclosing intangible assets information in the annual reports.

Batista and Macagnan (2013)

The study examined 145 annual reports of 29 companies listed on the Brazilian Stock Exchange for five years period from 2005 to 2009 to present the level of voluntary human capital information. Unweighted coding system for content analysis was used for measuring disclosure. The statistical results reveal the association between the the factors such as size, debt, growth, time of registration with the Brazilian Securities and Exchange Commission and the level of voluntary human capital disclosure of the companies studied.

Lipunga (2013)

Lipunga (2013) conducted a study on intellectual capital disclosures in annual reports of commercial banks of Malawi applying unweighted coding system on annual reports and follow content analysis approach for measuring ICD. Sample covers 3 listed and 2 unlisted banks out of 11 total banks of Malawi. Including 10 internal capital items, 15 external capital items and 16 human capital items, the total IC framework comprises of 41 items. Results reveal 40% internal capital, 32% external capital, 29% human capital and average 32% IC items disclosed by the studied firms.

Majdalany and Henderson (2013)

The study titled "Voluntary Disclosure of Intellectual Assets and Intellectual Liabilities: Impact on Financial Performance in Publicly Listed Firms in the United Arab Emirates" is based on 124 companies' annual reports for the year 2010 and 2011. Following content analysis technique the authors use unweighted coding system. IC framework includes 498 items (human asset 158. relational assets 133, structural assets 146. human liabilities 13. relational liabilities 17 and structural liabilities 31). The findings show a positive relationship between human asset. relational assets, structural assets. human liabilities, relational liabilities and structural liabilities on one hand, and return on equity on the other hand.

3.4 Bangladesh Perspective

Ali, Khan and Fatima (2008)

Ali et al. (2008) investigate the level of awareness of Bangladeshi companies about intellectual capital and show how disclosures are made in the annual reports. They performed content analysis of annual reports for the period of 2005-2006 of top 22 companies listed on the Dhaka Stock Exchange. Considering internal capital 10, external capital 10, human capital 7 the total IC items stands at 27. The study uses unweighted disclosure index that means value 1 is given when information is available and 0 otherwise. They followed frequency counting of line. The results of the study show that Bangladeshi companies disclose a maximum of 19 items and a minimum of 4 items leaving an average disclosure of 9.7727 items. Further, their results show that the companies do not have a positive approach in reporting and interpreting the IC.

Khan and Khan (2010)

The purpose of their study is to examine the extent of human capital reporting in leading Bangladeshi firms. Content analysis technique was used in this study. Annual reports over three years of 32 leading manufacturing and service sector companies listed on the Dhaka Stock Exchange (DSE) were selected on the basis of the market capitalization. The result reveals that the HC reporting practices of leading Bangladeshi firms are not as low as projected in relation to the total list of items reported. According to their findings the most commonly disclosed HC items are information on employee training, number of employees, career development and opportunities that firms provide, and employee recruitment policies. They also comment that HC reporting trend is positive over the period of time.

Hossain (2011)

Hossain (2011) conducted a study to measure the level of IC disclosure practices by listed fuel & power and engineering companies. He classified IC into three categories – HC, SC and RC. An unweighted disclosure index, with 37 IC items, has been developed by him. As a source of data, the corporate annual reports for the year 2007-2008 were used in his study. The study shows that average disclosure score of HC, SC and RC are 37.94%, 64.81% and 60.19% respectively whereas overall disclosure score of the complains is 49.89%. The results also show that proportion of independent director, proportion of audit committee members and market capitalization are influencing factors to disclose IC items in the annual reports.

Nurunnabi, Hossain and Hossain (2011)

Nurunnabi et al. (2011) investigate the level of IC reporting practice by listed non financial companies in Bangladesh. They used weighed disclosure index and OLS regression analysis to test the association between company characteristics and the extent of the intellectual capital reporting. Score 0 was assigned if an item was not disclosed, 1 for qualitative disclosure, 2 for quantitative disclosure whereas 3 for both qualitative and quantitative disclosure of IC items. Annual reports of 90 listed companies were selected as a source of data. The disclosure index contains 63 IC items where 11 are structural capital (SC), 19 are relationship capital (RC) and 33 are human capital (HC) items. The results report that the level of average voluntary IC disclosure in the sample companies is 23.02%. The study also reports that size and industry are important attributes to explain the IC disclosure. Table 3.1 presents a summary of previous literatures with key information.

Table 3.1: Summary of previous literatures

Study • Data Ref • Time Ref	Sample • Research Method	Coding System • IC Framework	Key Findings
A. Developed Country Perspective			
Guthrie and Petty (2000) • Australia • 1998	Top 20 listed companies as at December 1998 • Content Analysis (CA) of Annual Report (AR)	Location, quantity, and nature of the information is recorded • SC=9, RC=9, HC=6, T=24	SC = 30%; RC = 40%; & HC = 30% of total ICD
Brennan (2001) • Ireland • 1999	11 knowledge-based companies • CA of AR	0 = Not disclosed 1 = Narrative 2 = Numerical 3 = Monetary • SC=9, RC=9, HC=6, T=24	Little progress in measuring IC assets, rarely reporting of IC and the most disclosure are in qualitative terms.
Olsson (2001) • Sweden • 1990, 1994 and 1998	18 largest listed Swedish companies • CA of AR	Only HC items	Low level of information about human resources, none of the companies were above 7%.
Bozzolan et al. (2003) • Italy • 2001	30 non-financial companies by stratified sampling • CA and frequency was ignored & there were 2 coders.	0= not disclosed 1=qualitative 2=quantitative • SC=8, RC=9, HC=5, T=22	SC = 30%; RC = 49%; & HC = 21% of total ICD. Average disclosure score is 51 IC items.
Shareef and Davey (2005) • United Kingdom • 2002	19 listed professional English football clubs • CA of AR	• Total 52 IC items	A positive significant correlation between the size of clubs, club performance and their overall ICD. Most reported category is RC followed by HC.
Vandemaele et al. (2005) • The Netherlands, Sweden and the UK • 1998, 2000 and 2002	180 ARs of the largest companies over 3 years. The Netherlands 20, Sweden 20 and UK 20 companies. • CA of AR & sentence is used as the recording unit	0 = not disclosed 1 = qualitative 2 = Quantitative & 2 = Graphics • SC=8, RC=9, HC=5, T=22	IC disclosure is increasing over the period of time. Sweden has the highest amount of IC disclosure
Wong and Gardner (2005) • New Zealand • 2004	30 high tech and 30 traditional companies selected randomly • CA of AR and sentence as a unit of reporting	4 digits code is used. 0000 = no IC, 1st = IC, 2nd = Type, 3rd = Item & 4th = Nature of disclosure. • SC = 6, RC = 7, HC = 5, T = 18	SC = 21%; RC = 48%; & HC =31% of total IC disclosure.

Study • Data Ref • Time Ref	Sample • Research Method	Coding System • IC Framework	Key Findings
Oliveira et al. (2006) • Portugal • 2003	56 Listed Companies • CA of AR	0=not disclosed 1=qualitative 2=quantitative & frequency of occurrence is ignored • SC=8, RC=14, HC=10, T=32	Minimum 5.75%, Maximum 72.2% & Average 30.3% IC disclosure. Significant influence of size, ownership concentration, type of auditor, industry and listing status on Disclosure.
Guthrie et al. (2007) • Hong Kong and Australia • 2002	Top 50 of Australian and top 100 of Hong Kong based on market capitalization • CA of AR	0= not reported 1= reported, Unweighted coding system and Frequency of occurrence counted • SC=6, RC=7, HC=5, T =18	In Hong Kong, minimum 2, maximum 29 & average 13.2 and in Australia, minimum 0, maximum 105 & average 31.6 items are reported in one report. Nearly 90% of IC information is discursive.
Sujan and Abeysekera (2007) • Australia • 2004	Top 20 firms by market capitalization • CA of AR	0=not disclosed 1=qualitative 2=numerical 3=fiscal • SC=9, RC=9, HC=7, T=25	SC = 28%; RC = 53%; & HC = 19% of total IC reporting. Mostly qualitative disclosure (73%).
Striukova et al. (2008) • United Kingdom • 2004	Total 15 from 4 distinct sectors; ICT/software, Pharma/biotech, Retail, Real estate/utilities • CA of all documents on websites	Coded as Narrative, non-monetary and monetary. Compared with proportion of A4 page • SC=7, RC=8, HC=5, T=20	SC = 17%; RC = 61%; & HC = 22% of total IC disclosure
Oliveras et al. (2008) • Span • 2000, 2001 and 2002	12 leading firms • CA of AR	Utilization of Software "Concordance" and frequency of IC items • Total 25 IC items	SC = 18.5 %; RC = 59.6%; HC = 21.9 % of total IC disclosure
Dumay (2009) • Australia	Australian financial services company (AusFinCo) • CA and Case Study	Annual Report, Social Impact Report, Strategic Plan and Performance Report were examined • SC=8, RC=9, HC=8, T=25	IC measurement has relied heavily on "accountingisation" & that alternate methods to understand IC need to be developed.

Study • Data Ref • Time Ref	Sample • Research Method	Coding System • IC Framework	Key Findings
Bruggen et al. (2009) • Australia • 2002, 2003, 2004	125 firms publicly listed on Australian stock exchanges with an average asset size of 3.7 million AUS$ • CA of AR	Word as unit & frequencies of occurrence to determine the quantity of IC disclosure • Gen= 9, SC=12, RC=5, HC=10, T=36	SC is the most frequently disclosed category, whereas hardly any disclosure of the RC category can be found. Key role of Industry type & Size for IC disclosure.
Davey et al. (2009) • Europe & North America • 2005	Top 15 European companies and top 15 North American companies • CA of AR	0 = not disclosed 1 = disclosed, i.e., Unweighted coding system • SC=8, RC=13, HC=11, T=32	SC = 34%; RC = 50%; & HC = 16% of total IC Disclosure
Guthrie et al. (2009) • Australia • 2002/2003, 2003/2004 & 2004/2005	Australian Red Cross Blood Service (ARCBS) • CA of AR & IC Report, case study & interview	Count frequency of occurrence but type of information ignored • SC=8, RC=10, HC=14, T=32	SC = 37%, RC = 33%, HC = 30% of total IC Report whereas SC = 43%, RC = 40%, HC =17% of total annual report.
Orens et al. (2009) • Belgium, France, Germany & Netherlands • Summer 2002	267 (43+97++84+43) non-financial listed largest firms from 4 countries • CA of Corporate websites	1=general disclosure 2=specifically 3=quantitative • SC=10, RC=16, HC=16, T=42	Greater IC disclosure in continental Europe is associated with lower information asymmetry, lower implied cost of equity capital and lower rate of interest paid.
Tovstiga and Tulugurova (2009) • Russia, Denmark, Germany, USA. • e-survey via an electronic link	Total 122 (Russia 42, Denmark 22, Germany 40, USA 18). • A questionnaire with 62 items	A five-point Likert-type scale for the scales relating to IC, External factors and performance • SC=9 and HC=9	Intellectual capital is perceived to be the most important factor driving competitive performance in all the regions.
Joshi et al. (2010) • Australia • 2008	Top 20 software and IT companies based on market capitalization. • CA of AR	Items disclosed and Lines counting, Unweighted coding system • Total 39 IC items	Disclosed 14 items; Not Disclosed 25 items. The levels of ICD are found to be low and are reported in qualitative.

Study • Data Ref • Time Ref	Sample • Research Method	Coding System • IC Framework	Key Findings
B. Emerging Economy/Developing Country Perspective			
April et al. (2003) • South Africa • March 2001	Top 20 largest listed companies by market capitalization • CA and Interview	0 = not reported 1 = reported item, i.e., Unweighted coding system • SC=9, RC=9, HC=6, T=24	SC=30.4%; RC=40.1%; & HC=29.5% of total ICD. There is a lacking in the measurement & appropriate systems of reporting IC.
Abeysekera and Guthrie (2004) • Sri Lanka • 1998/1999 and 1999/2000	Top 30 listed companies on the Colombo Stock Exchange based on market capitalization • CA by line counting & frequency	Frequency of IC item whether qualitatively or quantitatively • HC = 25	Featuring employee is the most reported and vocational qualifications, employee equity related issues & compensation plans are the least reported items.
Goh and Lim (2004) • Malaysia • 2004 & 2005	Top 20 most profitable listed companies • CA of AR	0= not disclosed 1= disclosed, i.e., Unweighted coding system • SC=9, RC=9, HC=6, T=24	SC = 36%; RC = 41.4%; & HC = 21.9% of total ICD. IC disclosure is highly in qualitative.
Abeysekera and Guthrie (2005) • Sri Lanka • 1998/1999 to 1999/2000	Top 30 listed companies on the Colombo Stock Exchange based on market capitalization • CA & frequency of appearance of IC item	-1=Intellectual Liability 0=not intellectual item 1=Intellectual Asset • SC =10, RC=10, HC=25, T=45	SC = 3rd reported item; RC = 1st reported item; HC = 2nd reported item.
Abeysekera (2007) • Sri Lanka & compared with Australia • 1998/1999 & 1999/2000	Top 30 listed companies on the Colombo Stock Exchange, based on market capitalization • CA of AR	Each IC item was recorded by frequency of occurrence, under each IC category • SC=10, RC=10, HC=25, T=45	SC=3rd Reported category; RC=1st Reported category; HC=2nd Reported category. ICR differences were identified between two countries for economic, social and political factors.
Abeysekera (2008) • Sri Lanka & compared with Singapore • 1998, 1999 and 2000	Top 20 listed companies on the Colombo Stock Exchange based on market capitalization • CA & frequency of appearance of IC item	1=qualitative reporting 2=non-fiscal reporting 3=monetary reporting • SC=10, RC=10, HC=25, T=45	IC disclosure differences between two countries for country perspectives. A uniform methodology in ICD framework is required.

Study • Data Ref • Time Ref	Sample • Research Method	Coding System • IC Framework	Key Findings
Kamath (2008) • India • 2005-2006	30 technology, entertainment, communication and other knowledge (TecK) • CA of AR	Items presence or absence was recorded. Unweighted coding system • Total 39 IC items	Out of 39 terms only 13 terms were found in annual report. Significantly small extent of IC disclosures in Indian firms.
Xiao (2008) • China • 2007	Top 50 firms listed on the Shanghai Stock Exchange (SSE) by market capitalization • CA of AR	0 = not disclosed 1 = qualitative 2 = quantitative. Repetition is ignored • SC=6, RC=7, HC=5, T=18	SC = 1st; RC = 2nd ; & HC = 3rd disclosed item. Maximum 16, Min 4 and Ave 8.6 elements of IC information.
Chander and Mehra (2011) • India • 2003-04 and 2007-08	243 companies • CA of AR	0 = not disclosed 1 = qualitative 2 = quantitative. Repetition is ignored • SC=7, RC=8, HC=8, IC Score Sheet=1, Mandatory=5, T=29	External capital is the most disclosed intangible asset, 37.90% and 35.83% in the years 2003-04 and 2007-08 respectively.
Batista and Macagnan (2013) • Brazil • 2005-2009	29 listed companies • CA of AR	0= not disclosed 1= disclosed, i.e., unweighted coding system • Only HC =30	Size, debt, growth and time of registration explain the level of voluntary human capital disclosure
Lipunga (2013) • Malawi • 2011	Listed 3 and unlisted 2 banks • CA of AR	0= not disclosed 1= disclosed, i.e., unweighted coding system • SC=10, RC=15, HC=16, T=41	80% of sample banks disclose IC SC= 40% RC= 32% HC= 29% Average score= 32%
Majdalany and Henderson (2013) • United Arab Emirates • 2010 and 2011	All of 124 listed companies • CA of AR	0= not disclosed 1= disclosed, i.e., unweighted coding system • HA=158, RA=133, SA=146, HL=13, RL=17, SL=31, Total=498 A=Asset; L=Liability	The findings indicate a statistically positive relationship between HA, RA, SA, HL, RL, and RL on one hand, and Return on Equity (ROE) on the other hand

Study • Data Ref • Time Ref	Sample • Research Method	Coding System • IC Framework	Key Findings
C. Bangladesh Perspective			
Ali et al. (2008) • Bangladesh • 2005-2006	Top 22 listed companies by market capitalization • CA of AR	0 = not reported 1 = reported item, i.e., Unweighted coding system • SC=10, RC=10, HC=7, T=27	Maximum 19, Minimum 4 & Average disclosure is 9.7727 (about 36%) items.
Khan and Khan (2010) • Bangladesh	32 leading manufacturing and service sector firm listed on the DSE, based on market capitalization • CA of AR	Only HC items	HC reporting practices are not as low as projected in relation to the total list of items reported. HC reporting trend is positive over the period of time.
Hossain (2011) • Bangladesh • 2007-2008	8 Fuel & Power and 16 Engineering Listed Companies • CA of AR	0 = not reported 1 = reported item, i.e., Unweighted coding system • SC=9, RC=9, HC=19, T=37	SC = 64.81%; RC = 60.19%; HC = 37.94%; and Average = 49.89% of required IC items
Nurunnabi et al. (2011) • Bangladesh • 2008	90 listed non-financial companies • CA of AR	0=not disclosed 1=qualitative 2=quantitative 3=both, and repetition is ignored • SC=11, RC=19, HC=33, T= 63	The level of average IC disclosure is 20.72 (23.02%), with a maximum of 41 (45.56%) and a minimum of 4 (3.33%).

Source: Researcher's own compilation

2.5 Conclusion

The review of current literatures reveals that most of the researchers (e.g. Guthrie and Petty, 2000; Brennan, 2001; Lipunga, 2013; Majdalany and Henderson, 2013; etc.) use content analysis as a method of research. Annual reports are commonly used as data sources in the previous studies e.g. Olsson (2001), April et al. (2003), Ali et al. (2008), Joshi et al. (2010), Batista and Macagnan (2013), etc. Corporate websites of the companies are also used by some researches like Striukova et al. (2008), Orens et al. (2009). Separate intellectual capital report of the company has been analysis by Guthrie, Steane and Farneti (2009).

Top listed companies based on market capitalization were selected as sample by some of the research papers (such as Guthrie and Petty, 2000; Goh and Lim, 2004; Xiao, 2008; Davey et al. 2009) whereas some other studies follow purposive sampling technique (such as Bozzolan et al., 003; Tovstiga and Tulugurova, 2009; Nurunnabi et al., 2011; Lipunga, 2013).

April et al. (2003), Goh and Lim (2004), Ali et al. (2008), Davey et al. (2009), Lipunga (2013) used unweighted disclosure index whereas Brennan (2001), Vandemaele et al. (2005), Xiao (2008), Nurunnabi et al. (2011) used weighted disclosure index though weightage allocation is different among them. Abeysekera and Guthrie (2005) unlikely allotted -1 (minus one) for intellectual liability disclosure and Wong and Gardner (2005) used four-digit coding system.

Intellectual capital (IC) is mostly classified into three categories e.g., structural capital, relational capital and human capital. Bruggen Vergauwen and Dao (2009) consider general IC items as a separate group. Contrary to it, Majdalany and Henderson (2013) consider IC liabilities under three categories. A number of studies (for instance, Guthrie and Petty, 2000; Wong and Gardner, 2005; Oliveira et al., 2006; Kamath, 2008; Joshi et al., 2010; Lipunga, 2013) reveals that the extent of IC disclosure is very low (less than 50%) while other studies show that IC disclosure is increasing over time (Vandemaele et al., 2005; Khan and Khan, 2010). It is also revealed that most of the IC disclosure is qualitative (Brennan, 2001; Goh and Lim, 2004; Joshi et al., 2010). A positive association between extent of IC disclosure and company size, age, profitability, nature of industry, types of auditor is found in some studies (Oliveira et al., 2006; Batista and Macagnan, 2013). Again, some studies report a positive association between IC and financial performance, innovation, risk management, value creation and/or corporate reputation of the company (Ting and Lean, 2009; F-Jardón and Martos, 2009; Wu, Lee and Wang, 2012; Ngari et al., 2013; Kharal et al., 2014; Xinyu, 2014 Lu, Wang and Kweh, 2014). Despite these studies, García de Leaniz, and Rodríguez del Bosque (2013) comment that sustainability research in the field of IC has not become a widely studied topic in premier journals. The present study made an attempt to examine the IC reporting practice by listed companies in Bangladesh. It is expected that the study has a contribution to minimize research gap of the previous studies on Bangladeshi firms.

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Chapter Four

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Chapter Outline

Chapter Four

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

4.1 Introduction

Intellectual capital (IC) has been considered by many, defined by some, understood by a select few, and formally valued by practically no one (Stewart, 1997; Sveiby, 1997; Bontis, 1998). Understanding and defining IC is thus a great challenge now-a-days. Different scholars define IC in different ways. Scope and framework of IC also differ according to their definitions. Some of the scholars proposed framework for recognizing and measuring this type of asset. Some of the researchers believe that IC influences greatly the performance of a company. Some of the authors opine that a company who has IC enjoys competitive advantage over those who do not. Some of them say that IC assets act to create corporate value and reputation. Zéghal and Maaloul (2010) state that IC has a positive impact on economic and financial performance. The following parts of this chapter illustrate conceptual aspects of intellectual capital and develop some hypotheses based on prior research.

4.2 Intellectual Capital Defined

The term IC was first proposed by Galbraith (1969), as a form of knowledge, intellect, and brainpower activity, which uses knowledge to create value (Shih, Chang and Lin, 2010). But, Stewart (2001) claimed that he first used IC back in 1958 (Chang and Hsieh, 2011). The most short and snappy definitions of intellectual capital is given by

Stewart (1997) as 'packaged useful knowledge'. According to his opinion, IC includes an organization's processes, technologies, patents, employees' skills, and information about customers, suppliers and stakeholders. Sveiby is the first thought-leader who published the book titled "The Knowhow Company" in Swedish in 1986 and proposed how to create, leverage and measure IC (Sveiby 2001; Yongvanich, and Guthrie 2004). Yongvanich and Guthrie (2004) stated in their paper that the world's first book on knowledge management was written by Sveibly in 1990 (Sveiby 2001). Sveiby (1997) stated that people in an organization direct their efforts in two directions primarily: outward working with customers or inward maintaining and building the organization. The first article on IC, "Brainpower" was published in 1991 by Stewart (Stewart 1991; Yongvanich and Guthrie 2004). According to Stewart (1997), IC is intellectual material - knowledge, information, intellectual property and experience that can be put to use to create wealth. Thus, IC is the possession of knowledge, applied experience, organizational technology, customer relationships, and professional skill that provide a competitive edge in the market (Edvinsson and Malone 1997). Edvinsson and Sullivan (1996) defined IC as knowledge that can be converted into value. Brooking (1996) says that IC is the term given to the combined intangible capital which enable the company to function. Stewart (1997) refers IC as the aggregation of all knowledge and competences of employees that can bring about competitive advantages. Booth (1998) argues that IC is the ability to translate new ideas into products or services and it comprises people related assets, non-people related (market assets) and internal assets. Skandia Insurance Company (1998) defines IC as the possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provides the company with a competitive edge in the market. Likewise, Mayo (2001) acknowledges that IC

is the synonym of knowledge, information, intellectual properties, experience, and other intangible assets. Rastogi (2000) states that IC is the ability owned by an organization as a whole to constantly face existing and potential challenges, and respond in a creative and effective manner. Petty and Guthrie (2000) state that IC is instrumental in the determination of enterprise value and national economic performance. It is, therefore, commented that there has been no generally accepted definition of intellectual capital (IC) (Kavida and Sivakoumar, 2009; Canibano et al., 2000; Bhartesh and Bandyopadhyay, 2005; OECD, 2006).

The terms 'intellectual capital' and 'intangible capital' are used interchangeably as they all represent a non-physical claim to future benefits (Kavida and Sivakoumar, 2009). This is also indicated in International Accounting Standard (IAS) issued by International Accounting Standard Committee (IASC). IAS 38 defines intangible asset as an identifiable non-monetary asset without physical substance (IASB, 2006). Some intangible assets may be contained in or on a physical substance such as a compact disc (in the case of computer software), legal documentation (in the case of a license or patent) or film (IASB, 2006). IAS 38 presents some common examples of intangible assets like computer software, patents, copyrights, motion picture films, customer lists, mortgage servicing rights, fishing licenses, import quotas, franchises, customer or supplier relationships, customer loyalty, market share, marketing rights etc. (IASB, 2006). From these examples it is clear that IAS 38 includes intellectual capital items in intangible assets. In this context, Kavida and Sivakoumar (2009) rightly affirmed that;

> "Economists call them (IC) knowledge capital, management experts refer
> to them as intellectual capital, and accountants call them intangible capital
> or intellectual capital. Intangible capital is a generic term used in

describing the invisible capital of a firm that generates value for it. Intangible capital, in its evolving forms, is commonly referred to as intellectual capital or knowledge capital or intellectual assets. If intellectual capital is considered as an input, then intellectual assets is referred to as output, in an intangible form. Intellectual assets, when legally protected, become intellectual property" (Kavida and Sivakoumar, 2009).

Accounting standards do not allow a full recognition and disclosure of IC components (Meer-Kooistra and Zijlstra, 2001) because IAS 38 has acknowledged the difficulty in quantitatively verifying IC processes for financial reporting purposes (Abeysekera, 2008). Besides, financial accounting records only transaction which is measured in terms of money. Although, IAS 38 acknowledges that entities frequently expend resources, or incur liabilities, on the acquisition, development, maintenance or enhancement of intangible resources such as scientific or technical knowledge, design and implementation of new processes or systems, licenses, intellectual property, market knowledge and trademarks (IASB, 2006). This type of capital should be provided properly in the annual reports of the companies. Petty et al. (2008) argued that IC is the link between personal knowledge within group of an organization, and it can serve as a basis for decision making. Moreover, the better assessment and belief of the company's future wealth creation capabilities might raise the company share price and, thus, the market capitalization (Williams, 2001).

Business resources may be classified as physical resources, financial resources and intellectual resources. In the competitive market, IC plays a significant role to face challenges and to cope up with opportunities. It also creates value for the organization. To be effective, efficient and innovative, there is no alternative to having IC. Therefore, IC contributes a lot to improve the business performance. To

ensure proper utilization of physical and financial capital, company should hold sufficient IC. Figure 1 presents the importance of IC in an organization. IC is generally classified as human capital (HC), structural capital (SC) and relationship capital (RC). To explain the significance of IC in a company, we may take an example of a bi-cycle. Body of the bi-cycle may be compared to the physical assets of the company. Human capital of the company acts as a pedal/engine to operate the physical assets whereas sprocket is compared to structural capital which is the foundation of business performance. The chain of the cycle may be identified as relationship capital to expose the company to external parties. The combined efforts of all types of capital determine the performance of the entity which is compared to speed of running the cycle. None of the elements should be ignored for the success of a company.

Figure 4.1: Contribution of IC on business performance
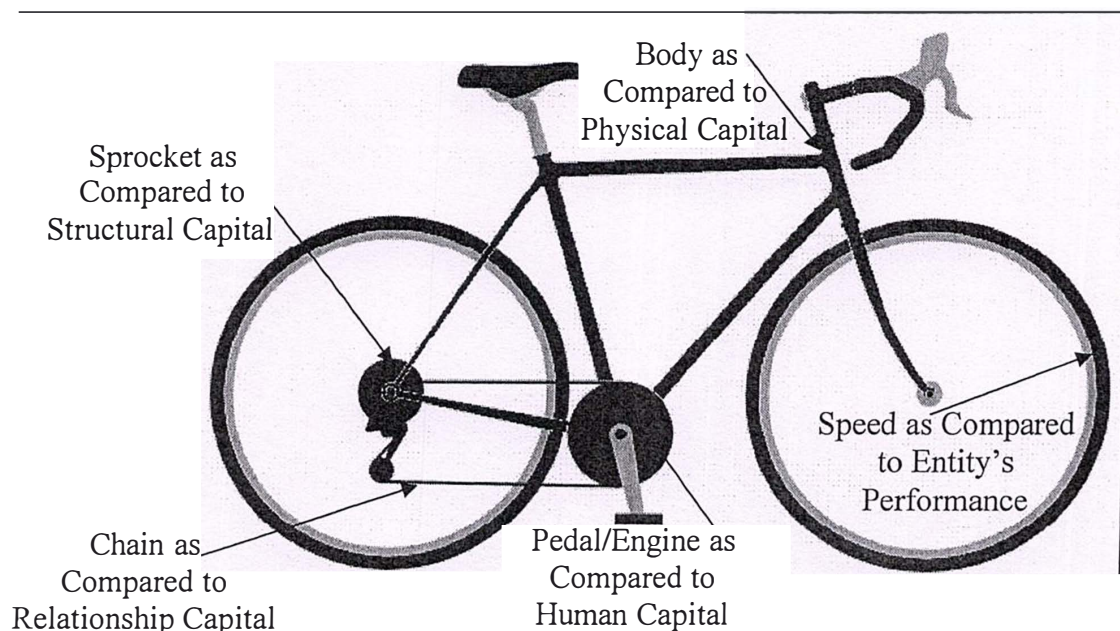
Source: Developed by the researcher

According to Carrington (2009), IC represents an intangible resource that has been created or acquired by the firm and can be used to provide future economic benefits to the entity. So, it can be stated that IC is a term used for knowledge-based resources of organizations (Striukova, Unerman and Guthrie, 2008; Joshi, Ubha and Sidhu, 2010). Shih, Chang and Lin (2010) state that any intellectual materials that can create wealth, such as knowledge, information, techniques, intellectual properties, experience, learning ability of organizations, and customer relationships, can be the most valuable assets and most advantageous tools in competition. It is the kind of movement from "having" knowledge and skills to "using" knowledge and skills (Chang and Hsieh 2011). Hence, IC is the intellectual properties or intellectual assets transferred by knowledge (Shih, Chang and Lin, 2010). Where Brennan (2001), Striukova, Unerman and Guthrie (2008) mentioned that the value of intellectual capital is the difference between market value and book value of a company though there are a number of problems with this measure. This concept can be used to measure the IC. Dzinkowski (2000) consider IC as the total inventory of capital or knowledge-based resources owned by an organization. In the same way, Bontis (2004) defined IC as a stock of knowledge at a given time.

Canibano et al. (2000) opine that IC is defined as assets which lack physical substance but which are likely to yield future benefits. Based on the annual report of Skandia, a Swedish insurance company, Ahmad and Mushraf (2011) presents IC model as depicted in Figure 2. Here, HC indicates knowledge skills and capabilities; SC indicates everything that remains when employees go home, e.g. organizational structure; customer capital (CC) indicates the relationship built up with the customers;

and relational capital indicates reputation of organization. Thus, I C is the aggregate sum of all intangible value.

Figure 4.2: Skandia I C model

Intellectual Capital	
Human Capital	Structural Capital
Customer Capital	Organization Capital
Innovation Capital	Process Capital
Innovation Property	Intangible Assets
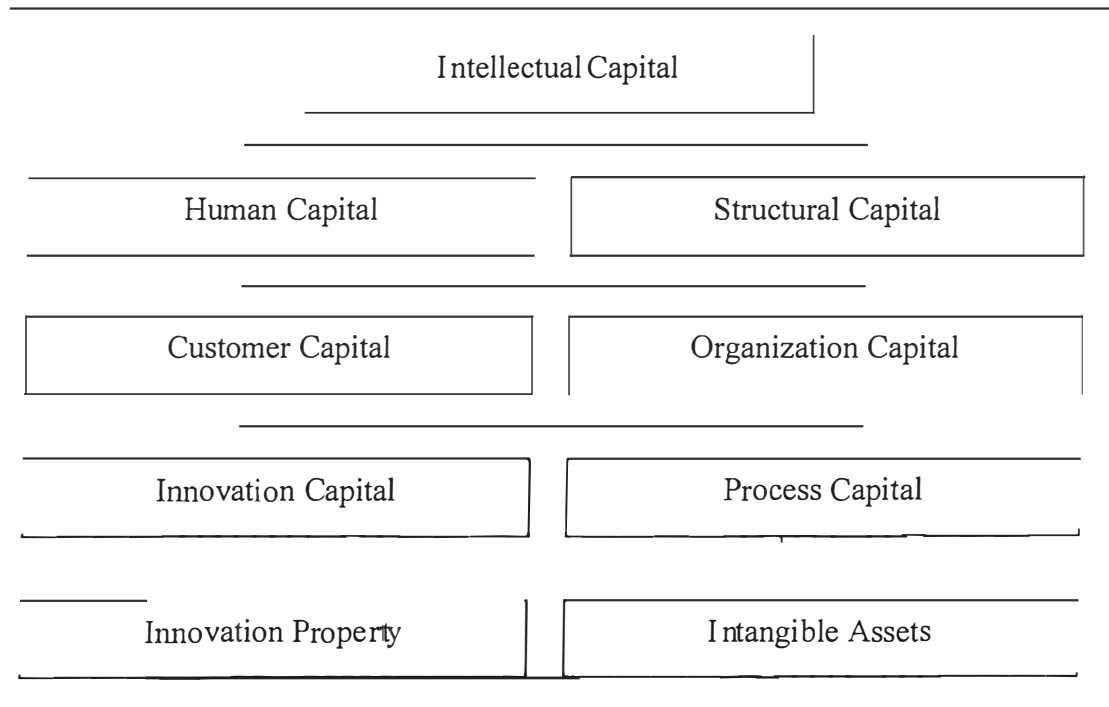
Source: Ahmad and Mushraf (2011)

From the above discussion it can be said that I C is capable enough to create wealth of an organization. It has future economic benefits. To acquire or create this capital companies have to spend resources. It is not less important than tangible asset. It has positive impact on market value and financial performance of firms. Companies' prosperity and sustainability depend on IC also. Tangible capital cannot work properly without having intellectual capital. Therefore, this resource should be recognized appropriately and reported properly. IC disclosure is an appropriate approach for companies to meet stakeholders' I C information needs (Bruggen, Vergauwen and Dao, 2009). Since, stakeholders are not fully aware of the gap between the fair and reported value of the firm (Lev, 1999; Lev and Mintz, 1999), this increase in the "unexplained gap" may tend to support the function of I C disclosure as

bridging the "unexplained gap" so that stakeholders can make more informed economic decisions (Abeysekera, 2008). According to Andriessen (2004), information asymmetry may result in the misallocation of capital, which eventually leads to social costs such as unemployment or reduced productivity. A reduction of information asymmetry has advantages, such as lower costs of capital. IC disclosure can help to increase the value relevance of financial statements (Bruggen, Vergauwen and Dao, 2009). The reduction in borrowing costs is due to stakeholders' better estimates of firm risk and a larger pool of potential investors (Bontis, 2003; Andriessen, 2004; Vergauwen and van Alem, 2005). Thus, the present study defines IC as an instrument for proper utilization of physical and financial capital to achieve organizational goals. A summary of several researchers' definitions is presented in Table 4.1.

Table 4.1: Summary of definitions of IC given by the prior IC researchers

Prior work	Definition
Galbraith (1969)	A form of knowledge, intellect, and brainpower activity, which uses knowledge to create value.
Brooking (1996)	IC is the term given to the combined intangible assets which enable the company to function.
Edvinsson and Sullivan (1996)	IC is knowledge that can be converted into value.
Edvinsson & Malone (1997)	IC is the possession of knowledge, applied experience, organizational technology, customer relationships, and professional skill that provide a competitive edge in the market.
Roos et al. (1997b)	The sum of knowledge of company's members and practical translation of this knowledge like trademark, patents and brands.
Stewart (1997)	A 'packaged useful knowledge' that includes an organization's processes, technologies, patents, employees' skills, and information about customers, suppliers and stakeholders.
Booth (1998)	IC is the ability to translate new ideas into products or services and it comprises people related assets, non-people related (market assets) and internal assets.

Skandia Insurance Company (1998)	IC is the possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provides the company with a competitive edge in the market.
Sveiby (1998)	IC is the knowledge, experience, brainpower of employee as well as knowledge resources, stored in an organizations databases system processes, culture and philosophy.
Sullivan (1999)	IC can be defined as the knowledge that can be converted into future profits and comprises resources such as ideas, inventions, technologies, designs, processes and informatics programs.
Caddy (2000)	IC is the difference between intangible assets and intangible liabilities.
Rastogi (2000)	IC is the ability owned by an organization as a whole to constantly face existing and potential challenges, and respond in a creative and effective manner.
Petty and Guthrie (2000)	IC is instrumental in the determination of enterprise value and national economic performance.
Dzinkowski (2000)	IC is the total inventor of capital or knowledge-based resources owned by an organization.
Brennan (2001),	The value of intellectual capital is the difference between market value and book value of a company
Bontis (2001)	The collection of intangible resources and their flows.
Mayo (2001)	IC is the synonym of knowledge, information, intellectual properties, experience, and other intangible assets.
Bontis (2004)	IC is a stock of knowledge at a given time.
Wang and Chang (2005)	IC assists enterprises in promoting competitive advantage and value.
European Commission (2006)	The IC is the collection of intangibles which allows an organization to transfer a collection of material, financial and human resources into a system capable of creating value for the stakeholders.
IASB (2006)	An identifiable non-monetary asset without physical substance though some intangible assets may be contained in or on a physical substance.
Denise Hung et al. (2007)	IC is a composite of the wisdom, intelligence, flexibility, creativity, and entrepreneurship core competencies necessary to succeed in an increasingly competitive global economy where technology and knowledge dominate.
Petty et al. (2008)	IC is the link between personal knowledge within group of an organization, and it can serve as a basis for decision making.
Striukova, Unerman, and Guthrie (2008),	IC can be defined as the intellectual, or knowledge-based, resources of an organization.

Kavida & Sivakoumar (2009)	The terms 'intellectual capital' and 'intangible capital' are used interchangeably as they all represent a non-physical claim to future benefits.
Carrington (2009)	IC represents an intangible resource that has been created or acquired by the firm and can be used to provide future economic benefits to the entity.
Joshi, Ubha and Sidhu (2010).	IC is a term used for knowledge based resources of organizations
Shih, Chang and Lin (2010)	Any intellectual materials that can create wealth, such as knowledge, information, techniques, intellectual properties, experience, learning ability of organizations, and customer relationships, can be the most valuable assets and most advantageous tools in competition. IC is the intellectual properties or intellectual assets transferred by knowledge.
Chang and Hsieh (2011)	It is the kind of movement from "having" knowledge and skills to "using" knowledge and skills.
González-Loureiro and Dorrego (2012)	IC is usually referred as the intangible – invisible assets or knowledge resources that are able to create value in firms
Lipunga (2013)	Intangible resources are referred to as intellectual capital or intellectual assets
Córcoles (2013)	IC, when referred to a university, is a term used to cover all the institution's non tangible or non physical assets, including processes, capacity for innovation, patents, the tacit knowledge of its members and their capacities, talents and skills, the recognition of society, its network of collaborators and contacts, etc.
Karami et al. (2014)	IC is the total capabilities, knowledge, culture, strategy, process, intellectual property, and relational networks of a company that create value or competitive advantage and help a company to achieve its goals.
Sami et al. (2014)	IC is technique of attaining the competitive edge by consuming human, structural and physical capital in distinctive way.

Source: Compiled by the researcher from different prior works.

4.3 Intellectual Capital Framework

4.3.1 Groups of IC Items

Sujan and Abeysekera (2007) comment that key components of intellectual capital (IC) are poorly understood, inadequately identified, inefficiently managed and inconsistently reported. Different researchers define and categorize IC in different ways. In most of the cases IC items have been classified into three categories with different labels (e.g. Kaplan and Norton, 1992; Edvinsson and Malone, 1997; Stewart, 1997; Sveiby, 1997; Bontis et al., 2000; Wong and Gardner, 2005; Oliveira et al., 2006; Davey et al., 2009; Nurunnabi et al., 2011; Iazzolino et al., 2013; Karami et al., 2014; Sami et al., 2014; Xinyu, 2014; etc.). Sometimes, these items are classified into two broad groups (OECD, 1999; Tovstiga and Tulugurova, 2009) whereas some of the studies classify IC items into four categories (e.g., Skandia, 1994; Brooking, 1996; Roos et al., 1997; Hussi and Ahonen, 2002; Boekestein, 2009; Bruggen et al., 2009; Ortiz, 2009; Chander and Mehra, 2011; Karchegani et al., 2013; etc.). Considering assets and liabilities of IC, Majdalany and Henderson (2013) categorize under six heads.

4.3.2 Framework of IC Items

Kaplan and Norton (1992) analyze IC from three perspectives –customer perspective, internal procedure or business process perspective and learning & growth perspectives. Skandia (1994) classifies IC items as human capital, structural capital, customer capital and relational capital whereas Brooking (1996) classifies IC into four categories – market assets, intellectual property assets, human centered assets and infrastructure assets. Human capital, structural capital and customer capital are

categories proposed by many researchers including Edvinssson and Malone (1997). Roos et al. (1997) suggest that IC consists of four broad categories like human capital, business process capital, business renewal & development capital and customer relationship capital. Sveiby (1997) states that the invisible assets on an organization's balance sheet can be classified as a family of three – employee competence, internal structure and external structure while OECD (1999) proposes two categories of intangible assets of a company – organizational (structural) capital and human capital. Hussi and Ahonen (2002) classify IC into four groups as human capital, process capital, relationship capital and innovation capital. Boekestein (2009) categorizes the IC as intellectual property indicating rights, structural capital indicating technology, customer capital indicating customer or contracts and human capital indicating expertise. Bruggen et al. (2009) classify the IC terms as human capital, structural capital, relational capital and general IC terms. Differently, Ortiz (2009) presents a model for IC components in three dimensions – (i) nuclear, that cannot be transferred, packaged or commercialized, (ii) radial, that are generated by the human capital and are differentiated by their transferability capacity and (iii) peripheral dimensions are as part of the organization's processes. Orens, Aerts and Lybaert (2009) present IC items under human capital, internal capital and customer value. Tovstiga and Tulugurova (2009) frame IC items under two broad categories – human capital and structural capital. Human capital includes competence, attitude and intellectual agility whereas structural capital comprises relationships, organization, and renewal and development. Human resources, external assets, internal assets and intellectual property assets are the classification of IC as is used in the study of Chander and Mehra (2011). Majdalany and Henderson (2013) categorize IC as assets and liabilities groups under human, relational and structural items. Kharal et al. (2014) and Sami et

al. (2014) propose a framework of IC items under human capital, structural capital and capital employed similar categories are proposed by Xinyu (2014) as human capital, structural capital and financial capital. Along with other three groups, spiritual capital group of IC items is proposed by Karchegani et al. (2013). But most of the researchers categorize IC into three basic components – human capital (HC), structural capital (SC) and relationship capital (RC) using different levels for them (see Johnson, 1999; Knight, 1999; Bontis et al., 2000; Vandemaele et al., 2005; Ali et al., 2008; Dumay, 2009; Córcoles, 2013; Lipunga, 2013; Verbano and Crema, 2013; etc.). In consistent with the major studies, the present study uses intellectual capital items under three categories such as human capital (HC), structural capital (SC) and relationship capital (RC). Table 4.2 presents a summary of IC framework given in the prior literatures.

Table 4.2: Summary of IC framework in different ways

Reference	IC Framework
Kaplan and Norton (1992); Wu, Lee and Wang (2012)	▪ Customer perspective ▪ Internal procedure or business process perspective and ▪ Learning and growth perspectives
Skandia (1994)	▪ Human Capital ▪ Structural Capital ▪ Customer Capital ▪ Relational Capital
Brooking (1996)	▪ Market assets ▪ Intellectual property assets ▪ Human centered assets and ▪ Infrastructure assets
Edvinssson and Malone (1997); Stewart (1997); Bontis et al. (2000); Khalique et al. (2011); Karami et al. (2014)	▪ Human capital ▪ Structural capital and ▪ Customer capital

Reference	IC Framework
Roos et al. (1997) Edvinssson and Malone (1997b)	▪ Human capital ▪ Business process capital ▪ Business renewal & development capital and ▪ Customer relationship capital
Sveiby (1997); Goh and Lim (2004)	▪ Employee competence ▪ Internal structure and ▪ External structure
Johnson (1999); Chen (2001); Dumay (2009); Ngari et al. (2013)	▪ Human capital ▪ Structural capital ▪ Relationship capital
Knight (1999)	▪ Human capital ▪ Structural capital ▪ External capital
OECD (1999)	▪ Organizational (structural) capital ▪ Human capital
Guthrie and Petty (2000); April et al. (2003); Wong and Gardner (2005); Sujan and Abeysekera (2007); Davey et al. (2009); Guthrie et al. (2009); Nurunnabi et al. (2011); Lipunga (2013)	▪ Human capital ▪ Internal capital ▪ External capital
Brennan (2001); Bozzolan et al. (2003); Abeysekera and Guthrie (2005); Vandemaele et al. (2005); Abeysekera (2007); Abeysekera (2008)	▪ Human capital ▪ Internal structure ▪ External structure
Hussi and Ahonen (2002)	▪ Human capital ▪ Process capital ▪ Relationship capital ▪ Innovation capital
Oliveira et al. (2006); Guthrie et al. (2007); Ali, Khan and Fatema (2008); González-Loureiro and Dorrego (2012); Córcoles (2013); Iazzolino et al. (2013)	▪ Human Capital ▪ Structural Capital ▪ Relational Capital
Oliveras et al. (2008)	▪ Employee capital ▪ Internal capital ▪ External capital

Reference	IC Framework
Striukova et al. (2008); Verbano and Crema (2013)	▪ Human Capital ▪ Internal Organizational Capital ▪ Relational Capital
Xiao (2008)	▪ Employee capital ▪ Structural capital ▪ Relational capital
Boekestein (2009)	▪ Intellectual property indicating rights ▪ Structural capital indicating technology ▪ Customer capital indicating customer or contracts ▪ Human capital indicating expertise
Bruggen et al. (2009)	▪ Human capital ▪ Structural capital ▪ Relational capital and ▪ General IC items
Ortiz (2009)	▪ Nuclear dimensions, that cannot be transferred, packaged or commercialized ▪ Radial dimensions, that are generated by the human capital and are differentiated by their transferability capacity and ▪ Peripheral dimension are as part of the organization's processes.
Orens, Aerts and Lybaert (2009)	▪ Human capital ▪ Internal capital ▪ Customer value

Sánchez et al. (2009)	▪ Financial indicator and
	▪ Non-financial indicator under;
	
	    ▪ Human capital
	    ▪ Organizational capital and
	    ▪ Relational capital

Tovstiga and Tulugurova (2009)	▪ Human capital
	    o Competence
	    o Attitude
	    o Intellectual agility
	
	▪ Structural capital
	    o Relationships
	    o Organization
	    o Renewal and development

Reference	IC Framework
Chander and Mehra (2011)	- Human resources - External assets - Internal assets and - Intellectual property assets
Hossain (2011)	- Human capital - Structural capital and - Relationship capital
Karchegani et al. (2013)	- Human capital - Structural capital - Relational capital and - Spiritual capital
Majdalany and Henderson (2013)	- Human assets - Relational assets - Structural assets - Human liabilities - Relational liabilities - Structural liabilities
Kharal et al. (2014); Sami et al. (2014)	- Human capital - Structural capital - Capital employed
Xinyu (2014)	- Human capital - Structural capital - Financial Capital
Present study	- Human capital (HC) - Structural capital (SC) and - Relationship capital (RC)

Source: Researcher's own compilation

4.3.3 Number of Items in IC Framework

There is a great variation of IC framework in the previous studies. Wong and Gardner (2005), Guthrie, Petty and Ricceri (2007) and Xiao (2008) have included 18 items in IC framework. Twenty items have been considered by Striukova, Unerman and Guthrie (2008). Bozzolan, Favotto and Ricceri (2003) and Vandemaele, Vergauwen and Smits (2005) include 22 items as IC disclosure whereas Guthrie and Petty (2000)

Brennan (2001), April, Bosma and Deglon (2003) and Goh and Lim (2004) consider 24 items. Some of the studies like Sujan, and Abeysekera (2007), Oliveras et al. (2008), Dumay (2009) and Abeysekera and Guthrie (2004) contain 25 items as IC. There are 27 items in the disclosure index of Ali, Khan and Fatima (2008) whereas 29 items are in Chander and Mehra (2011). In the range of 30-39 items have been considered by some research papers (e.g., Oliveira, Rodrigue and Craig, 2006; Davey, Schneider and Davey, 2009; Batista and Macagnan, 2013; Guthrie, Steane and Farneti, 2009; Hossain, 2011; etc.) whereas 40-49 items are in some other studies (e.g., Abeysekera and Guthrie, 2005; Abeysekera, 2007; Abeysekera, 2008; Orens, Aerts and Lybaert, 2009; Lipunga, 2013; etc.). More than 50 items have also been considered in some cases (Shareef and Davey, 2005; Nurunnabi et al., 2011). Considering disclosure aspects of Bangladeshi companies, the present study prepared a disclosure index with 37 items into three different IC categories. A summary with number of IC items used in some previous studies has been presented in Table 4.3.

Table 4.3: Number of items in IC framework in the previous studies

Prior Study	No. of IC Items
Wong and Gardner (2005)	18
Guthrie, Petty and Ricceri (2007)	18
Xiao (2008)	18
Striukova, Unerman and Guthrie (2008)	20
Bozzolan, Favotto and Ricceri (2003)	22
Vandemaele, Vergauwen and Smits (2005)	22
Guthrie and Petty (2000)	24
Brennan (2001)	24
April, Bosma and Deglon (2003)	24
Goh and Lim (2004)	24
Sujan, and Abeysekera (2007)	25
Oliveras et al. (2008)	25

Prior Study	No. of IC Items
Dumay (2009)	25
Abeysekera and Guthrie (2004)	25
Ali, Khan and Fatima (2008)	27
Chander and Mehra (2011)	29
Batista Fontana and Macagnan (2013)	30
Oliveira, Rodrigue and Craig (2006)	32
Davey, Schneider and Davey (2009)	32
Guthrie, Steane and Farneti (2009)	32
Bruggen Vergauwen and Dao (2009)	36
Hossain (2011)	37
Joshi, Ubha and Sidhu (2010)	39
Kamath (2008)	39
Lipunga (2013)	41
Orens, Aerts and Lybaert (2009)	42
Abeysekera and Guthrie (2005)	45
Abeysekera (2007)	45
Abeysekera (2008)	45
Shareef and Davey (2005)	52
Nurunnabi, Hossain and Hossain (2011)	63
Present study	37

Source: Researcher's own compilation

4.3.4 Definition of Different Categories of IC Framework

Human capital (HC) refers to the individual's education, skills, training, values, experiences, and so forth (Guthrie and Petty, 2000). From a value-based perspective these items should be measured and placed on the balance-sheet, as one cannot envisage an organization without employees. HC may be leveled as human centered assets or employee competence or employee capital (Table 4.4). HC involves the capacity to act in a wide variety of situations to create both tangible and intangible assets (Sveiby, 1997). These are inherent in people and cannot be owned by

organizations (Kavida and Sivakoumar, 2009). HC indicates combined capability of employees for solving business problems efficiently. It cannot be incorporated as external agents, nor can they be bought or transferred, packaged or commercialized (Ortiz, 2009). Roos and Roos (1997) define HC as the knowledge, skills and experiences that the employees take with them when they leave the company. Examples of this type of capital are know-how, vocational qualification, career development, training program, equity issue, employee benefits, professional experience, educational level, entrepreneurial skills and spirits etc.

Structural capital (SC) consists of the two main elements – intellectual property and infrastructure assets (Bozzolan et al., 2003). The first is related to the IC elements that are protected by law (such as patents, copyrights, trademarks, etc.) and the second refers to the IC elements that can be created within the company or acquired from the outside (such as corporate culture, management processes, information systems, networking systems, etc.). SC may be leveled as infrastructure assets or internal structure or internal capital or organizational capital or internal organizational capital (Table 4.4). SC is created by the employees and is generally owned by the organization (Sveiby, 1997). SC indicates everything in an organization that supports HC in their work. It can be defined as the knowledge that stays within the firm (Bontis, 1998). Therefore, SC includes management process, information system, corporate culture, intellectual property, financial relations with other institutions etc.

Relationship capital (RC) indicates the relationship of the company with different external stakeholders such as customers, distribution channels, business collaborations, franchising agreements and so forth (Bozzolan et al., 2003). This

capital may be known as relational capital or external structure or external capital (Table 4.4). RC is the strength and loyalty of customer relations (Kavida and Sivakoumar, 2009). It can be defined as all resources linked to the external relationship of the firm – with customers, suppliers or partners in research and development (Ting and Lean, 2009). RC refers to brands, customer loyalty, quality standard, company image, favorable contract, licensing agreement, franchising agreement, distribution channel, market share etc.

In a different way, Ortiz (2009) proposed IC framework as nuclear dimensions, *which cannot be transferred, packaged or commercialized*; radial dimensions, *which are generated by the human capital and are differentiated by their transferability capacity;* and peripheral dimension, *which are parts of the organization's processes.* Karchegani et al. (2013) includes spiritual capital separately to mean the tacit knowledge, faith, belief and emotion embedded in the minds and hearts of individuals within organizational employees (Karchegani et al., 2013). To make an effective decision by several types of stakeholders, IC information is essential. Without having sufficient information relating to intellectual capital, it is impossible to judge the strength/weakness, profitability, sustainability of a firm or to make prediction about these aspects of the firm. Only financial information is not enough for making all types of decision. Therefore, it is expected that companies' management will provide sufficient information in their corporate annual reports. Summary of definition of different categories of IC framework is presented in the following table.

Table 4.4: Definition of different categories of IC framework

IC Framework	Definition
Human Capital/Human centered assets/ Employee competence/ Employee capital	This refers to the individual's education, skills, training, values, experiences, and so forth. However, from a value-based perspective they should be measured and placed on the balance-sheet, as one cannot envisage an organization without employees. Employee competence requires the capacity to create both tangible and intangible assets in a wide variety of situations. In knowledge organizations there is little "machinery" other than the employees (Guthrie and Petty, 2000).
Structural Capital/Infrastructure assets/ Internal structure/ Internal capital/ Organizational capital/ Internal Organizational Capital	This consists of the two main elements of intellectual property and infrastructure assets. The first is related to the IC elements that are protected by law (patents, copyrights, and trademarks), and the second refers to the IC elements that can be created within the company or acquired from the outside (corporate culture, management processes, information systems, networking systems) (Bozzolan et al., 2003).
Relationship capital/ Relational Capital/ External structure/ External capital	This relates to the relationship of the company with different external stakeholders, and includes elements such as customers, distribution channels, business collaborations, franchising agreements, and so forth (Bozzolan et al., 2003).
Internal procedure or business process perspective/ Process capital	Items which are related with business operations such as technology, accounting information system, management information system, etc.
Learning and growth perspectives	The items which expedite the growth and expansion of the company such as training, innovation, number of branch, etc.
Customer perspective/ Customer capital/ Customer relationship capital/ Customer value	This is a part of external capital such as number of customers, customers' loyally etc.
Market assets	These are also included in external capital such as market share, distribution channel, etc.

IC Framework	Definition
Intellectual property assets	Intellectual property indicating rights such as patent, copyright, etc.
Business renewal and development capital	Factors affect the development of the company such as infrastructure, new product, market expansion, etc.
Innovation capital	This is a part of internal capital such product innovation.
General IC items	For example economic value addition, knowledge stock, competitive intelligence, etc.
Nuclear dimensions	Nuclear dimensions that cannot be transferred, packaged or commercialized.
Radial dimensions	Radial dimensions that are generated by the human capital and are differentiated by their transferability capacity.
Peripheral dimension	Peripheral dimension are as part of the organization's processes.
Spiritual capital	The tacit knowledge, faith, belief and emotion embedded in the minds and hearts of individuals within organizational employees (Karchegani et al., 2013).
IC assets	IC assets include human assets, relational assets and structural assets of the company Majdalany and Henderson, 2013).
IC liabilities	IC liabilities include human liabilities, relational liabilities and structural liabilities of the company Majdalany and Henderson, 2013).

Source: Researcher's own compilation

4.4 Theories and the Hypotheses Development

4.4.1 Theories Explaining Corporate Disclosure

Several theories have been found through the literature to explain voluntary disclosure practices. Alberti-Alhtaybat, Hutaibat, and Al-Htaybat (2012) proposed a combination of theoretical supplements to explain processes of change in mandatory and voluntary corporate disclosure in practice. According to Choi (1973) stakeholder theory, agency theory, legitimacy theory, and political economy theory favor more disclosure. Some studies suggest other theories like codification theory (Al-Htaybat, 2014), capital need theory (Shehata, 2014), positive accounting theory (Mohammed, Olfa and Faouzi, 2014), political economy theory (Miller, 1994), etc. Therefore, Laan (2009) states that:

> it is probable that there is no single motivation for making social disclosure. (…) If there is no single motivation to disclose, then many theories could be considered adequate as explanations for disclosure, as extant research suggests. Any theory, mental framework or way of visualizing the world is…..temporary, conditional and debatable. Theories are abstractions of reality and hence particular theories cannot be expected to provide a full account or description of particular behavior. As the role of theory in this instance is to best understand managerial motivation to voluntarily disclose social information, a phenomenon that is not observable, then competing (or complementary) theoretical explanations are likely to co-exist. However, a particular theoretical explanation may be superior.

Considering the nature of this study, the following sections present a discussion on agency theory, capital need theory, signalling theory and legitimacy theory.

4.4.1.1 Agency Theory

Jensen and Meckling (1976) define the agency relationship as a contract under which one or more persons (the principals) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making

authority to the agent. From the companies' perspective, principals correspond to shareholders and agents correspond to managers. Agency costs stem from the assumption that agents and principals have different interests (Shehata, 2014). The agency relationship leads to the information asymmetry problem due to the fact that managers can access information more than shareholders (Jensen and Meckling, 1976). The theory assumes that the agency cost will vary with corporate attributes e.g., size, corporate governance, etc. Therefore, disclosure of more information may reduce the agency cost by ensuring trustworthiness to the shareholders and then the agency theory would be justified in this regard (Nurunnabi et al., 2011).

4.4.1.2 Capital Need Theory

Every company needs to collect fund either through debt or equity. For collecting fund the company considers cost of that fund along with other factors. The company should attract the fund providers to provide fund at low cost. If the company discloses its positive information to the external parties it may motivate them for providing fund to the company. The capital need theory suggests that voluntary disclosure helps in achieving a company's need to raise capital at a low cost (Choi, 1973). But, it is rationale that a company's cost of capital is believed to include a premium for investors' uncertainty (Shehata, 2014). Therefore, reduction in a company's cost of capital is achieved when investors are able to interpret the company's economic prospects through voluntary disclosure (FASB, 2001). According to the capital need theory the higher the information disclosures, the lower the cost of capital (Shehata, 2014).

4.4.1.3 Signalling Theory

The signalling theory is based on two main researches of Arrow (1972) and Spence (1973). Although the signalling theory was originally developed to clarify the information asymmetry in the labor market, it has been used to explain voluntary disclosure in corporate reporting (Ross, 1977). If there are some players in the financial market, who have both more and better quality information than other players, the best informed players are able to make economic decisions which allow greater benefits to them than the other players. Voluntary disclosure is one of the signalling means, where companies would disclose more information than the mandatory ones required by laws and regulations in order to signal that they are better (Campbell, Shrives Saager, 2001). The theory assumes that disclosure of information is a reaction to information asymmetry in markets (Nurunnabi et al., 2011). Therefore, it is expected that comparatively better companies will provide more information for the external users to distinguish themselves from the others.

4.4.1.4 Legitimacy Theory

The theory of legitimacy is based on two fundamental ideas; companies need to legitimize their activities, and the process of legitimacy that confers benefits to businesses (Mohammed, Olfa and Faouzi, 2014). They also state that the first element is compatible with the idea that social disclosure is related to the social pressure. But the need for legitimacy is not same for all companies due to the degree of social pressure and the level of response to this pressure. Since the objective of accounting is providing users with information that help in decision-making, the theory has been integrated in accounting studies as a means of explaining what, why, when and how

certain items are addressed by corporate management in their communication with outside audiences (Magness, 2006).

4.4.2 Dependent Variable

The primary objective of this study is to examine the intellectual capital reporting (ICR) practices by listed companies in Bangladesh. So, the dependent variable is extent of IC reporting in corporate annual reports (CARs) of the companies. Therefore, the dependent variable in this study is denoted as "Total Intellectual Capital (TIC)" reporting index.

4.4.3 Independent Variables

Independent variables are classified into three categories – Corporate Governance (COG), Status in Capital Market (MKT) and Corporate Attributes (COA). There are three variables in each broad category. COG variables are selected in accordance with the notification issued by the Bangladesh Securities and Exchange Commission (BSEC, 2006) (No. SEC/CMRRCD/2006-158/Admin/02-08, dated February 20, 2006). The BSEC issued this notification to enhance corporate governance in the interest of investors and the capital market (BSEC, 2006). The study does not consider BSEC notification (No. SEC/CMRRCD/2006-158/134/Admin/44) issued on August 07, 2012 (BSEC, 2012) because, the study examines the extent of IC disclosure in CARs for the year 2008 and 2011. The prior researches on disclosure have also been consulted to identify independent variables. In the following sections independent variables have been discussed.

4.4.3.1 Corporate governance (COG) variable

Several prior studies based on Bangladesh companies used corporate governance attribute as a determinant of corporate disclosure (Bhuiyan and Biswas, 2007; Akhtaruddin et al., 2009; Hossain, 2011; Karim et al., 2011; Nurunnabi et. al., 2011; Rouf and Hossain, 2011; etc.). Therefore, the present study examines influences of corporate governance (COG) on IC reporting in corporate annual report. The agency theory is very much supported with COG variables these attributes may create pressure on management to provide more information in annual reports which will minimize agency cost. In this study, COG variables include size of board of the firm (SBOARD), Size of audit committee in the firm (SACOM), and number of independent directors on board of the firm (NIND), which are presented below.

4.4.3.1.1 Size of board (SBOARD)

Board size may influence the level of disclosure. For this purpose BSEC issued a notification (BSEC, 2006) mentioning the number of the board members of the company. As IC disclosure is voluntary in nature, it depends on strategic decision made by the board of directors. As a highest decision making body, the board of directors formulates policies regarding disclosures of information in the CARs of the company. It has been argued that a greater number of directors on the board may reduce the likelihood of information asymmetry (Birnbaum, 1984; Chen and Jaggi,

2000; Bhuiyan and Biswas, 2007; Akhtaruddin et al., 2009; Hossain, 2011). Zahra, et al. (2000) said that the size of the board is believed to affect the ability of the board to monitor and evaluate management and small board encourages faster information processing. So, it is expected that higher the number of the member on the board, more IC reporting in the corporate annual report is ensured.

4.4.3.1.2 Size of audit committee (SACOM)

Audit committee has been used as a COG variable in many previous studies (e.g., Forker, 1992; McKinnon and Dalimunthe, 1993; Ho and Wong, 2001; White et al., 2007; Akhtaruddin et al., 2009; Rouf and Hossain, 2011; Hossain, 2011; Karim et al., 2011; Nurunnabi et. al., 2011). The presence of an audit committee may significantly influence the magnitude of corporate disclosure. Ho and Wong (2001), White, Lee and Tower (2007), Akhtaruddin et al. (2009), Forker (1992) argued that audit committee is an effective monitoring tool to improve disclosure. The composition of audit committee with insiders and outsiders is also important factor in examining the level of disclosure (Akhtaruddin et al., 2009). So, it is expected that the size of audit committee (SACOM) in the firm is positively associated with the level of IC reporting in the corporate annual report.

4.4.3.1.3 Number of independent directors (NIND)

As an indicator of COG, number of independent directors (NIND) has been used by Forker (1992), Chen and Jaggi (2000), Cheng and Courtenay (2006), Akhtaruddin et al. (2009), Hossain (2011), Rouf and Hossain (2011), etc. Effective representation of independent directors on the board of directors of the firm may influence the disclosure of information for the users. Inclusion of independent directors on the board may enhance the corporate governance and that may ensure required information disclosure. According to Chen and Jaggi (2000), Cheng and Courtenay (2006), Akhtaruddin et al. (2009), Rouf and Hossain (2011), independent directors have influence on board's decisions. So, it is anticipated that more number of independent directors on board is positively associated with higher level of IC reporting in the annual report. On the contrary, Klein (1998), Agrawal and Knoeber (1996), Ho and Wong (2001) do not agree with the positive relationship between the number of independent directors and level of disclosure.

4.4.3.2 Status in capital market (MKT)

To explain the level of ICR, researcher has incorporated status in capital market (MKT) as an independent variable group. The study cover listed companies in Bangladesh. Therefore, status of the company in the capital market is important and thus, the study considers this variable which is supported by the capital need theory. MKT variables include share category of the firm in stock market (CAT), market performance of the firm (PER) and market capitalization of the firm (MCAP). Following paragraphs explain independent variables under MKT.

4.4.3.2.1 Share category (CAT)

BSEC categorizes listed companies as "A", "B", "G", "N" and "Z" based on their dividend payments, commercial activities, holding of annual general meeting, accumulated loss, etc. (BSEC, 2013). Category A indicates the companies which are regular in holding the annual general meetings (AGM) and have declared dividend at the rate of ten percent or more per English calendar year. Category B indicates the companies which are regular in holding their AGM but have failed to declare dividend of at least ten percent in the English calendar year. Category G indicates Greenfield companies, have not started their commercial operation. Category N indicates all newly listed companies, except companies under G, before holding AGM. Category Z indicates companies which have failed to hold the current AGM or have failed to declare any dividend or which are not in operation continuously for more than six months or whose accumulated loss after adjustment of revenue reserve, if any, is negative and exceeded its paid up capital (DSE, 2007). Therefore, category A indicates the best and Z indicates the worst securities. So, it is expected that the best firms will disclose more intellectual capital items in their annual reports.

4.4.3.2.2 Market performance (PER)

The DSE publishes list of the top twenty companies considering price earning ratio (P/E) and earning per share (EPS). At the same time, the stock exchange publishes list of the bottom twenty companies considering the same criteria. If a firm is in the list of top twenty that means the company is better than others. On the other hand, if the firm is in the list of bottom twenty that means the company is worse than others. All other firms are neither the best nor the worst firm. So, it is expected that the market

performance (PER) is positively associated with the level of IC reporting in the corporate annual report of the listed companies.

4.4.3.2.3 Proportion of Market capitalization (PMCAP)

Some of the previous researchers (e.g., Watts and Zimmerman, 1986; White et al., 2007; Hosain, 2011; Nurunnabi et. al., 2011; etc.) have used market capitalization as an explanatory variable. Market capitalization, often known as market cap, is a measurement of the value of the ownership interest that shareholders hold in a business enterprise. It can be defined as the share price multiplied by the number of shares in issue, providing a total value for the company's shares outstanding. To the investment community, it may also be used as a proxy of size of the firm as an alternative of sales or total asset figures. According to Watts and Zimmerman (1986) the firms with higher market capitalization will disclose more information than the others.

4.4.3.3 Corporate attributes (COA)

A number of corporate attributes (COA) are using to explain the dependent variable in prior research (e.g., Akhtaruddin, 2005; Hossain et al., 2006; Bhuiyan and Biswas, 2007; Akhtaruddin et al., 2009; Hossain, 2011; Karim et al., 2011; Nurunnabi et. al., 2011; Rouf and Hossain, 2011; Batista Fontana and Macagnan, 2013; etc.) though dimension of COA differs among these studies. COA may act as a signal for the investors which may influence the disclosure of the company. Therefore, signalling theory is more compatible with COA variables. In the current study, COA variables

include proportion of total assets of the firm (PASSET), proportion of sales revenue of the firm (PSALES) and proportion of net profit after tax of the firm (PNPAT).

4.4.3.3.1 Proportion of total assets (PASSET)

Along with others, total assets of the firm are generally used as a proxy of size (Akhtaruddin, 2005; Hossain et al., 2006; Akhtaruddin et al., 2009; Rouf and Hossain, 2011; Hossain, 2011; Karim et al., 2011; Nurunnabi et al., 2011; Batista Fontana and Macagnan, 2013; etc). Larger firms are often scrutinized by stakeholder groups, and therefore positive voluntary intellectual capital disclosure might be predicted if a firm is attempting to distinguish itself from other firms (Akerlof, 1970). Research on corporate disclosure uses this variable to show the relationship with disclosure.

4.4.3.3.2 Proportion of total sales revenue (PSALES)

Total sales revenue may be used to measure the operating efficiency of the management and at the same time it may be used as a measure of size of firm. The firms with more total sales revenue are better than the others. Akhtaruddin (2005), Hossain et al. (2006), Bhuiyan and Biswas (2007), Hossain (2011), Rouf and Hossain (2011), Nurunnabi et al. (2011) have used this as a predictor of voluntary disclosure. Akhtaruddin (2005) shows that a company with higher sales revenues discloses more mandatory items than the smaller one.

4.4.3.3.3 Proportion of total net profit after tax (PNPAT)

The profitability variable is used by many researchers (e.g., Wallace & Naser, 1995; Karim, 1996; Hossain, 2000; Akhtaruddin, 2005; Hossain et al., 2006; Akhtaruddin et

al., 2009; Rouf and Hossain, 2011; Karim et al., 2011; Batista Fontana and Macagnan, 2013; etc.) although, the measures of profitability were not similar in all these studies. This study uses proportion of net profit after tax (PNPAT) as a measure of profitability. It is expected that PNPAT has a significant positive relationship with the level of voluntary disclosure.

Besides, some studies use industry type (IND) as an explanatory variable for difference in disclosure level (e.g., Akhtaruddin, 2005; Hossain et al., 2006; Bhuiyan and Biswas, 2007). Moreover, different types of industries are been regulated by different regulators under different regulations. Because of this, disclosure pattern may differ among the industries as suggested by the legitimacy theory. Therefore, the current study uses industry type as an independent variable. Moreover, the researcher has conducted perception survey on different aspects of IC reporting for the purpose of primary data collection from different types of stakeholders like supplier of information, direct user of corporate information and indirect user of the information. The above discussions and arguments suggest the following null hypotheses that will be tested:

H_{01}: The extent of IC reporting is not associated with corporate governance.

H_{02}: The extent of IC reporting is not associated with status in capital market.

H_{03}: The extent of IC reporting is not associated with corporate attributes.

H_{04}: The extent of IC reporting is not associated with industry type.

H_{05}: The extent of IC reporting is not different at two points in time.

H_{06}: There is no difference in perceptions among stakeholders about IC reporting.

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Chapter Five

RESEARCH METHODOLOGY

Chapter Outline

Chapter Five

RESEARCH METHODOLOGY

5.1 Introduction

Research methodology can be defined as a system of models, procedures and techniques used to find the results of a research problem (Panneerselvam, 2010). The main objective of the study is to examine the intellectual capital reporting (ICR) practice by listed companies in Bangladesh. Based on the objective, context of the present study and consulting relevant prior literatures, research methodology has been finalized. The subsequent parts of the chapter elaborate research methodology used in the study.

5.2 Population and Sample Size

Abedin (2005) states that population refers to the whole area of study and all units constituting population are called sampling unit whereas the number of units included in the sample is called sample size. Population of the current study is the listed companies in Bangladesh. There are two stock exchanges in Bangladesh- Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE). DSE, older than CSE, is the major stock exchange in Bangladesh. Besides, most of the companies listed on CSE are also listed on DSE. The study therefore considers all companies listed on DSE. As on June 30, 2008, there were 270 companies (excluding corporate bonds) listed on DSE (Table 5.1) which are the sampling units for the study. Sample units include listed non-financial companies under 13 industries, insurance companies, banks and financial institutions. Initially, researcher has tried to cover all of these

companies as sample. For this purpose, email address of the listed companies has been collected form DSE website. Through email researcher requested the company secretary to send a copy of the annual report of the company. But, researcher did not get positive response from all of the companies. The final sample size consists of 149 listed companies whose annual reports for the year 2008 and 2011 are available. Total sample size represents 55% of the population. A list of the sample companies has been presented in Appendix I.

Table 5.1: Population and sample distribution of companies

S/N	Nature of Industry	Population* (No.)	Sample (No.)	Sample to population (%)
1	Non-Financial Institution (NFI)			
(i)	Engineering	23	12	
(ii)	Food & Allied Products	35	10	
(iii)	Fuel & Power	9	8	
(iv)	Jute	4	1	
(v)	Textile	39	18	
(vi)	Pharmaceuticals & Chemicals	25	15	
(vii)	Paper & Printing	8	1	
(viii)	Services & Real Estate	6	3	
(ix)	Cement	8	4	
(x)	IT Sector	7	3	
(xi)	Tannery Industries	8	3	
(xii)	Ceramics Sector	4	2	
(xiii)	Miscellaneous	13	5	
	Total NFI	189	85	45
2	Insurance	35	30	86
3	Non-Banking Financial Institution (NBFI)	17	17	100
4	Banking Financial Institution (BFI)	29	17	59
	Total	**270**	**149**	**55**

* Source: DSE (2008)

5.3 Method of Research

The main objective of the study is to examine intellectual capital reporting (ICR) practices of the companies. It is found from the literature review that most of the studies in this area use content analysis as a method of research (e.g., Guthrie and Petty, 2000; Bozzolan, Favotto and Ricceri, 2003; Joshi, Ubha and Sidhu, 2010; Nurunnabi, Hossain and Hossain, 2011; Lipunga, 2013; etc.). Content analysis is a technique which is widely used in a social science research (Ali, Khan and Fatima, 2008). The content analysis method involves codifying qualitative and quantitative information into pre-defined categories so that a pattern can be derived in presenting and reporting that information (Abeysekera and Guthrie, 2005). In the current study, annual reports of each company have been read and coded the information contained therein in accordance with pre-specified IC framework. This method allows the presentation of the published information in a systemic, objective and reliable manner (Krippendroff, 1980).

5.4 Source of Data and Time Reference

To achieve the set objectives of the study, both primary and secondary data have been used. Perception survey on different aspects of IC reporting has been conducted for collecting primary data through a questionnaire. Different types of stakeholders (like supplier of information, direct user of corporate information and indirect user of the information) have been requested to provide their observations through the questionnaire. A total number of 283 respondents sent back the filled up questionnaires out of 500. But, some of these responses were not fully complete. Finally, a total number of 265 (Table 5.2) responses have been summarized.

Table 5.2: Sample distribution for perception survey

S/N	Group	Type of Stakeholder		Number of Respondent
A	Supplier of Information	1. Preparers of corporate annual reports of listed companies		59
B	Direct User of Information	1. Equity investors 2. Lenders/Bankers		136
C	Indirect User of Information	1. Auditors working in audit firms	11	70
		2. Executives working in regulatory bodies (BB, BSEC, RJSCF)	10	
		3. Academician and researchers (Teachers of business school in different universities)	49	
		Total		**265**

Secondary data have been collected from the corporate annual report (CAR) of concern companies. Besides, various publications of Bangladesh Securities and Exchange Commission (BSEC), Dhaka Stock Exchange (DSE), Bangladesh Bank (BB), Insurance Development and Regulatory Authority (IDRA), Institute of Chartered Accountants of Bangladesh (ICAB), Institute of Cost and Management Accountants of Bangladesh (ICMAB), International Accounting Standards Board (IASB), Financial Accounting Standards Board (FASB), Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), Islamic Financial Services Board (IFSB), Basel Committee on Banking Supervision (BCBS), South Asian Federation of Accountants (SAFA), International Federation of Accountants (IFAC), etc. have been consulted. Moreover, relevant regulations and published research articles have also been reviewed.

Annual reports are commonly used as data sources in the previous studies (e.g., Olsson, 2001; Goh and Lim, 2004; Ali et al., 2008; Batista Fontana and Macagnan, 2013; etc.) Corporate websites of the companies are also used by some researches like Striukova, Unerman and Guthrie (2008), Orens, Aerts and Lybaert (2009). Separate intellectual capital report of the company has been analyzed by Guthrie, Steane and

Farneti (2009). But it is opined that annual report is considered as an important source of company information by external users (Bozzolan et al. 2003). Annual report is a means by which a company tries to convey its image to the public (Goh and Lim, 2004). According to Guthrie and Petty (2000) annual reports are highly useful sources of data, because managers of companies commonly signal what is important through the reporting mechanism. Besides, annual report is required to be prepared and circulated yearly by a listed company of Bangladesh. Additionally, annual reports offer an opportunity for a comparative analysis of management attitudes and policies across reporting periods (Sujan, and Abeysekera, 2007). Therefore, current study performs content analysis of annual reports of sample firms to examine the extent of ICR practices. For the purpose of comparison over period, annual reports of the sample firms for the year 2008 and 2011 have been examined.

5.5 Instrument Development

5.5.1 Disclosure Index

The corporate annual reporting in a country depends on the legal requirements, recommendations of the professional bodies, national and international accounting standards governing disclosures. There are several regulatory authorities and regulations that may require reporting items in the annual reports of the companies. But, there is no regulation to govern ICR practices in the corporate annual reports of Bangladeshi companies indicating that ICR in the corporate annual reports of the companies is voluntary in nature. One key task of the current study is to develop a suitable index containing IC items which are expected to be reported in the corporate annual reports. To do this researcher consulted several prior studies like Abeysekera

(2001), Ali et al. Xiao (2008), Nurunnabi et al. (2011), Hossain (2011), Lipunga (2013), etc. Based on the prior studies, 37 intellectual capital items have been selected under three categories (Table 5.3). Out of 37 IC items, human capital (HC), structural capital (SC) and relationship capital (RC) include 19, 9 and 9 items respectively. Intellectual capital reporting checklist is presented in Appendix II.

Table 5.3: IC framework

S/N	IC Cate_o	No. of IC Items
(i	Human Capital (HC)	19
(ii)	Structural Capital (SC)	9
(iii)	Relationship Capital (RC)	9
	Total	37

5.5.2 Questionnaire for Primary Data Collection

A perception survey has been conducted in regard of primary data. For this purpose, a questionnaire has been developed following five-level Likert scale (Appendix III). A Likert scale is a psychometric scale commonly involved in research that employs questionnaires and it is the most widely used approach to scaling responses in survey research (Likert, 1932). The current study uses five-level Likert item as "1" for "strongly agree", "2" for "agree", "3" for "neutral", "4" for "disagree" and "5" for "strongly disagree". Through this questionnaire, perceptions of the respondents regarding ICR have been collected. Respondents had options for putting some suggestions to enhance ICR practices by the listed companies in Bangladesh.

5.5.3 Questionnaire for Secondary Data Collection

Based on the ICR index, a questionnaire has been developed (Appendix IV). To develop the questionnaire, ICR items and independent variables have been considered. As discussed earlier, independent variables are classified into three categories – Corporate Governance (COG), Status in Capital Market (MKT) and Corporate Attributes (COA). There are three variables in each broad category. COG variables include size of board of the firm (SBOARD), size of audit committee in the firm (SACOM), and number of independent directors on board of the firm (NIND). MKT variables include share category of the firm in stock market (CAT), market performance of the firm (PER) and proportion of market capitalization of the firm (PMCAP). COA variables include proportion of assets of the firm (PASSET), proportion of sales revenue of the firm (PSALES) and proportion of net profit after tax of the firm (PNPAT). Besides, industry type (IND) is also used as an explanatory variable.

5.6 Coding System and Data Collection

Weighted and unweighted approaches are the two most recognized methods for determining the level of intellectual capital disclosure. Some of the prior researchers in the field of IC disclosure (like, Brennan, 2001; Xiao, 2008; Abeysekera, 2008; Nurunnabi et al., 2011, etc.) use weighted approach in their study. But their coding system is not similar. Some studies (like, Bozzolan et al., 2003; Xiao, 2008) use '0', '1' and '2' for 'not reported', 'qualitative reporting' and 'quantitative reporting', respectively. Whereas, some others (like, Brennan, 2001; Abeysekera, 2008; etc.) assign score 3 for monetary reporting of an IC item. Differently, Nurunnabi et al.

(2011) assigned 3 for disclosure in both, qualitative and quantitative. On the other hand, some researches (e.g., April et al., 2003; Goh and Lim, 2004; Ali et al., 2008; Hossain, 2011; etc.) use unweighted scoring system. According to Wallace (1988), all disclosure items are equally important to the average users. It could be said that disclosure of more IC items is more important than disclosure of less items in several ways. Besides, most of the items in the disclosure index are qualitative in nature (April et al., 2003). Moreover, some items which may not be disclosed in terms of money (e.g., know-how and work-related competencies, vocational qualifications, expert seniority, management processes and corporate culture, management philosophy, mission or vision, company name and image, brands and company logo, etc.). Therefore, the present study uses unweighted approach for coding intellectual capital item in the disclosure index. If the IC item is reported in the annual report, then it is given '1' and '0' if not. An unweighted index is defined a ratio of the number of items a company actually disclosed to the total that it could be disclosed (Akhtaruddin, 2005). Abeysekera (2008), Guthrie, Petty and Ricceri (2007), Oliveras et al. (2008), etc. consider frequency of occurrence whereas Oliveira et al. (2006), Xiao (2008) Nurunnabi et al. (2011), etc. ignored repetition. Repetition is also ignored in the current study. The IC reporting score for each company is expressed as follows:

$$TIC_i = \sum_{j=1}^{n} r_{ij}$$

Where,

TIC = the total intellectual capital reporting score;

$i = company\ (1,\ 2,\ 3,\ ....,149)$

$j = IC\ item\ (1,\ 2,\ 3,\ ....,37)$

r = one if the item is reported; zero, if the item is not reported.

5.7 Data Tabulation and Data Analysis

Researcher has read the corporate annual report of each firm thoroughly, even the cover page, and scored on a pre-specified coding sheet for the IC item identified. After reading all of the annual reports, coded items were tabulated in a worksheet of Microsoft Excel program. By this program data were summarized and graphs were prepared. It helps to examine ICR practices by listed companies in Bangladesh. Besides, to analyze data SPSS 14.0 version is used by the researcher. Different parametric and non-parametric tests have been used to test the set hypotheses.

5.7.1 Model Specification

To investigate the corporate attributes as determinates of ICR the regression technique has been used. The association between a number of independent variables and dependent variable has been tested using regression technique. In this regard, several regression models were used. Table 5.4 presents the operational definition of variables, source of information and expected sign along with their relationship. Model 1 shows the relationship between corporate governance variables (COG) and total intellectual capital reporting of listed companies in Bangladesh. Through this model most influencing corporate governance attribute can be identified. The regression Model 1 is as follows:

Model 1: [Corporate Governance (COG), industry type (IND) and TIC]

$$\text{TIC} = \alpha + \beta_1\text{SBOARD} + \beta_2\text{SACOM} + \beta_3\text{NIND} + \beta_4\text{IND} + \varepsilon \dots\dots\dots\dots\dots\dots \textit{(i)}$$

where:

TIC	= total intellectual capital reporting index for each firm
SBOARD	= size of board of the firm
SACOM	= size of audit committee in the firm
NIND	= number of independent directors on board of the firm
IND	= industry type
α	= the constant
	= the coefficient
	= the error term

The regression Model 2 illustrates the association between market status variables (MKT) of the company on stock exchange and TIC. Using this model, the most influencing market status attribute can be located. The regression Model 2 is as follows:

Model 2: [Market Status (MKT), industry type (IND) and TIC]

$$\text{TIC} = \alpha + \beta_1\text{CAT} + \beta_2\text{PER} + \beta_3\text{PMCAP} + \beta_4\text{IND} + \varepsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots \textit{(ii)}$$

where:

TIC	= total intellectual capital reporting index for each firm
CAT	= share category of the firm
PER	= market performance of the firm
PMCAP	= proportion of market capitalization as compared to total firms
IND	= industry type
α	= the constant
	= the coefficient
ε	= the error term

The association between firm specific corporate attributes (COA) and intellectual capital reporting (TIC) is demonstrated in Model 3. This model also suggests the most influencing corporate attribute out of three. This model can be expressed as follows:

Model 3: [Corporate attributes (COA), industry type (IND) and TIC]

$$TIC = \alpha + \beta_1 PASSET + \beta_2 PSALES + \beta_3 PNPAT + \beta_4 IND + \varepsilon \dots\dots\dots\dots\dots (iii)$$

where:

TIC	= total intellectual capital reporting index for each firm
PASSET	= proportion of assets as compared to that of total firms
PSALES	= proportion sales revenue as compared to that of total firms
PNPAT	= proportion of net profit after tax as compared to that of total firms
IND	= industry type
α	= the constant
β	= the coefficient
ε	= the error term

Model 4 explains the relationship of COG, MKT, COA and IND with ICR status of listed companies in Bangladesh. In this model, researcher uses only the most influencing attributes out of three from each category, which are identified by the regression Model 1, Model 2 and Model 3. Besides, this model includes industry type (IND) as an explanatory variable of TIC. The regression is as follows:

Model 4: [COG, MKT, COA, IND and TIC]

$$TIC = \alpha + \beta_1 COG + \beta_2 MKT + \beta_3 COA + \beta_4 IND + \varepsilon \dots\dots\dots\dots\dots\dots\dots\dots (iv)$$

where:

TIC	= total intellectual capital reporting index for each firm
COG	= corporate governance
MKT	= market status
COA	= corporate attribute
IND	= industry type
α	= the constant
β	= the coefficient
ε	= the error term

Table 5.4: Operational definition of variables, source of information and expected sign

Variable	Operational Definition	Source of Information	Measurement	Expected Sign	Relationship
TIC	Total ICR index	Corporate annual report (CAR)	Total ICR of the firm		Index
COG	Corporate governance attributes	CAR	SBOARD, SACOM and/or NIND	(+)	Significant relationship with TIC
SBOARD	Size of board of the firm	CAR	No. of members on board	(+)	Significant relationship with TIC
SACOM	Size of audit committee in the firm	CAR	No. of member on audit committee	(+)	Significant relationship with TIC
NIND	No. of independent directors on board	CAR	No. of independent directors on board	(+)	Significant relationship with TIC
MKT	Market status of firm on stock exchange	DSE (2008) & DSE (2011)	CAT, PER and/or PMCAP	(+)	Significant relationship with TIC
CAT	Share category of the firm on stock exchange	DSE (2008) & DSE (2011)	Share Category A=5, B=4, G=3, N=2 and Z=1	(+)	Significant relationship with TIC
PER	Market performance of the firm	DSE (2008) & DSE (2011)	Firm in top 20 = 1, in bottom 20= -1 and neither = 0	(+)	Significant relationship with TIC
PMCAP	Proportion of Market capitalization of firm	DSE (2008) & DSE (2011)	Market capitalization as on June 30, 2011 as compared to total firms	(+)	Significant relationship with TIC
COA	Corporate attributes	CAR	PASSET, PSALES and/or PNPAT	(+)	Significant relationship with TIC
PASSET	Proportion of total assets of the firm	CAR	Total assets as compared to total firms	(+)	Significant relationship with TIC
PSALES	Proportion of total sales of the firm	CAR	Proportion of gross sales as compared to total firms	(+)	Significant relationship with TIC
PNPAT	Proportion of net profit after tax	CAR	Net profit after tax as compared to total firms	(+)	Significant relationship with TIC
IND	Industry type	DSE (2008)	Industry type where: NFI=1, INS=2, NBFI =3 and BFI=4	(+/-)	Significant relationship with TIC

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Chapter Six

ANALYSIS AND INTERPRETATION OF RESULTS

Chapter Outline

Chapter Six

ANALYSIS AND INTERPRETATION OF RESULTS

6.1 Introduction

Intellectual capital (IC) becomes an important asset of a company because it provides competitive advantages to the company. According to the resource-based theory, it is a main source to improve business performance (Ahmad and Mushraf, 2011). Different factors like globalization, new technology, relatively free capital, increased competition, changes in customer demands, the demand for innovation and changes in economic and political structures and the growing role of the State in supporting knowledge economies, are constantly reshaping the way that business is carried out (Abeysekera, 2007). Bollen, Vergauwen and Schnieders (2005) agree that IC plays an increasingly important role in sustaining competitive advantages and creating corporate value and, thus, companies have increased their investments in this type of capital. Goh and Lim (2004) believe that, around the world, increasing recognition and utilization of IC helps companies to be more efficient, effective, productive and innovative. Thus, IC items should be reported on the financial statements of a firm for proper communication to stakeholders. An entity can enjoy competitive advantages by disseminating information regarding IC along with physical and financial resources. Simultaneously, stakeholders may take pragmatic decisions on the basis of this kind of information. This is also important for the investors to judge the profitability, potentiality and sustainability of the organization. The subsequent parts of this chapter present status of IC reporting in corporate annual report of the listed companies in Bangladesh.

6.2 Status of IC Reporting

Edvinsson & Malone (1997) define IC as the possession of knowledge, applied experience, organizational technology, customer relationships, and professional skill that provide a competitive edge in the market. In most of the cases, IC items have been categorized into three basic components – human capital (HC), structural capital (SC) and relationship capital (RC) using different levels for them. Status of IC reporting by companies categorized as non-financial institution (NFI), insurance (INS), non-banking financial institution (NBFI) and banking financial institution (BFI) at two points in time have been depicted in the following paragraphs.

6.2.1 Status of IC Reporting of all Companies Based on IC Category

As mentioned earlier, IC items have been classified into three groups i.e., HC, SC and RC. Inter group IC reporting analysis has also been used to show the status of IC reporting made by the companies. Besides, data have been collected for two different periods. The Wilcoxon Signed Ranks Test has been applied for showing significance of changes. The test is designed to test a hypothesis about the location (median) of a population distribution that involves the use of matched pairs, for example, before and after data (Bajpai, 2011). Usually, this test is used in place of the one sample t-test when the normality assumption is questionable.

Using content analysis as a method of research, status of IC reporting in the corporate annual report (CAR) of listed companies has been summarized and presented in Table 6.1. The table shows IC reporting status of all companies at two points in time i.e. 2008 and 2011. In both the years, minimum score of HC (human capital) reporting is 5.26% where as maximum score has increased to 89.47% in 2011 from 78.95% in

2008. Average figures of these two points in time show positive trend in reporting HC items in CAR of the listed companies. The researcher has conducted Wilcoxon Signed Ranks Test to prove the change statistically. From the statistical tables, with a significance level of 1%, it can be said that there is a statistically significant difference in the HC reporting in CAR over a period of time.

In case of structural capital (SC) reporting, average score (geometric mean) in 2008 is 58.67% and 60.94% in 2011. It is seen from the Table 6.1 that there are some (or at least one) companies in both the years that report all of the SC items in annual report. Same scenario has been observed in relationship capital (RC) reporting. Minimum score for SC and RC reporting at both the points in time is 22.22%. For reporting SC items, companies are showing greater intent as compared to HC and RC items (Figure 6.1). Positive changed in SC reporting is statistically significant (z-value is -3.651 at .000 level). At 1% significance level RC reporting status has changed over time (z-value is -2.754 where N is 149). Last column of the same table shows the status of total intellectual capital (TIC) reporting comprising HC, SC and RC by the companies in CAR of the year 2008 and 2011. Average TIC reporting is more than 45% with minimum reporting score 18.92% and maximum score 86.49%. From the Wilcoxon Signed Ranks Test results it can be concluded that the null hypothesis, H_{50}, (the extent of IC reporting is not different at two points in time) can be rejected and the alternative hypothesis (H_{51}) is accepted at 1% significance level (z = -4.683). This indicates that there is a statistically significant difference in IC reporting at two points in time. Appendix V presents IC reporting score of different companies for the year 2008 and Appendix VI is for 2011.

Table 6.1: Status of IC reporting of all companies (%)

Descriptive Statistics	Types of IC							
	HC[1]		SC[2]		RC[3]		TIC[4]	
	2008	2011	2008	2011	2008	2011	2008	2011
Minimum Score	5.26	5.26	22.22	22.22	22.22	22.22	18.92	18.92
Maximum Score	78.95	89.47	100	100	100	100	81.08	86.49
Arithmetic Mean	39.56	42.03	61.00	63.46	54.14	56.00	48.32	50.64
Geometric Mean	36.49	38.52	58.67	60.94	52.17	54.56	46.52	48.73
SD	14.99	16.70	16.37	17.10	13.99	12.45	13.04	13.80
CV	0.38	0.40	0.27	0.27	0.26	0.22	0.27	0.27

Wilcoxon Signed Ranks Test

N	149	149	149	149
Z	-3.153	-3.651	-2.754	-4.683
Sig. (2-tailed)	.002	.000	.006	.000

Figure 6.1: IC Reporting (Geometric Mean) by Category
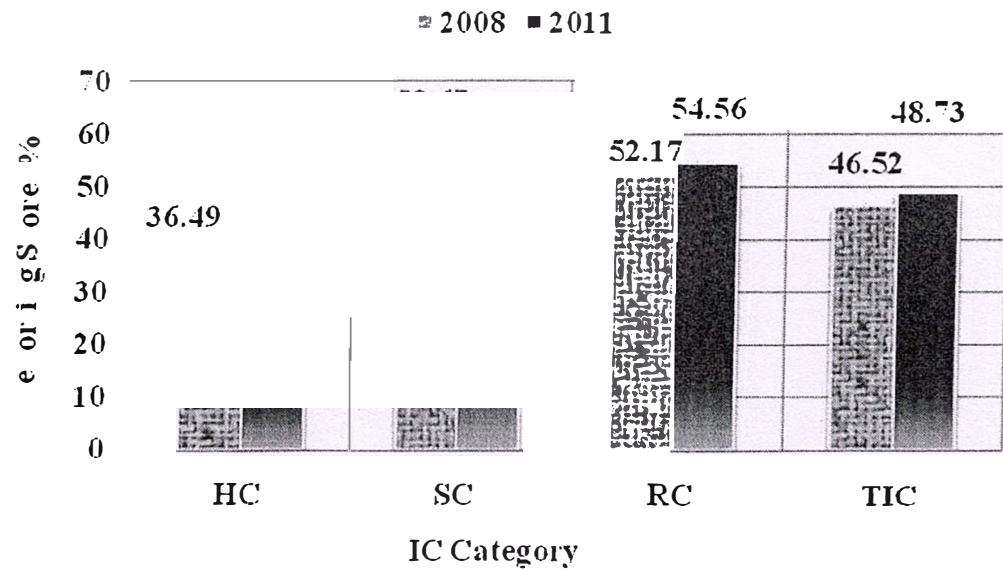
1. Human Capital
2. Structural Capital
3. Relationship Capital
4. Total Intellectual Capital

6.2.2 Proportion of IC Reporting by All Companies

Table 6.2 as well as Figure 6.2 shows proportion of IC reporting by all companies at two points in time. It is observed that companies do not show equal importance on each group of IC components. To some extent, in both the years, companies furnish similar priorities. Out of total IC reporting, 25% are HC items, 40% are SC items and remaining 35% are RC items. Therefore, SC items get the highest importance to the listed companies for disseminating information among the stakeholders.

Table 6.2: Proportion of IC reporting by all companies

IC Category	Total No. of Items	Geometric Mean of IC Re orting Score %)		Proportion of Total IC Re orting (%	
		2008	2011	2008	2011
		11	111	iv= ii/Total)%	v=(iii/Total)%
HC	19	36.49	38.52	25	25
SC	9	58.67	60.94	40	40
RC	9	52.17	54.56	35	35
Total	**37**	**147.33**	**154.02**	**100**	**100**

Figure 6.2: Proportion of IC Reporting by all Companies
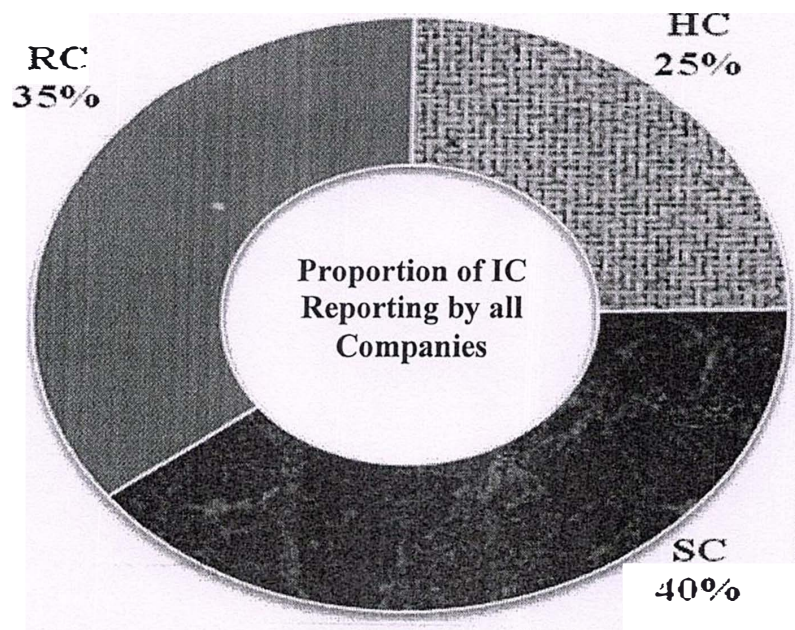
6.2.3 Status of IC Reporting by Industry Type

For the purpose of inter-industry analysis of IC reporting status, listed companies have been classified into four groups, namely, NFI, INS, NBFI and BFI. IC reporting under these groups may vary at two points in time significantly or not. In that case, the researcher has employed the Paired Sample t-test. The test is used to determine whether there is a significant difference between the average values of the same measurement made in two different conditions (www.stats.gla.ac.uk). Both measurements are made on each unit in a sample, and the test is based on the paired differences between these two values. The usual null hypothesis is that the difference in the mean values is zero. It is a more powerful alternative to a two sample procedure, such as the two sample t-test, but can only be used when there are matched samples.

Table 6.3 portrays the status of HC reporting by four types of industries at two points in time. The lowest score (5.26%) is observed at NFI whereas the highest score is observed at NBFI in the year 2011. All of the four industries showed positive attitude towards reporting more HC items in recent year as compare to previous position. Paired Sample t-Test statistics have been presented in the same table. Based on the statistics it can be said that there is a difference between HC reporting score of NFI for the year 2008 and 2011 and it is statistically significant at 5% level. Similar conclusion may be drawn on BFI at 10% level of significance. On the contrary, difference of HC reporting in 2008 and 2011 by INS and NBFI industry is not statistically significant.

Table 6.3: Status of HC reporting by industry type (%)

Descriptive Statistics	Industry Type							
	NFI[5]		INS[6]		NBFI[7]		BFI[8]	
	2008	2011	2008	2011	2008	2011	2008	2011
Minimum Score	5.26	5.26	10.53	15.79	15.79	31.58	31.58	31.58
Maximum Score	63.16	73.68	73.68	78.95	78.95	89.47	73.68	73.68
Arithmetic Mean	34.61	36.22	39.82	41.93	52.32	57.28	51.08	56.04
Geometric Mean	31.98	33.15	37.45	39.59	49.13	54.99	50.08	54.55
SD	13.20	14.67	13.38	14.40	16.90	16.53	10.49	12.88
CV	0.38	0.41	0.34	0.34	0.32	0.29	0.21	0.23

Paired Sample t-Test

N (df)	85 (84)	30 (29)	17 (16)	17 (16)
Correlation (Sig.)	.876 (.000)	.702 (.000)	.687 (.002)	.631 (.007)
t (Sig. 2-tailed)	2.095 (.039)	1.072 (.293)	1.545 (.142)	1.988 (.064)

Table 6.4 presents the status of SC reporting by industry type at two points in time. The table shows that maximum score 100% in both the years has been achieved by NFI and NBFI. But standard deviation (SD) is lower in the companies under BFI where coefficients of variation (CV) are 10% and 9% in the year 2008 and 2011 respectively. On the other hand, there is a greater degree of variation (CV=30%) in the companies under NFI. Paired sample t-test results show that SC reporting scores of NFI, INS and BFI have been increased over the periods at statistically significant level. On the contrary, some companies under NBFI have reported less SC items in 2011 as compare to 2008. But in all cases there is a high degree of positive correlation between SC reporting scores of the years 2008 and 2011.

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[5] Non-Financial Institution
[6] Insurance
[7] Non-Banking Financial Institution
[8] Banking Financial Institution

Table 6.4: Status of SC reporting by industry type (%)

Descriptive Statistics	NFI		INS		NBFI		BFI	
	2008	2011	2008	2011	2008	2011	2008	2011
Minimum Score	22.22	22.22	33.33	33.33	44.44	44.44	55.56	66.67
Maximum Score	100	100	77.78	88.89	100	100	88.89	100
Arithmetic Mean	55.69	58.04	62.96	67.04	68.63	66.67	76.47	81.05
Geometric Mean	53.28	55.47	61.74	65.44	66.97	64.99	76.07	80.72
SD	16.58	17.18	11.79	13.52	15.83	15.71	7.74	7.62
CV	0.30	0.30	0.19	0.20	0.23	0.24	0.10	0.09
Paired Sample t-Test								
N (df)	85 (84)		30 (29)		17 (16)		17 (16)	
Correlation (Sig.)	.907 (.000)		.730 (.000)		.807(.000)		.731 (.001)	
t (Sig. 2-tailed)	84 (.004)		2.362 (.025)		-.824 (.422)		3.347 (.004)	

Summary of RC reporting by different types of industries at two points in time has been depicted in Table 6.5. Considering minimum RC reporting score, BFI is in the best position at both points in time and NFI is in the worst position. On the other hand, maximum RC score is obtained by NFI. Therefore, SD and CV are higher in NFI as compared to other three industries indicating more variation in reporting RC items. To show the change over time from 2008 to 2011, NFI industry proves that there is a significant difference (significant at 5% level) of RC reporting at these two points. However, RC reporting trends in other there industries are not statistically significant.

Table 6.5: Status of RC reporting by industry type (%)

Descriptive Statistics	NFI		INS		NBFI		BFI	
	2008	2011	2008	2011	2008	2011	2008	2011
Minimum Score	22.22	22.22	44.44	44.44	44.44	55.56	55.56	55.56
Maximum Score	100	100	77.78	66.67	77.78	66.67	77.78	77.78
Arithmetic Mean	50.85	53.46	55.56	56.30	60.13	59.48	62.09	64.71
Geometric Mean	48.28	51.49	54.90	55.93	59.40	59.25	61.74	64.24
SD	16.12	14.70	8.75	6.48	9.67	5.47	6.87	8.08
CV	0.32	0.27	0.16	0.12	0.16	0.09	0.11	0.12
Paired Sample t-Test								
N (df)	85 (84)		30 (29)		17 (16)		17 (16)	
Correlation (Sig.)	.764 (.000)		.600 (.000)		.660 (.004)		.662 (.004)	
t (Sig. 2-tailed)	2.261 (.026)		572 (.572)		-.367 (.718)		1.725 (.104)	

Table 6.6 shows TIC reporting status by industry type at two points in time. As TIC is the combination of HC, SC and RC items, it shows the similar picture as stated in the previous tables. Considering all IC items together, three industries (NFI, INS and BFI) show positive trend in reporting these items in their CAR which is statistically significant at 1% to 10% level. However, TIC reporting change in NBFI industry is not statistically significant.

Table 6.6: Status of TIC reporting by industry type (%)

Descriptive Statistics	Industry Type							
	NFI		INS		NBFI		BFI	
	2008	2011	2008	2011	2008	2011	2008	2011
Minimum Score	18.92	18.92	24.32	29.73	32.43	40.54	48.65	54.05
Maximum Score	75.68	81.08	70.27	78.38	81.08	86.49	75.68	81.08
Arithmetic Mean	43.69	45.72	49.28	51.53	58.19	60.10	59.94	64.23
Geometric Mean	42.01	43.93	48.23	50.41	56.74	58.86	59.54	63.81
SD	12.43	13.14	10.00	10.88	13.00	12.70	7.10	7.74
CV	0.28	0.29	0.20	0.21	0.22	0.21	0.12	0.12
Paired Sample t-Test								
N (df)	85 (84)		30 (29)		17 (16)		17 16)	
Correlation (Sig.)	.923 (.000)		.802 (.000)		.805 .000)		.629 (.007)	
t (Sig. 2-tailed)	3.712 (.000)		1.862 .073)		.979 (.342)		2.759 (.014)	

6.2.4 Trend of IC Reporting by Industry Type

Differences between the scores of the years 2011 and 2008 can be seen in Table 6.7 (detailed list is in Appendix VII). Changes have been determined based on industry type under three IC categories along with total reporting scores. Under HC category, maximum positive change in 2011 from 2008 is 42.11% which is achieved by NFI. The second highest increased score is observed in NBFI (26.32%). On the other hand, maximum negative change in 2011 is 26.32% which is for INS and NBFI jointly. It confirms that in recent time companies are reporting more HC items in their corporate annual reports. As per as SC reporting is concern, maximum improvement is 33.33%

in the annual report of an insurance company. On the other hand, maximum decreased score in SC reporting is 22.22%. Under RC items reporting category, maximum increased and decreased score is 33.33% and surprisingly, it is found in the companies under non-financial companies. If we consider total intellectual capital reporting score, maximum increase has been observed in the company under NFI whereas maximum decrease has been reported from the company under NBFI. Maximum increased score is 42.11% and maximum decreased score is 33.33%. It indicates that some companies are reporting more IC items while some companies are reporting less IC in recent time in their annual reports.

Table 6.7: Change in ICR by industry type over 2008 to 2011

Industry Type	Difference between the scores of the years 2011 and 2008 (%)							
	HC		SC		RC		TIC	
	Max Increase	Max Decrease	Max Increase	Max Decrease	Max Increase	Max Decrease	Max Increase	Max Decrease
NFI	42.11	(15.79)	22.22	(22.22)	33.33	(33.33)	24.32	(10.81)
INS	21.05	(26.32)	33.33	(11.11)	22.22	(11.11)	18.92	(10.81
NBFI	26.32	26.32	11.11	(22.22	11.11	(11.11)	13.51	(21.62)
BFI	21.05	(15.79)	11.11	0	11.11	(11.11)	16.22	(2.70)
All	42.11	(26.32)	33.33	22.22	33.33	(33.33)	24.32	(21.62)

6.2.5 Inter Industry Analysis of IC Reporting

For the purpose of inter industry analysis, companies have been classified under four industries namely non-financial institution (NFI), insurance (INS), non-banking financial institution (NBFI) and banking financial institution (BFI). Central tendency of IC item reporting may be similar or dissimilar. But, the differences among the industries may be statistically significant or not. So, a statistical tool, the Kruskal-Wallis Test, has been applied for testing the hypothesis. It is a nonparametric test used to compare three or more samples where Wilcoxon-Mann-Whitney Test may not be

used because of more than two groups. It is used to test the null hypothesis that all populations have identical distribution functions against the alternative hypothesis that at least two of the samples differ only with respect to location (median), if at all (www.stats.gla.ac.uk). Generally, F-test is used in analysis of variance where the test depends on the assumption that all populations under comparison are normally distributed. On the contrary, the Kruskal-Wallis Test places no such restriction on the comparison.

In Table 6.8, Kruskal-Wallis Test results on IC reporting by different industry in 2008 have been presented. The comparisons have been made among 85 NFIs, 30 INSs, 17 NBFIs and 17 BFIs. Mean rank for HC reporting score in 2008 of NFI, INS, NBFI and BFI are 60.71, 76.92, 107.79 and 110.26, respectively. Chi-square value is 31.028 at 1% significant level. It indicates that there are differences of HC reporting in 2008 among four industries. Similar pictures have been observed in case of SC, RC and TIC reporting scores for the year 2008.

Table 6.8: Kruskal-Wallis Test on ICR by industry type in 2008

IC Item	Industry Type	N	Mean Rank	Chi-Square	Asymp. Sig.
HC Reporting Score in 2008	NFI	85	60.71		
	INS	30	76.92	31.028	.000
	NBFI	17	107.79		
	BFI	17	110.26		
	Total	149			
SC Reporting Score in 2008	NFI	85	60.89		
	INS	30	80.85	30.313	.000
	NBFI	17	92.44		
	BFI	17	117.79		
	Total	149			
RC Reporting Score in 2008	NFI	85	64.89		
	INS	30	78.40	15.009	.002
	NBFI	17	93.38		
	BFI	17	101.15		
	Total	149			

IC Item	Industry Type	N	Mean Rank	Chi-Square	Asymp. Sig.
TIC Reporting Score in 2008	NFI	85	59.42		
	INS	30	79.65	34.171	.000
	NBFI	17	104.91		
	BFI	17	114.76		
	Total	149			

Table 6.9 presents Kruskal-Wallis Test results on HC, SC, RC and TIC reporting by industry type in 2011. The Chi-Square value for HC, SC, RC and TIC are 35.308, 29.855, 15.841, 35.929 respectively and all of these are statistically significant at 1% level. Therefore, it can be said that there are statistically significant differences of IC reporting among the industries.

Table 6.9: Kruskal-Wallis Test on ICR by industry type in 2011

IC Item	Industry Type	N	Mean Rank	Chi-Square	Asymp. Sig.
HC Reporting Score in 2011	NFI	85	59.99		
	INS	30	75.90	35.308	.000
	NBFI	17	111.26		
	BFI	17	112.21		
	Total	149			
SC Reporting Score in 2011	NFI	85	61.56		
	INS	30	84.13	29.855	.000
	NBFI	17	80.62		
	BFI	17	120.47		
	Total	149			
RC Reporting Score in 2011	NFI	85	65.59		
	INS	30	76.17	15.841	.001
	NBFI	17	88.71		
	BFI	17	106.29		
	Total	149			
TIC Reporting Score in 2011	NFI	85	59.51		
	INS	30	78.17	35.929	.000
	NBFI	17	103.12		
	BFI	17	118.74		
	Total	149			

6.2.6 Company Based on IC Reporting Performance

Table 6.10 summarizes the list of higher scored companies based on TIC reporting score. It is found in this table that LANBAFI (S/N 123 of the sample) reports the highest number of IC items in both years. Some other higher scored firms are SINGERBD (S/N 12), PRIFILTD (S/N 129), ISLBLTD (S/N 135), HEIDELBCEM (S/N 71), GREINCOL (S/N 95), etc. Conversely, Table 6.11 presents a list of lower scored companies based on TIC reporting in CAR. Surprisingly, a pharmaceuticals and chemicals (S/N 53) company reports the least number of IC items in its annual reports for the year 2008 and 2011. Some other firms in this list are MODCEML(S/N72), MEGHNAPET (S/N 19), ALPHATOBA (S/N 22), DELTASPINN (S/N 36), PURINCOL (S/N 107), etc.

Table 6.10: List of higher scored companies based on TIC of 2011 (>70%)

S/N	Company	Industry Type	TIC Reporting Score (%)	
			2008	2011
123	LANBAFI	Financial Institutions	81.08	86.49
12	SINGERBD	Engineering	75.68	81.08
129	PRIFILTD	Financial Institutions	75.68	81.08
135	ISLBLTD	Banks	67.57	81.08
71	HEIDELBCEM	Cement	70.27	78.38
95	GREINCOL	Insurance	64.86	78.38
147	ASIBLTD	Banks	62.16	75.68
108	RELINLTD	Insurance	64.86	72.97
131	UTTFILTD	Financial Institutions	70.27	72.97
141	SOUBLTD	Banks	75.68	72.97
29	SUMITPOWER	Fuel & Power	62.16	70.27
57	IBNSINA	Pharmaceuticals & Chemicals	64.86	70.27
118	DBHFCLTD	Financial Institutions	62.16	70.27
134	IFIBLTD	Banks	62.16	70.27
149	JUMBLTD	Banks	67.57	70.27

Table 6.11: List of lower scored companies based on TIC of 2011 (>35%)

S/N	Company	Industry Type	TIC Reporting Score (%) 2008	2011
53	BANGLAPRO	Pharmaceuticals & Chemicals	18.92	18.92
72	MODCEML	Cement	27.03	27.03
19	MEGHNAPET	Food & Allied	29.73	29.73
22	ALPHATOBA	Food & Allied	29.73	29.73
36	DELTASPINN	Textile	27.03	29.73
107	PURINCOL	Insurance	24.32	29.73
4	AZIZPIPES	Engineering	32.43	32.43
5	BDAUTOCA	Engineering	32.43	32.43
14	BEACHHATCH	Food & Allied	32.43	32.43
17	APEXFOODS	Food & Allied	32.43	32.43
40	MONNOFABR	Textile	40.54	32.43
49	TAMTEXLTD	Textile	32.43	32.43
58	IMAMBUTTON	Pharmaceuticals & Chemicals	29.73	32.43
63	PHARMAID	Pharmaceuticals & Chemicals	32.43	32.43
66	EHL	Services & Real Estate	29.73	32.43
70	CONFIDCEM	Cement	32.43	32.43
78	SAMATALETH	Tannery Industries	29.73	32.43
80	STANCERAM	Ceramics Sector	32.43	32.43
93	FEDINCOL	Insurance	37.84	32.43

6.2.7 Frequency Distribution of Companies Based on ICR Score

Table 6.12, Table 6.13, Table 6.14 and Table 6.15 present frequency distribution of the companies for HC, SC, RC and TIC reporting score respectively. The highest number of companies in both the years lie between the score more than 20% to 40%. More than 85% of the total companies report up to 60% of HC items (Table 6.12). Differently, the highest number of companies report SC items in between more than 60% to 80% of total SC items (Table 6.13). Less than 50% of the total companies report up to 60% of total SC items. Table 6.14 show that up to 60% of the total RC items are reported by the highest number of companies. Considering TIC reporting score of the companies, concentration of the companies' scores are in the slot more than 40% to 60% level (Table 6.15).

Table 6.12: HC reporting score of the companies

HC Reporting Score	Reporting Company					
	CAR[9] 2008			CAR 2011		
	No.	%	Cumulative	No.	%	Cumulative
Up to 20%	7	4.70	4.70	7	4.70	4.70
More than 20% to 40%	69	46.31	51.01	67	44.97	49.66
More than 40% to 60%	57	38.26	89.26	54	36.24	85.91
More than 60% to 80%	16	10.74	100.00	19	12.75	98.66
More than 80% to 100%	0	0.00	100.00	2	1.34	100.00
Total	**149**	**100**		**149**	**100**	

Table 6.13: SC reporting score of the companies

SC Reporting Score	Reporting Company					
	CAR 2008			CAR 2011		
	No.	%	Cumulative	No.	%	Cumulative
Up to 20%	0	0.00	0.00	0	0.00	0.00
More than 20% to 40%	12	8.05	8.05	12	8.05	8.05
More than 40% to 60%	61	40.94	48.99	53	35.57	43.62
More than 60% to 80%	65	43.62	92.62	68	45.64	89.26
More than 80% to 100%	11	7.38	100.00	16	10.74	100.00
Total	**149**	**100**		**149**	**100**	

Table 6.14: RC reporting score of the companies

RC Reporting Score	Reporting Company					
	CAR 2008			CAR 2011		
	No.	%	Cumulative	No.	%	Cumulative
Up to 20%	0	0.00	0.00	0	0.00	0.00
More than 20% to 40%	21	14.09	14.09	11	7.38	7.38
More than 40% to 60%	77	51.68	65.77	86	57.72	65.10
More than 60% to 80%	50	33.56	99.33	51	34.23	99.33
More than 80% to 100%	1	0.67	100.00	1	0.67	100.00
Total	**149**	**100**		**149**	**100**	

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[9] Corporate Annual Report

Table 6.15: TIC reporting score of the companies

TIC Reporting Score	Reporting Company					
	CAR 2008			CAR 2011		
	No.	%	Cumulative	No.	%	Cumulative
Up to 20%	1	0.67	0.67	1	0.67	0.67
More than 20% to 40%	43	28.86	29.53	37	24.83	25.50
More than 40% to 60%	76	51.01	80.54	76	51.01	76.51
More than 60% to 80%	28	18.79	99.33	31	20.81	97.32
More than 80% to 100%	1	0.67	100.00	4	2.68	100.00
Total	**149**	**100**		**149**	**100**	

6.2.8 Status of HC Item Reporting by the Companies

There are a total of 19 items under HC category. Data have collected from 149 companies' CAR for the year 2008 and 2011. Average of HC items reporting by all 149 companies has been summarized in Table 6.16. It is observed form the table that all of the companies are reporting a HC item in both years (S/N 9). In contrast, it is noted that none of the companies report equity issue related with disability in their CAR of 2008. Some other higher reported HC items are employee benefits other than salary (S/N 10), employees being thanked and featured (S/N 7), employee and their numbers (S/N 13), etc. Some of the least reported HC items are age of employees (S/N 17), expert seniority (S/N 16), employee involvement in the community (S/N 8), vocational qualifications (S/N 2), etc. Last column of the table shows that most of the HC items have been reported by more companies in CAR 2011. HC reporting sores of three items (S/N 2, S/N 7 and S/N 12) have been decreased in 2011 as compared to that of 2008.

Table 6.16: Status of HC item reporting by the companies (%)

S/N	HC Item	Disclosure 2008	Disclosure 2011	Increase/ (Decrease)
1	Know-how and work-related competencies	35.57	36.24	0.67
2	Vocational qualifications	4.73	4.70	(0.03)
3	Career and Development	14.77	22.82	8.05
4	Training Programs	51.01	51.01	0.00
5	Equity Issue (Race, Gender and Religion)	6.71	16.11	9.40
6	Equity Issue (Disability)	0.00	1.34	1.34
7	Employees being thanked and Featured	93.96	92.62	(1.34)
8	Employee involvement in the community	4.03	4.70	0.67
9	Employee and executive compensation	100	100	0.00
10	Employee benefits other than salary	91.28	95.30	4.03
11	Employee share and option ownership plan	56.76	64.19	7.43
12	Value-added statement	35.57	34.90	(0.67)
13	Employee and their numbers	89.93	92.62	2.68
14	Professional experience of the employee	32.89	36.24	3.36
15	Educational and professional qualification of member of the board and company secretary	42.95	45.64	2.68
16	Expert seniority	3.36	4.03	0.67
17	Age of employees	1.34	4.03	2.68
18	Entrepreneurial spirits	57.05	59.73	2.68
19	Employee safety and work environment	30.20	32.89	2.68

Table 6.17 presents status of HC item reporting by industry type at two points in time. Based on the industry classification, HC reporting status has been shown in this table. It can be noted that none of the companies under INS and BFI report vocational qualification (HC No. 2) in their CAR of the year 2008 and 2011. Similarly, none of the companies under NFI, INS and BFI present information regarding disability issue (HC No. 6) in their either year's CARs. Employee involvement in the community (HC No. 8) is not furnished in any CAR of NBFI and BFI. There is no company under

BFI who report information regarding expert seniority (HC No. 16). Likewise, age of employees (HC No. 17) is not reported by insurance companies. Employees are being thanked and featured by all listed companies under NBFI and BFI industries. Information regarding employee benefits other than salary (HC No. 10) has been reported by all companies of these two industries. All of the banks mention number of employees (HC No. 13) in their CARs. They also show their entrepreneurial spirits (HC No. 18) in annual reports.

Table 6.17: Status of HC item reporting by industry type (%)

HC Item No.	NFI		INS		NBFI		BFI	
	2008	2011	2008	2011	2008	2011	2008	2011
HC No. 1	24.71	24.71	46.67	50.00	52.94	52.94	52.94	52.94
HC No. 2	7.14	7.06	0	0	5.88	5.88	0	0
HC No. 3	5.88	12.94	13.33	10.00	41.18	52.94	35.29	64.71
HC No. 4	38.82	41.18	43.33	40.00	82.35	76.47	94.12	94.12
HC No. 5	3.53	5.88	3.33	10.00	23.53	41.18	11.76	52.94
HC No. 6	0	0	0	0	0	11.76	0	0
HC No. 7	91.76	88.24	93.33	96.67	100	100	100	100
HC No. 8	7.06	7.06	0	3.33	0	0	0	0
HC No. 9	100	100	100	100	100	100	100	100
HC No. 10	92.94	95.29	76.67	90.00	100	100	100	100
HC No. 11	47.62	59.52	60.00	73.33	76.47	76.47	76.47	58.82
HC No. 12	30.59	28.24	33.33	30.00	41.18	35.29	58.82	76.47
HC No. 13	88.24	89.41	90.00	93.33	88.24	100	100	100
HC No. 14	17.65	18.82	36.67	43.33	70.59	82.35	64.71	64.71
HC No. 15	32.94	32.94	60.00	56.67	64.71	76.47	41.18	58.82
HC No. 16	1.18	4.71	0.00	3.33	23.53	5.88	0	0
HC No. 17	1.18	1.18	3.33	0	0	23.53	0	5.88
HC No. 18	37.65	40.00	76.67	80.00	76.47	82.35	100	100
HC No. 19	29.41	31.76	20.00	16.67	47.06	64.71	35.29	35.29

6.2.9 Status of SC Item Reporting by the Companies

A total number of nine items have been included under SC category. Table 6.18 present status of reporting of SC items by the companies at two points in time. As a corporate body, all of the companies are reporting information about management processes and corporate culture (S/N 1). Similarly, all of the companies provide information of financial relation (S/N 8) like lending and borrowing. Innovative products or product focused (S/N 9), future plan (S/N 4), etc. are the mostly reported SC items. There is no SC item which is not reported by any of the companies. In most of the cases SC reporting scores have been increased in 2011 as compared to that of 2008.

Table 6.18: Status of SC item reporting by the companies

S/N	SC Item	Disclosure (%)		Increase/ (Decrease)
		2008	2011	
1	Management processes and corporate culture	100	100	0
2	Technology	46.62	47.30	0.68
3	Management philosophy, mission or vision	61.74	62.42	0.67
4	Future plan	80.54	86.58	6.04
5	Research and development	12.75	14.09	1.34
6	Intellectual property (Patent, Copyright and Trademark)	9.40	10.07	0.67
7	Certificate or award received	40.27	51.68	11.41
8	Financial relations with other institutions	100	100	0
9	Innovative products or product focused	97.99	99.33	1.34

Status of SC item reporting by industry type at two points in time is summarized in Table 6.19. It is observed that all of the banks make forward looking statement (SC No. 4) in their CARs. On the other hand, none of the insurance companies provide information regarding intellectual property (SC No. 6). A very few non-financial listed companies do not report information regarding product (SC No. 9) in their CARs. All other companies provide this information in both years' CARs.

Table 6.19: Status of SC item reporting by industry type (%)

SC Item	NFI		INS		NBFI		BFI	
	2008	2011	2008	2011	2008	2011	2008	2011
SC No. 1	100	100	100	100	100	100	100	100
SC No. 2	42.86	44.05	26.67	40.00	47.06	29.41	100	94.12
SC No. 3	47.06	44.71	76.67	80.00	88.24	82.35	82.35	100
SC No. 4	69.41	78.82	93.33	93.33	94.12	100	100	100
SC No. 5	18.82	18.82	0	6.67	5.88	5.88	11.76	11.76
SC No. 6	4.71	5.88	0	0	52.94	35.29	5.88	23.53
SC No. 7	22.35	31.76	70.00	83.33	29.41	47.06	88.24	100
SC No. 8	100	100	100	100	100	100	100	100
SC No. 9	96.47	98.82	100	100	100	100	100	100

6.2.10 Status of RC Item Reporting by the Companies

One of the IC categories is RC. There are nine items in this group. Table 6.20 describes status of RC reporting by the listed companies in Bangladesh. Out of nine RC items, only two items (S/N 3 and S/N 4) have been reported in CAR by all companies in both years. There is no RC item which is not reported by any of the listed companies. However, licensing agreement (S/N 6) and franchising agreement (S/N 7) are lower reported RC items. It is noted that there are three RC items (S/N 5, S/N 6 and S/N 9) which are been reporting by lower number of companies in 2011 as compared to that of 2008.

Table 6.20: Status of RC item reporting by the companies (%)

S/N	RC Item	Disclosure 2008	Disclosure 2011	Increase/ (Decrease)
1	Brands and Com any lo o	91.28	95.30	4.03
2	Customer and their satisfaction & loyalty	68.46	84.56	16.11
3	Com any name and ima e	100	100	0.00
4	Favorable and/or unfavorable financial contacts	100	100	0.00
5	Business collaborations	20.13	19.46	(0.67)
6	Licensin agreement	2.68	1.34	(1.34)
7	Franchisin agreements	3.36	4.70	1.34
8	Distribution channels/ marketin	64.43	65.77	1.34
9	Market share or other com etitive advanta es	36.91	32.89	(4.03)

Based on industry classification, RC items reporting status at two points in time has been furnished in Table 6.21. Except a very few companies under NFI industry, all of the listed Bangladeshi companies make available information about brands and company logo (RC No. 1). In contrast with this, only a very few companies under NFI industry report two RC items (RC No. 6 & 7) where others do not report these two items at all. All of the banks provide information related with customer, their satisfaction and loyalty (RC No. 2). All of the companies under INS and BFI industries disclose RC No. 8.

Table 6.21: Status of RC item reporting by industry type (%)

RC Item	NFI 2008	NFI 2011	INS 2008	INS 2011	NBFI 2008	NBFI 2011	BFI 2008	BFI 2011
RC No. 1	84.71	91.76	100	100	100	100	100	100
RC No. 2	56.47	77.65	70.00	86.67	94.12	100	100	100
RC No. 3	100	100	100	100	100	100	100	100
RC No. 4	100	100	100	100	100	100	100	100
RC No. 5	24.71	23.53	3.33	6.67	11.76	0	35.29	41.18
RC No. 6	4.71	2.35	0	0	0	0	0	0
RC No. 7	5.88	8.24	0	0	0	0	0	0
RC No. 8	38.82	40.00	100	100	94.12	100	100	100
RC No. 9	42.35	37.65	26.67	13.33	41.18	35.29	23.53	41.18

6.2.11 Mostly reported and least reported IC Items

In the disclosure index, there are 37 IC items under three groups. As a sample, 149 listed firms have been studied to know the IC reporting practices. More than 90% companies report 10 IC items in their CARs (Table 6.22). There are five IC items which are reported by all listed companies.

Table 6.22: Mostly reported IC item by the companies (>90%)

S/N	IC Item	Nature of Item	Reporting Companies (%)	
			2008	2011
9	Employee and executive compensation	HC	100	100
20	Management processes and corporate culture	SC	100	100
27	Financial relations with other institutions	SC	100	100
31	Company name and image	RC	100	100
32	Favorable and/or unfavorable financial contacts	RC	100	100
28	Innovative products or product focused	SC	97.99	99.33
7	Employees being thanked and Featured	HC	93.96	92.62
10	Employee benefits other than salary	HC	91.28	95.30
29	Brands and Company logo	RC	91.28	95.30
13	Employee and their numbers	HC	89.93	92.62

A list of IC items which are not generally reported by the companies has been presented in Table 6.23. There are nine IC items which are reported by less than 10% listed companies.

Table 6.23: Least reported IC item by the companies at two points in time (<10%)

S/N	IC Item	Nature of Item	Reporting Companies (%)	
			2008	2011
6	Equity Issue (Disability)	HC	0	1.34
17	Age of employees	HC	1.34	4.03
34	Licensing agreement	RC	2.68	1.34
16	Expert seniority	HC	3.36	4.03
35	Franchising agreements	RC	3.36	4.70
8	Employee involvement in the community	HC	4.03	4.70
2	Vocational qualifications	HC	4.73	4.70
5	Equity Issue (Race, Gender and Religion)	HC	6.71	16.11
25	Intellectual property (Patent, Copyright, etc.)	SC	9.40	10.07

collected from the year 2011 will be considered. The regression models are as follows:

Model 1: TIC = α+ β_1SBOARD+β_2SACOM+β_3NIND+β_4IND+ε ……………….*(i)*

Model 2: TIC = α+ β_1CAT+β_2PER+β_3PMCAP+β_4IND+ ε ……………………...*(ii)*

Model 3: TIC = α+ β_1PASSET+β_2PSALES+β_3PNPAT+β_4IND+ ε …………...*(iii)*

Model 4: TIC = α+ β_1COG+β_2MKT+β_3COA+ β_4IND+ε ………………………...*(iv)*

where:

TIC	= total intellectual capital reporting index for each firm
SBOARD	= size of board of the firm
SACOM	= size of audit committee in the firm
NIND	= number of independent directors on board of the firm
CAT	= share category of the firm
PER	= market performance of the firm
PMCAP	= proportion of market capitalization as compared to total firms
PASSET	= proportion of assets as compared to that of total firms
PSALES	= proportion sales revenue as compared to that of total firms
PNPAT	= proportion of net profit after tax as compared to that of total
COG	= corporate governance
MKT	= market status
COA	= corporate attribute
IND	= industry type
α	= the constant
β	= the coefficient
ε	= the error term

6.3.1 Descriptive Statistics of All Variables

Table 6.24 presents descriptive statistics of dependent and all independent variables. Minimum total intellectual capital (TIC) score is 18.92% whereas maximum score is 86.49% with arithmetic mean 50.64%. Minimum size of board of the firm (SBOARD) is 3, maximum size is 26 and thus, average is 10.76. Minimum number of member on audit committee (SACOM) is zero and maximum members are 7. Similarly, minimum number of independent directors on board is zero and maximum number is 3. There are three variables under market status (MKT). Share category and market performance have been used as dummy variables. Market capitalization has been determined as a percentage of all firms under study. Minimum proportion of market capitalization (PMCAP) is 3.41% where maximum proportion is 11.23%. Three variables under corporate attributes (COA) have been used in this study namely PASSET, PSALES and PNPAT. Therefore, all of the variables under this category have been expressed as a proportion of total value of that aspect of all selected firms. On an average, a firm holds 0.67% of the total value of all selected firms. Industry type (IND) is also a dummy variable.

Table 6 24: Descriptive statistics of all variables

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Dependent Variable						
TIC	149	67.57	18.92	86.49	50.6440	13.80356
Corporate Governance Attributes (COG)						
SBOARD	149	23	3	26	10.76	5.504
SACOM	149	7	0	7	2.52	2.059
NIND	149	3	0	3	.89	.547
Market Status of Firm on Stock Exchange (MKT)						
CAT	149	4	1	5	4.44	1.338
PER	149	2	-1	1	-.01	.545
PMCAP	149	7.824	3.409	11.233	7.70000	1.703350

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Corporate Attributes (COA)						
PASSET	149	14.066	.000	14.066	.67114	1.691185
PSALES	149	14.29616	.00000	14.29616	.6711409	1.56282205
PNPAT	149	19.279	-3.156	16.124	.67114	1.802010
Industry Type (IND)						
IND	149	2	1	4	1.77	1.047
Valid N (listwise)	149					

6.3.2 Corporate governance (COG), IND and TIC

Regression results of model 1 have been presented in Table 6.25 whereas Table 6.26 presents a summary of regression results of COG, IND and TIC variables used in model 1. It is depicted from these tables that R and adjusted R^2 are 0.579 and 0.316 respectively where F value is 18.129 with sig. at 0.000. Durbin-Watson test for serial correlation of the residuals shows a value 1.989 which is most close to the expected value 2. It implies that the model is adequately fit and incorporated variables may explain more than 31% of the dependent variable without serial correlation of the residuals. The coefficients of all of the variables show expected sign except of NIND which shows opposite sign (Table 6.26). The variable SBOARD positively influences the TIC which is statistically significant at 10% level with t-value 1.808. On the other hand, NIND negatively influences the dependent variable but this is not statistically significant at 10%. Out of three variables among corporate governance attributes, SACOM is more influential factor which is statistically significant at 1% level with t-value 4.447 (Table 6.25). Therefore, SACOM will be considered as a measure of corporate governance (COG) in model 4 (Table 6.26). In this model it is depicted that intellectual capital reporting is also varies among different types of industries and the result is statistically significant at 5% level (t-value 2.166).

Table 6.25: Regression results of model 1 (COG, IND and TIC)

Mode 1: Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	37.666	2.490		15.129	.000
SBOARD	.429	.238	.171	1.808	.073
SACOM	2.347	.528	.350	4.447	.000
NIND	-2.941	1.928	-.117	-1.525	.129
IND	2.855	1.319	.217	2.166	.032

Model Summary*:

N	= 149	Durbin-Watson	= 1.989
R	= .579	F-Value	= 18.129
R^2	= .335	Sig.	= .000
Adjusted R^2	= .316		

* Dependent Variable: TIC Reporting Score

Table 6.26: Summary of regression results of COG variables in model 1

Variable	Operational Definition	Measurement	Expected Si n	Result
TIC	Total ICR index	Total ICR of the firm		Index
SBOARD	Size of board of the firm	No. of members on board	(+)	Supported
SACOM*	Size of audit committee in the firm	No. of member on audit committee	(+)	Supported
NIND	No. of independent directors on board	No. of independent directors on board	(+)	Not su orted
IND	Industry type	NFI=1, INS=2, NBFI =3 and BFI=4	(+/-)	Significant

*SACOM has been selected for model 4

6.3.3 Market Status (MKT), IND and TIC

Association between TIC and market status (MKT) along with industry type (IND) has been tested through regression model 2. Regression results of this model have been presented in Table 6.27 whereas a summary of regression results these variables used in model 2 is presented in Table 6.28. Goodness-of-fit statistics of model 2 show that R, R^2 and adjusted R^2 are 0.695, 0.482 and 0.468 respectively with F-value 33.547 (sig. 0.000). Besides, Durbin-Watson test for serial correlation of the residuals shows a value of 2.148 which is close to the expected value of 2. It means the model

is appropriate and entered variables are sufficient to explain more than 46% of dependent variable (Table 6.27). All of the variables under MKT are positively associated with TIC but PMCAP is only statistically significant determinant (t-value 6.542, sig. at 0.000). Thus, coefficients of all variables support the expected sign (Table 6.28). Therefore, PMCAP will be considered as a measure of market status (MKT) in model 4. In model 2, TIC is also associated with IND and the result is statistically significant at 5% level (t-value 2.206).

Table 6.27: Regression results of model 2 (MKT, IND and TIC)

Mode 2: Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10.293	4.013		2.565	.011
CAT	.004	.776	.000	.006	.995
PER	1.103	1.588	.044	.695	.488
PMCAP	4.731	.723	.584	6.542	.000
IND	2.209	1.001	.168	2.206	.029

Model Summary*:

N	= 149		Durbin-Watson	= 2.148
R	= .695		F-Value	= 33.547
R^2	= .482		Sig.	= .000
Adjusted R^2	= .468			

* Dependent Variable: TIC Reporting Score

Table 6.28: Summary of regression results of MKT variables in model 2

Variable	Operational Definition	Measurement	Expected Sign	Result
TIC	Total ICR index	Total ICR of the firm		Index
CAT	Share category of the firm	A=5, B=4, G=3, N=2 and Z=1	(+)	Supported
PER	Market performance of the firm	Top 20 = 1, Bottom 20= -1 and neither = 0	(+)	Supported
PMCAP*	Proportion of Market capitalization of firm	Market capitalization as compared to total firms	(+)	Supported
IND	Industry type	NFI=1, INS=2, NBFI =3 and BFI=4	(+/-)	Significant

*PMCAP has been selected for model 4

6.3.4 Corporate Attributes (COA), IND and TIC

Regression results of model 3 have been presented in Table 6.29 whereas Table 6.30 presents a summary of regression results of COA, IND and TIC variables used in this model. It is seen from Table 6.29 that R, R^2 and adjusted R^2 are 0.528, 0.279 and 0.259 respectively where F-value is 13.937 (sig. at 0.000). Durbin-Watson value (2.083) supports that there is no serial correlation of the residuals. The coefficients of PASSETS and PNPAT demonstrate expected sign. On the contrary, coefficient of PSALES shows negative sign which is unexpected (Table 6.29) but the result is not statistically significant. Relatively more significant COA variable is PNPAT for influencing intellectual capital reporting of a firm. For that reason, PNPAT will be considered as a measure of corporate attribute (COA) in model 4 (Table 6.30). Through this model it is also depicted that intellectual capital reporting is associated with IND and the result is statistically significant at 1% level (t-value 4.107).

Table 6.29: Regression results of model 3 (COA, IND and TIC)

Mode 3: Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	40.453	2.171		18.634	.000
PASSET	.599	.995	.073	.602	.548
PSALES	-.514	1.680	-.058	-.306	.760
PNPAT	1.771	1.333	.231	1.329	.186
IND	5.049	1.229	.383	4.107	.000

Model Summary*:

N	= 149	Durbin-Watson	= 2.083
R	= .528	F-Value	= 13.937
R^2	= .279	Sig.	= .000
Ad`usted R^2	= .259		

* Dependent Variable: TIC Reporting Score

Table 6.30: Summary of regression results of COA variables in model 3

Variable	Operational Definition	Measurement	Expected Sign	Result
TIC	Total ICR index	Total ICR of the firm		Index
PASSET	Proportion of total assets of the firm	Total assets as compared to total firms	(+)	Supported
PSALES	Proportion of total sales of the firm	Proportion of gross sales as compared to total firms	(+)	Not supported
PNPAT*	Proportion of net profit after tax	Net profit after tax as compared to total firms	(+)	Supported
IND	Industry type	NFI=1, INS=2, NBFI =3 and BFI=4	(+/-)	Significant

*PNPAT has been selected for model 4

6.3.5 COG, MKT, COA, IND and TIC

Through model 1, 2 and 3 the most influencing COG, MKT and COA variables have been picked up for Model 4. The variables SACOM, PMCAP and PNPAT have been selected as the measures of COG, MKT and COA respectively for the final model (Model 4). Consequently, Model 4 explains the relationship of COG, MKT, COA and IND with ICR status of listed companies in Bangladesh. Regression results of this model have been portrayed in Table 6.31 whereas a summary of regression results these variables entered in model 4 is presented in Table 6.32. Goodness-of-fit statistics of model 4 show that R, R^2 and adjusted R^2 are 0.717, 0.514 and 0.500 respectively with F-value 38.002 (sig. 0.000). Besides, Durbin-Watson test for serial correlation of the residuals shows a value 2.147 which is very much close to the expected value 2. It means the model is appropriately fit and entered variables are sufficient to explain more than 50% of dependent variable (Table 6.31). All of the variables are positively associated with TIC but some of them are not statistically significant. Hence, coefficients of all variables support the expected sign (Table 6.32). It has been found that COG is positively associated with TIC of firm where unstandardized beta, standardized beta and t-value are 1.408, 0.210 and 3.121

respectively which are statistically significant at 1% level. Based on the regression results it can be said that market status of firm on stock exchange is the most influencing determinant of intellectual capital reporting by the firm where unstandardized beta, standardized beta and t-value are 4.369, 0.539 and 6.878 respectively, which are statistically significance at 1% level. PNPAT has been used as a measure of corporate attribute (COA). It has also positive association with TIC but the t-value is 0.272 which is not statistically significance (sig. 0.786). TIC is associated with IND though it is not statistically significant.

Table 6.31: Regression results of model 4 (COG, MKT, COA, IND and TIC)

Mode 4: Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	11.449	4.182		2.738	.007
COG	1.408	.451	.210	3.121	.002
MKT	4.369	.635	.539	6.878	.000
COA	.141	.516	.018	.272	.786
IND	1.078	.975	.082	1.106	.271

Model Summary*:

N	= 149	Durbin-Watson	= 2.147
R	= .717	F-Value	= 38.002
R²	= .514	Sig.	= .000
Adjusted R²	= .500		

* Dependent Variable: TIC Reporting Score

Table 6.32: Summary of regression results of COG, MKT, COA and IND variables in model 4

Variable	Operational Definition	Measurement	Expected Sign	Result
TIC	Total ICR index	Total ICR of the firm		Index
COG	Corporate governance attributes	No. of member on audit committee	(+)	Supported
MKT	Market status of firm on stock exchange	Market capitalization as compared to total of firms	(+)	Supported
COA	Corporate attributes	Net profit after tax as compared to total of firms	(+)	Supported
IND	Industry type	NFI=1, INS=2, NBFI =3 and BFI=4	(+/-)	Associated

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Chapter Seven

PERCEPTION SURVEY OF STAKEHOLDERS

Chapter Outline

Chapter Seven

PERCEPTION SURVEY OF STAKEHOLDERS

7.1 Introduction

To achieve the set objectives of the study, perception survey on different aspects of IC reporting has been conducted for collecting primary data through a questionnaire. Opinions have been collected from 265 respondents grouping as supplier of information, direct user of information and indirect user of the information. Respondents have given their perceptions on a five-level Likert scale as "1" for "strongly agree", "2" for "agree", "3" for "neutral", "4" for "disagree" and "5" for "strongly disagree". For statistical test on the differences of opinions giving by different types of stakeholders, Kruskal-Wallis Test has been conducted. It is a nonparametric test used to compare three or more groups where Wilcoxon-Mann-Whitney Test may not be used. Besides, Cronbach's Alpha Test has been conducted for testing reliability of the questionnaire. Cronbach's alpha is a measure of internal consistency and it is considered to be a measure of scale reliability (www.ats.ucla.edu). The following sections summarize the opinions given by different types of stakeholders against different questions.

7.2 Perception about Means of Disseminating Information

A statement was placed before the respondents as corporate annual report (CAR) is the most suitable way of disseminating company information for the users. It is observed from Table 7.1 that 68% of the total suppliers of information "agree" with the given statement. Similarly, 49% of direct users of information "strongly agree"

with this statement whereas 89% indirect users of information "strongly agree" in this regard. Figure 7.1 also presents stakeholders' perceptions regarding the statement. On an average 52% of all respondents "strongly agree" with the statement that CAR is the most suitable way of disseminating corporate information for the users. Kruskal-Wallis Test results indicate that there is a difference in perceptions regarding the issue which is statistically significant at 1% level.

Table 7.1: Corporate annual report (CAR) is the most suitable way of disseminating company information for the users

espondents' Opinion Group of Stakeholders	Opinion on Likert Scale[1] (%)					N	Kruskal-Wallis Test*		
	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	19	68	10	3	0	59	171.31	53.151	.000
Direct User	49	32	16	4	0	136	140.97		
Indirect User	89	9	0	3	0	70	85.23		
Average	52	34	11	3	0				

* Grouping variable: Types of respondents
Source: Survey

Figure 7.1: Corporate annual report (CAR) is the most suitable way of disseminating company information for the users

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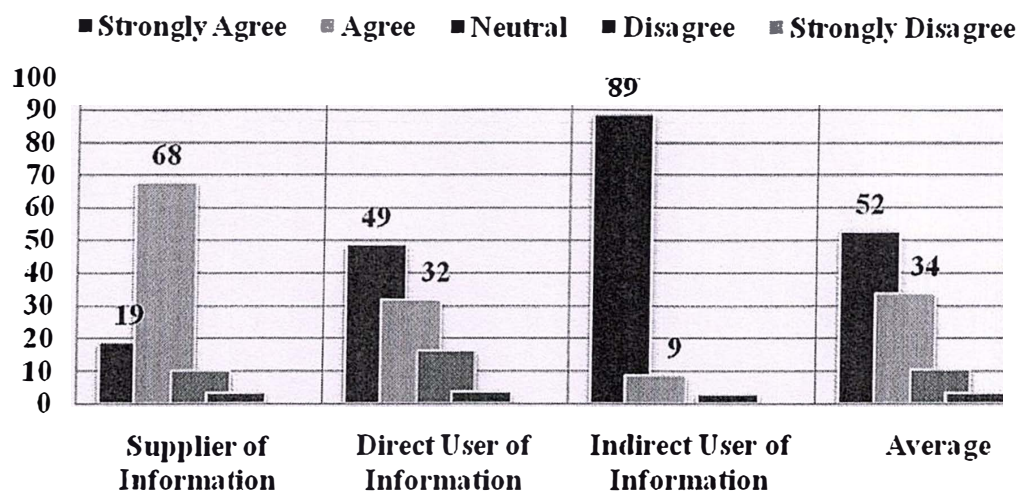
[1] "1" for "strongly agree", "2" for "agree", "3" for "neutral", "4" for "disagree" and "5" for "strongly disagree".

7.3 Use of Information Provided in CAR by the Investors

A statement "investors use information provided in CAR of a company before taking investment decision" was raised before the respondents. Table 7.2 summarizes the opinions given by the stakeholders. It is seen from this table that 12% of suppliers of information, 38% of direct users and 36% of indirect users "strongly agree" with this view. Score "2" is given by 75% suppliers, 49% direct and 50% indirect users of information. A few respondents have given score "3" and "4". None of the respondents has given score "5". Figure 7.2 portrays that 55% of total respondents "agree" with the given statement. None of the respondents strongly opines that users do not use information provide in CARs of the listed companies. There is a statistically significant difference (at 5% level) in perception concerning the statement as proved by Kruskal-Wallis Test.

Table 7.2: Investors use information provided in CAR of a company before taking investment decision

Respondents' Opinion / Group of Stakeholders	Opinion on Likert Scale (%)					N	Kruskal-Wallis Test*		
	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	12	75	12	2	0	59	156.02	8.767	.012
Direct User	38	49	10	2	0	136	124.85		
Indirect User	36	50	11	3	0	70	129.43		
Average	32	55	11	2					

* Grouping variable: Types of respondents
Source: Survey

Figure 7.2: Investors use information provided in CAR of a company before taking investment decision
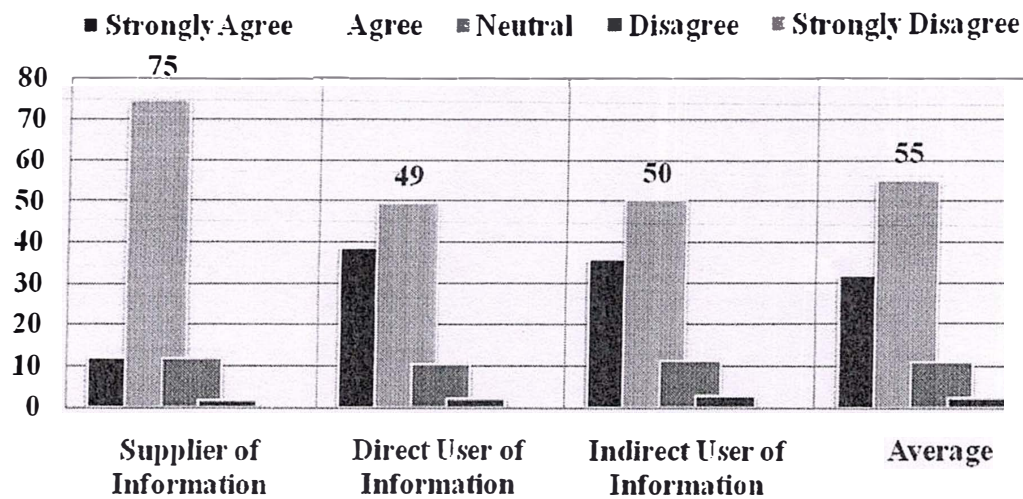
7.4 Use of Information Provided in CAR by the Lenders

Table 7.3 presents the perceptions about use information provided in CAR by the lenders. Majority of the respondents "agree" with statement placed before them. There is no statistically significant difference in perception as witnessed by Kruskal-Wallis Test. On an average 32 %, 57%, 9% and 2% respondents are "strongly agree", "agree", "neutral", and "disagree", respectively (Figure 7.3)

Table 7.3: Lenders use information provided in CAR of a company before taking lending decision

Respondents' Opinion	Opinion on Likert Scale (%)						Kruskal-Wallis Test*		
Group of Stakeholders	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	34	53	10	3	0	59	132.86	.037	.982
Direct User	32	55	10	3	0	136	133.69		
Indirect User	29	66	6	0	0	70	131.79		
Average	32	57	9	2	0				

* Grouping variable: Types of respondents
Source: Survey

Figure 7.3: Lenders use information provided in CAR of a company before taking lending decision
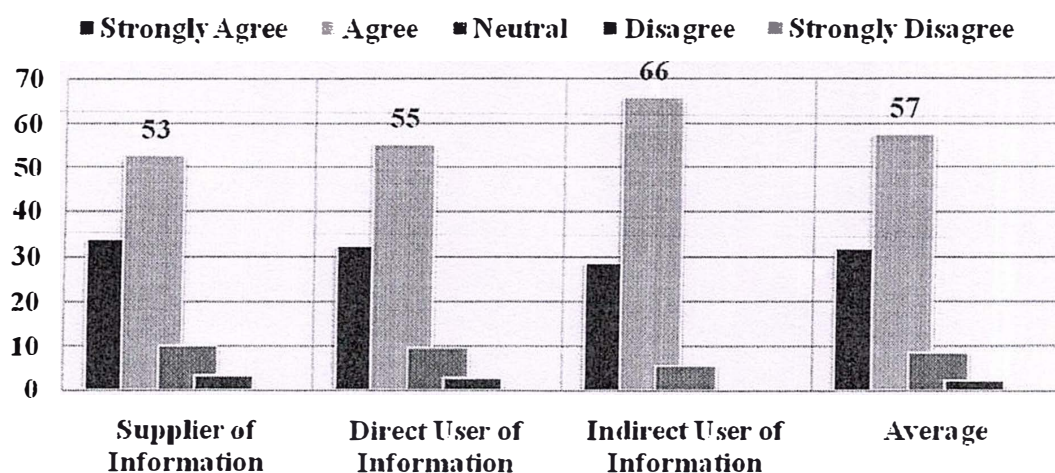
7.5 Use of Information Provided in CAR by the Regulators

A statement was put before the respondents as to whether regulators and others use information provided in CAR of a company before taking any decision. It is depicted in Table 7.4 that 69%, 72% and 59% 68% "agree" with the issue by suppliers, direct users and indirect users of information, respectively. Figure 7.4 presents stakeholders' perceptions regarding the statement. On an average, 68% of all respondents "agree" with the given statement. Test results indicate that there is a statistically significant difference in perceptions regarding the issue.

Table 7.4: Regulators and others use information provided in CAR of a company before taking any decision

Respondents' Opinion	Opinion on Likert Scale (%)						Kruskal-Wallis Test*		
Group of Stakeholders	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	15	69	14	2	0	59	143.62	21.346	.000
Direct User	14	72	13	1	0	136	143.76		
Indirect User	39	59	3	0	0	70	103.14		
Average	21	68	10	1	0				

* Grouping variable: Types of respondents
Source: Survey

Figure 7.4: Regulators and others use information provided in CAR
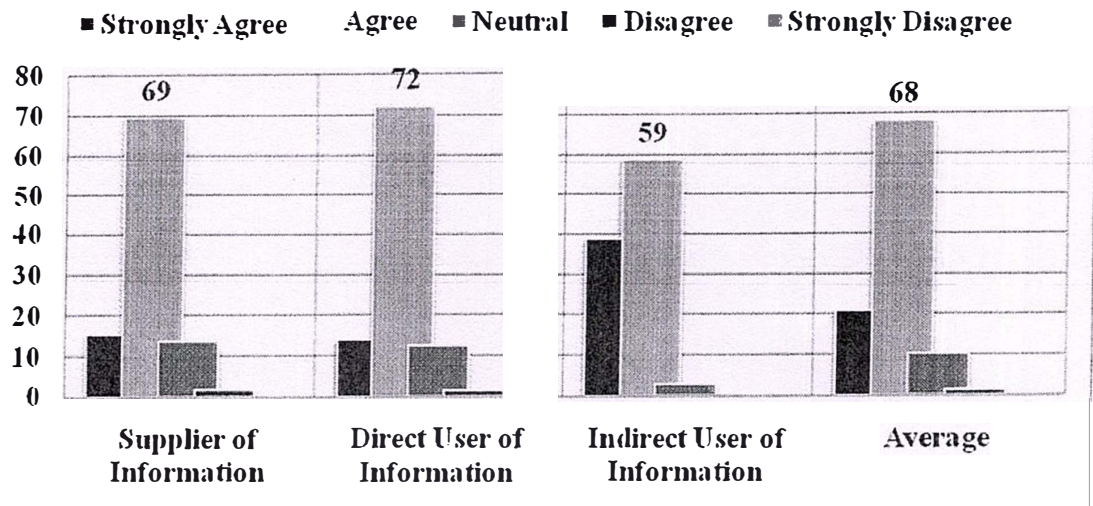
7.6 Importance of IC for Business Success

A statement as "IC is the most important factor for business success" was placed before the respondents for their opinions. Table 7.5 summarizes the opinions given by different stakeholders. It is seen from this table that 34% of suppliers, 22% of direct users and 37% of indirect users of information are neutral for giving opinions. Thus, it may not be said that IC is the most important factor for business success. This is important along with others factors. There is a consistency in perceptions of the respondents and null hypothesis (equality of mean) is failed to reject (Table 7.5). Though, the highest average score (43%) is for "agree" with the statement placed before them (Figure 7.5).

Table 7.5: Intellectual capital (IC) is the most important factor for business success

Respondents' Opinion	Opinion on Likert Scale (%)						Kruskal-Wallis Test*		
Group of Stakeholders	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	34	31	34	2	0	59	122.57		
Direct User	18	51	22	8	1	136	134.78	1.700	.427
Indirect User	21	39	37	0	3	70	138.33		
Average	23	43	29	5	1				

* Grouping variable: Types of respondents
Source: Survey

Figure 7.5: Intellectual capital (IC) is the most important factor for business success
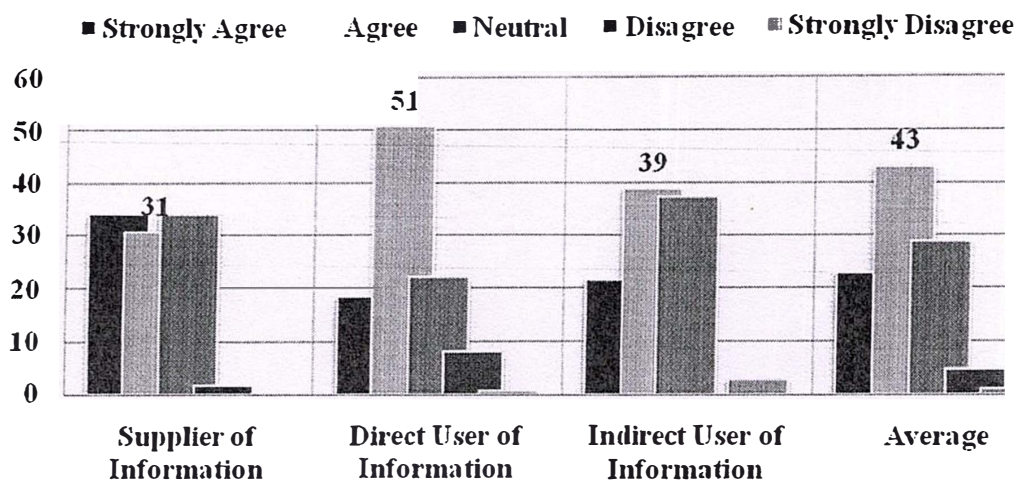
7.7 Making Compulsion by Regulators for IC Reporting

Table 7.6 presents the perceptions of stakeholders regarding compulsion imposed by regulators for IC reporting in CAR. A big number of suppliers of information "disagree" to make it mandatory. On the contrary, majority of the direct user and indirect users "strongly agree" with statement placed before them. It is clear that perceptions regarding the issue defer among the stakeholders which is supported by Kruskal-Wallis Test (Table 7.6). As many 46% of total respondents strongly support to make it mandatory for the suppliers to report more IC items in CAR (Figure 7.6).

Table 7.6: Regulators should make it mandatory to disclose IC items in CAR

Respondents' Opinion Group of Stakeholders	Opinion on Likert Scale (%)					N	Kruskal-Wallis Test*		
	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	12	39	10	39	0	59	190.82	52.772	.000
Direct User	50	35	10	4	0	136	122.59		
Indirect User	69	16	10	6	0	70	104.49		
Average	46	31	10	12	0				

* Grouping variable: Types of respondents
Source: Survey

Figure 7.6: Regulators should make it mandatory to disclose IC items in CAR

■ Strongly Agree   Agree   ■ Neutral   ■ Disagree   ■ Strongly Disagree
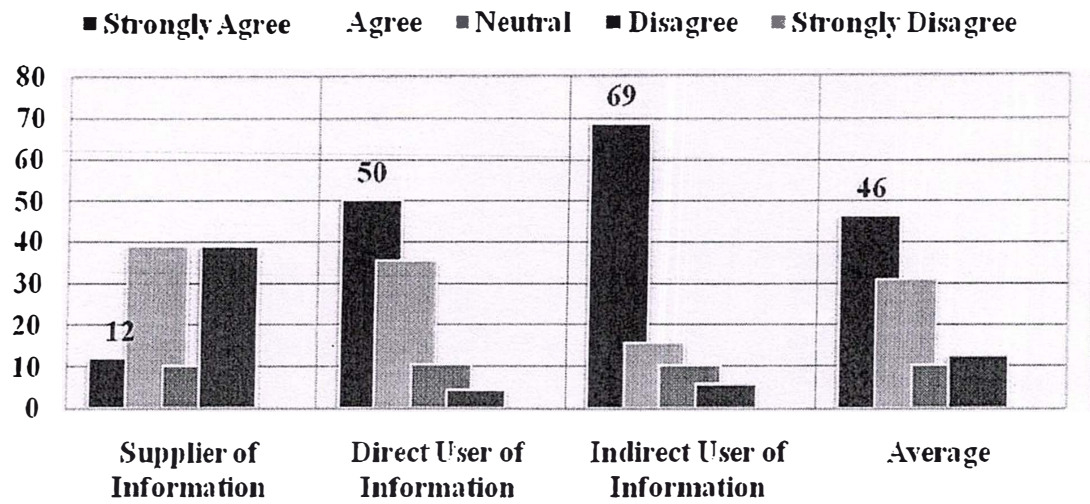
7.8 Cost-Effectiveness of IC Reporting in CAR

A statement was put before the respondents as to whether disclosure of IC information in CAR is cost-effective. It is illustrated in Table 7.7 that many of the respondents are not in favor or against the statement (neutral). Though, none of the respondents "strongly disagree" with the statement but some of the respondents opine that disclosure of IC information in CAR is not cost-effective. On an average, 46% respondents "agree" that IC reporting is cost-effective (Figure 7.7). At 1% significant level it can be said that there is no similarity in perceptions regarding cost-effectiveness of IC reporting.

Table 7.7: Disclosure of IC information in CAR is cost-effective

Respondents' Opinion	Opinion on Likert Scale (%)						Kruskal-Wallis Test*		
Group of Stakeholders	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	5	34	51	10	0	59	177.03	36.910	.000
Direct User	21	53	17	10	0	136	130.72		
Indirect User	40	44	13	3	0	70	100.32		
Average	22	46	23	8	0				

* Grouping variable: Types of respondents
Source: Survey

Figure 7.7: Disclosure of IC information in CAR is cost-effective
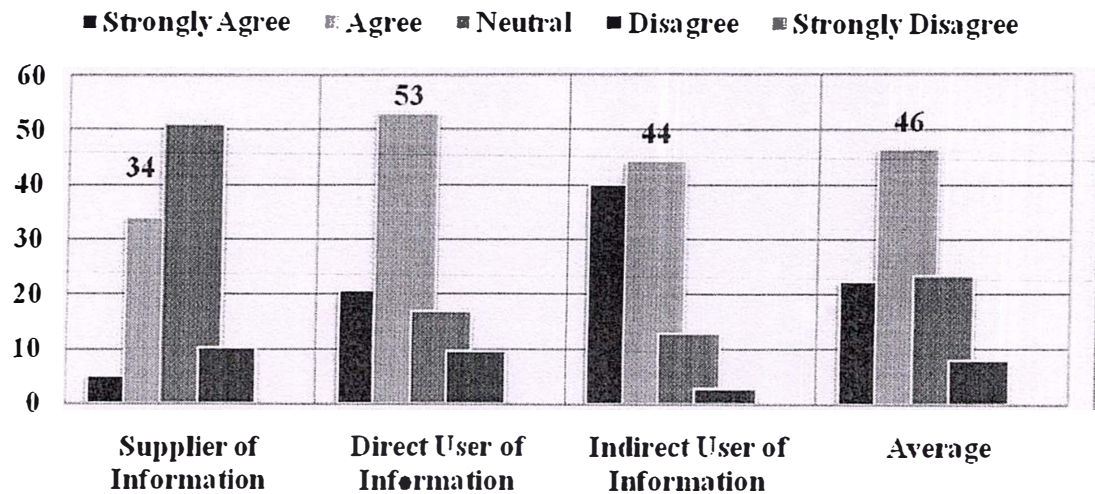
7.9 Value Addition by IC Reporting in CAR

It is stated that disclosure of IC will add value for the company and the users of information. Suppliers of information, direct users of information and indirect users of information have given their opinions regarding the issue. It can be found from Table 7.8 that the majority of the respondents under different groups either "strongly agree" or "agree" with this viewpoint. Besides, more than 50% of total respondents "strongly agree" that disclosure of IC adds value for the company and for the users as well (Figure 7.8). Table 7.8 depicts that there are differences in perceptions regarding value addition by IC reporting in CAR.

Table 7.8: Disclosure of IC will add value for the company and the users

| | Opinion on Likert Scale (%) | | | | | | Kruskal-Wallis Test* | | |
	1	2	3	4	5		Mean Rank	Chi-Square	Asymp. Sig.
Supplier of Information	29	42	25	3	0	59	172.88		
Direct User	51	38	7	3	0	136	135.65	42.598	.000
Indirect User	81	19	0	0	0	70	94.23		
Average	54	34	9	2	0				

* Grouping variable: Types of respondents
Source: Survey

Figure 7.8: Disclosure of IC will add value for the company and the users
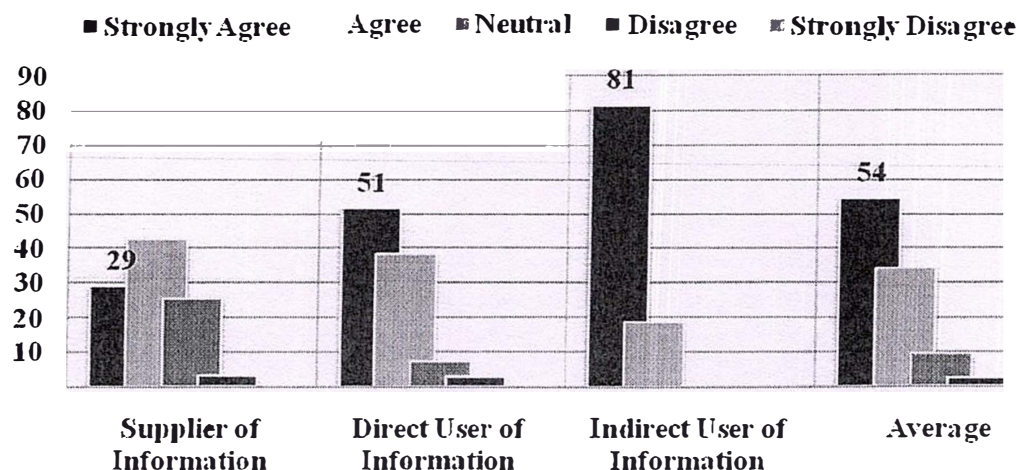
7.10 Perception of Stakeholders Regarding HC Reporting in CAR

Stakeholders' perceptions regarding HC reporting in CAR are presented in Table 79. On an average, 34.43%, 40.59%, 21.59%, 3.21% and 0.18% of the suppliers of information "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively about the necessity of HC items reporting in CAR. In the same way 38.39%, 46.52%, 11.11%, 2.9% and 0.54% of the direct users of information "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively about the same issue. Correspondingly 50.15%, 41.13%, 6.77%, 0.45% and 1.5% of the indirect users of information "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively regarding the statement (Table 7.9). The majority portions of the respondents either "strongly agree" or "agree" that HC items reporting in CAR is necessary (Figure 7.9). Kruskal-Wallis Test results based on the types of respondents as grouping variable are tabulated in Table 7.10. It is found that in most of cases there are statistically significant differences of perceptions among the groups. In three cases (HC No. 8, 15 and 18), perceptions differences are not statistically significant (Table 7.10).

Table 7.9: Disclosure of HC items in CAR is necessary (average of all HC items)

Respondents' Opinion / Group of Stakeholders	Opinion on Likert Scale (%)					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Supplier of Information	34.43	40.59	21.59	3.21	0.18	100.00
Direct User	38.93	46.52	11.11	2.90	0.54	100.00
Indirect User	50.15	41.13	6.77	0.45	1.50	100.00
Average	40.90	43.78	12.29	2.32	0.71	100.00

Source: Survey

Figure 7.9: Disclosure of HC items in CAR is necessary (Average of all HC Items)
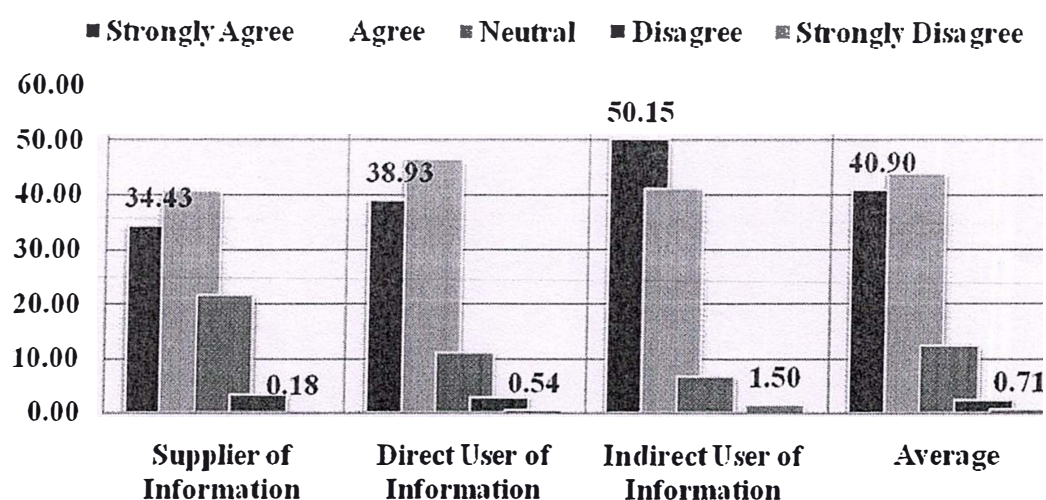
Table 7.10: Perception of the Stakeholders on HC Items Reporting in CAR

HC Item No.	Opinion on Likert Scale (%)					Kruskal-Wallis Test*	
	1	2	3	4	5	Chi-Square	Asymp. Sig.
HC No. 1	39.25	45.28	14.34	0.00	1.13	38.13	0.000
HC No. 2	26.04	52.45	16.98	3.40	1.13	18.742	0.000
HC No. 3	36.60	50.19	9.81	2.26	1.13	31.856	0.000
HC No. 4	52.08	44.53	2.26	0.00	1.13	9.004	0.011
HC No. 5	19.25	51.70	17.74	7.92	3.40	15.461	0.000
HC No. 6	12.83	53.21	24.91	7.92	1.13	18.898	0.000
HC No. 7	28.30	55.47	13.96	2.26	0.00	13.06	0.001
HC No. 8	**15.09**	**69.43**	**12.08**	**2.26**	**1.13**	**4.011**	**0.135**
HC No. 9	54.72	36.23	5.66	2.26	1.13	22.739	0.000
HC No. 10	62.64	30.19	3.77	2.26	1.13	19.891	0.000
HC No. 11	41.51	39.62	14.34	3.40	1.13	7.197	0.027
HC No. 12	60.38	25.66	10.57	3.40	0.00	11.046	0.004

HC Item No.	Opinion on Likert Scale (%)					Kruskal-Wallis Test*	
	1	2	3	4	5	Chi-Square	Asymp. Sig.
HC No. 13	51.70	38.49	7.55	2.26	0.00	5.239	0.073
HC No. 14	35.85	60.38	3.77	0.00	0.00	17.251	0.000
HC No. 15	**70.19**	**23.02**	**6.79**	**0.00**	**0.00**	**2.951**	**0.229**
HC No. 16	41.13	41.51	17.36	0.00	0.00	24.719	0.000
HC No. 17	9.06	52.45	33.96	4.53	0.00	7.393	0.025
HC No. 18	**49.06**	**37.74**	**13.21**	**0.00**	**0.00**	**1.108**	**0.575**
HC No. 19	71.32	24.15	4.53	0.00	0.00	12.639	0.002

* Grouping variable: Types of respondents

7.11 Perception of Stakeholders Regarding SC Reporting in CAR

Respondents' perceptions regarding SC reporting in CAR are summarized in Table 7.11. Results show that 53.48%, 38.8%, 7.34%, 0.19% and 0.19% of the suppliers of information "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively about the necessity of SC items reporting in CAR. Similarly, 58.99%, 34.64%, 5.80%, 0.24% and 0.33% of the direct users of information "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively about the same issue. Likewise, 74.29%, 22.06%, 2.7%, 0.32% and 0.63% of the indirect users of information "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively regarding the same statement (Table 7.11). The majority portions of the respondents (61.8%) "strongly agree" that SC items reporting in CAR is necessary (Figure 7.10). Kruskal-Wallis Test results based on the types of respondents as grouping variable are presented in Table 7.12. Statistically significant differences of perceptions among the groups are found in most of the cases. In two cases (SC No. 7 and 9), differences of perceptions are not statistically significant (Table 7.12).

Table 7.11: Disclosure of SC items in CAR is necessary (average of all SC items)

Group of Stakeholders	Opinion on Likert Scale (%)					Total
Respondents' Opinion	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
Supplier of Information	53.48	38.80	7.34	0.19	0.19	100.00
Direct User	58.99	34.64	5.80	0.24	0.33	100.00
Indirect User	74.29	22.06	2.70	0.32	0.63	100.00
Average	61.80	32.24	5.33	0.25	0.38	100.00

Source: Survey

Figure 7.10: Disclosure of SC items in CAR is necessary (average of all SC items)
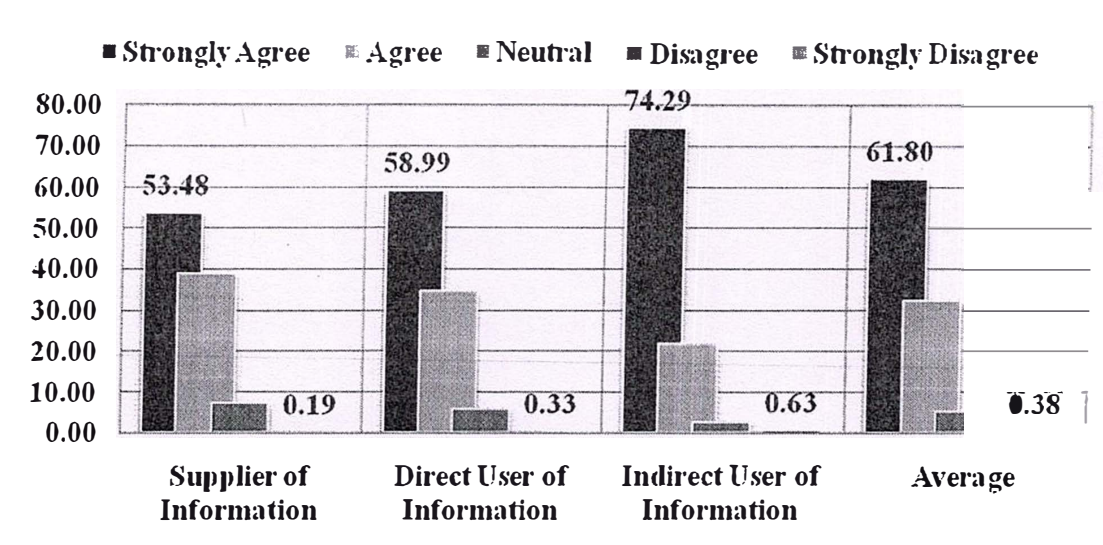
Table 7.12: Perception of the Stakeholders on SC Items Reporting in CAR

SC Item No.	Opinion on Likert Scale (%)					Kruskal-Wallis Test*	
	1	2	3	4	5	Chi-Square	Asymp. Sig.
SC No. 1	67.92	28.68	2.26	0.00	1.13	10.425	0.005
SC No. 2	57.74	38.11	4.15	0.00	0.00	27.132	0.000
SC No. 3	69.43	26.04	4.53	0.00	0.00	19.704	0.000
SC No. 4	74.72	23.02	2.26	0.00	0.00	10.097	0.006
SC No. 5	70.57	24.53	3.77	0.00	1.13	8.412	0.015
SC No. 6	65.66	26.42	6.79	0.00	1.13	13.367	0.001
SC No. 7	60.38	26.79	10.57	2.26	0.00	0.154	0.926
SC No. 8	29.43	61.89	8.68	0.00	0.00	5.36	0.069
SC No. 9	60.38	34.72	4.91	0.00	0.00	2.557	0.278

7.12 Perception of Stakeholders Regarding RC Reporting in CAR

Different types of respondents' perceptions regarding RC reporting in CAR are portrayed in Table 7.13. Respondents' perceptions show that the maximum stakeholders are in favor of RC reporting in CAR. It is seen from the table that 41.21%, 48.85%, 9.39%, 0.42% and 0.13% of the respondents "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively regarding the necessity of RC reporting in CAR. The proportions of perceptions are also presented in Figure 7.11. Kruskal-Wallis Test results based on the types of respondents as grouping variable are presented in Table 7.14. Statistically significant differences of perceptions at 1% level among the groups are found in case of two items (RC No. 4 and 9) whereas statistically significant differences of perceptions at 5% level among the groups are found in case other two items (RC No. 1 and 3). But in all other cases, differences in perceptions are not statistically significant.

Table 7.13: Disclosure of RC items in CAR is necessary (average of all RC Items)

	Opinion on Likert Scale (%)					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Supplier of Information	33.90	52.92	12.80	0.38	0.00	100.00
Direct User	40.77	49.02	9.64	0.49	0.08	100.00
Indirect User	48.25	45.08	6.03	0.32	0.32	100.00
Average	41.21	48.85	9.39	0.42	0.13	100.00

Source: Survey

Figure 7.11: Perception of the Stakeholders on RC Items Reporting in CAR
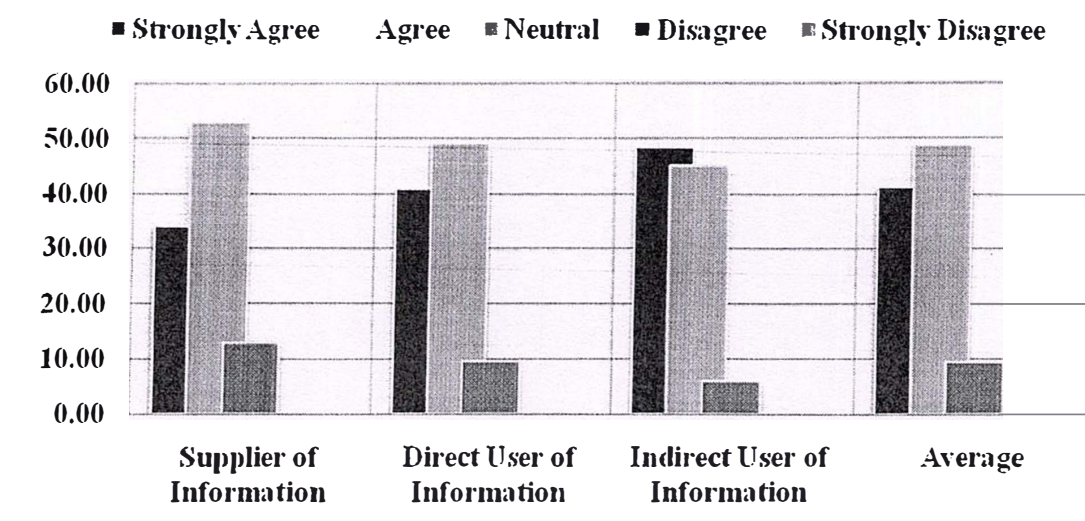
Table 7.14: Perception of the Stakeholders on RC Items Reporting in CAR

RC Item No.	Opinion on Likert Scale (%)					Kruskal-Wallis Test*	
	1	2	3	4	5	Chi-Square	Asymp. Sig.
RC No. 1	67.92	23.02	7.92	1.13	0.00	7.17	0.028
RC No. 2	42.64	51.70	4.53	0.00	1.13	1.269	0.530
RC No. 3	72.08	25.66	2.26	0.00	0.00	8.133	0.017
RC No. 4	30.57	56.23	13.21	0.00	0.00	37.644	0.000
RC No. 5	24.91	67.55	7.55	0.00	0.00	4.243	0.120
RC No. 6	26.04	61.51	12.45	0.00	0.00	2.968	0.227
RC No. 7	21.89	63.77	13.58	0.75	0.00	3.574	0.167
RC No. 8	33.96	52.08	12.08	1.89	0.00	3.444	0.179
RC No. 9	50.94	38.11	10.94	0.00	0.00	21.982	0.000

7.13 Perception of Stakeholders Regarding IC Reporting in CAR

Perceptions of the respondents regarding IC reporting in CAR are portrayed in Table 7.15. Though there are some variations in stakeholders' perceptions, they are in favor of IC reporting in CAR. Average figures show that 46.06%, 42.20%, 9.89%, 1.36%

and 0.49% of the total respondents "strongly agree", "agree", "neutral", "disagree" and "strongly disagree", respectively regarding the statement. Perceptions regarding necessity of reporting IC items are displayed through Figure 7.12.

Table 7.15: Disclosure of IC items in CAR is necessary (average of total IC items)

Respondents' Opinion / Group of Stakeholders	Opinion on Likert Scale (%)					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Supplier of Information	38.93	43.15	15.99	1.79	0.14	100
Direct User	44.25	44.24	9.46	1.67	0.38	100
Indirect User	55.56	37.45	5.60	0.39	1.00	100
Average	46.06	42.20	9.89	1.36	0.49	100

Source: Survey

Figure 7.12: Disclosure of IC items in CAR is necessary (average of total IC items)
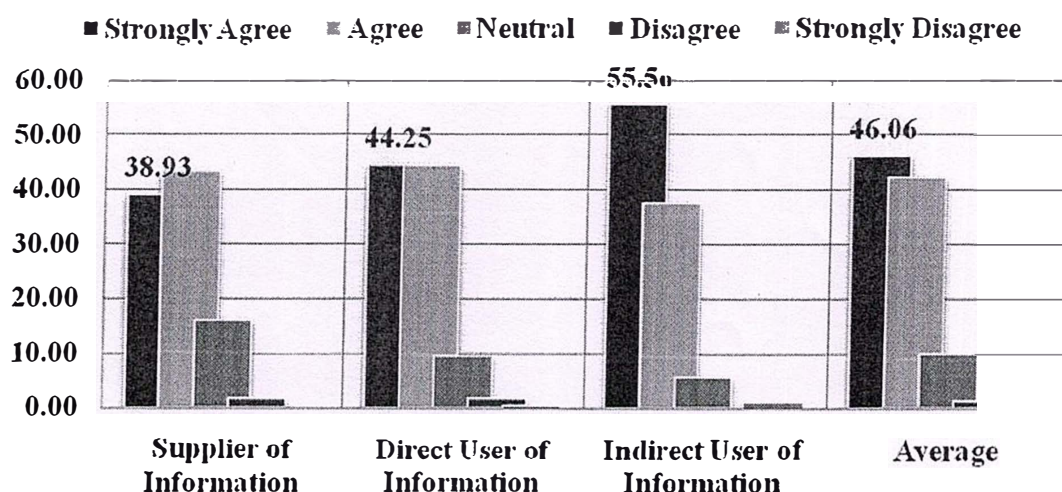
7.14 Reliability Test

Table 7.16 summarizes the results of Cronbach's Alpha test for the reliability of the questionnaire for perception survey. Cronbach's Alpha value of the issues regarding general aspects is 0.653. The table shows that out of eight questions under general aspects, all of the questions are consistent with each other except one question (General No. 5). The value of Cronbach's Alpha test of the issues regarding HC items

is 0.882. Based on this value it is observed that most of the questions are consistent to form a group as HC. An insignificant improvement in Cronbach's Alpha value may be occurred if two questions (HC No. 11 & 16) are deleted. The Cronbach's Alpha values of SC items and RC items are 0.835 and 0.819, respectively. Internal consistency has been found among SC items and RC items. Therefore, it may be said that the questionnaire for conducting perception survey is consistent with the issue.

Table 7.16: Summary of Cronbach's Alpha test resu ts

Question No.	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Issues regarding some general aspects of IC reporting					
General No. 1	13.41	9.220	.411	.605	
General No. 2	13.22	9.406	.458	.597	
General No. 3	13.24	9.949	.341	.625	
General No. 4	13.14	10.265	.332	.628	.653
General No. 5	12.87	11.605	-.084	.732	
General No. 6	13.17	8.202	.444	.594	
General No. 7	12.89	8.601	.498	.578	
General No. 8	13.46	9.068	.493	.586	
Issues regarding HC items					
HC No. 1	32.07	57.718	.532	.875	
HC No. 2	31.85	55.881	.653	.870	
HC No. 3	32.05	56.619	.614	.872	
HC No. 4	32.32	57.279	.687	.871	
HC No. 5	31.61	57.572	.411	.881	
HC No. 6	31.54	56.757	.562	.874	
HC No. 7	31.95	59.286	.434	.878	
HC No. 8	31.81	59.618	.424	.879	
HC No. 9	32.27	55.023	.755	.867	
HC No. 10	32.37	55.748	.709	.869	.882
HC No. 11	32.03	62.692	.078	.893	
HC No. 12	32.29	57.281	.535	.875	
HC No. 13	32.25	58.084	.535	.875	
HC No. 14	32.18	61.101	.371	.880	
HC No. 15	32.49	58.751	.582	.874	
HC No. 16	32.09	60.821	.281	.883	
HC No. 17	31.52	59.849	.384	.880	
HC No. 18	32.22	57.685	.594	.873	
HC No. 19	32.52	60.031	.484	.877	

Question No.	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Issues regarding SC items					
SC No. 1	11.69	11.314	.480	.825	
SC No. 2	11.60	12.271	.300	.842	
SC No. 3	11.71	11.122	.630	.809	
SC No. 4	11.79	11.167	.726	.803	
SC No. 5	11.70	10.719	.607	.810	.835
SC No. 6	11.62	10.502	.598	.812	
SC No. 7	11.52	9.902	.682	.800	
SC No. 8	11.27	12.691	.190	.852	
SC No. 9	11.62	10.600	.749	.796	
Issues regarding RC items					
RC No. 1	13.82	10.412	.529	.799	
RC No. 2	13.59	11.795	.212	.838	
RC No. 3	13.94	11.432	.450	.808	
RC No. 4	13.42	11.047	.417	.812	
RC No. 5	13.42	10.623	.653	.787	.819
RC No. 6	13.38	10.388	.633	.787	
RC No. 7	13.31	10.027	.721	.776	
RC No. 8	13.43	10.132	.574	.793	
RC No. 9	13.65	10.366	.550	.796	

7.15 Stakeholders' Suggestions Regarding IC Reporting in CAR

Stakeholders' perceptions regarding several issues have been collected through a questionnaire. In the questionnaire, there are some general issues regarding IC reporting in CAR. Other issues are related with HC, SC and RC. After putting opinions on Liker scale, they had options to put forward some suggestions regarding disclosure of IC information in CAR. Most of the suggestions are related with ensuring proper disclosure of IC items in harmonized way. Box 1 synchronizes the suggestions put forwarded by the respondents.

Box 7.1: Suggestions regarding disclosure of IC items in CAR as put forwarded by the res ondents

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a. Regulators may take steps to ensure harmonization in disclosure of information in annual reports of the listed companies in Bangladesh.

b. Financial literacy of the investors should be improved to take informed decision.

c. Regulators may increase supervision/monitoring of corporate disclosure made by the listed companies in Bangladesh.

d. Government may take necessary steps to amend the concerned regulations for proper disclosure of required information in the corporate annual reports of the listed companies.

e. Concerned regulatory bodies may ensure corporate governance in the listed companies which might ensure proper and sufficient disclosure of information in the corporate annual reports of the listed companies in Bangladesh.

Source: Survey

7.16 Conclusion

Rentala, Shaban, and Kavida (2014) opine that IC is becoming a major part of companies' value in today's knowledge-based economy. According to F-Jardón and Martos (2009) an improvement of this capital means an increase of the knowledge base of the company. Therefore, a perception survey of the stakeholders has been conducted. From survey results it has been observed that stakeholders are in favor of IC reporting in CARs of the listed companies in Bangladesh. The stakeholders think that IC reporting may add value for the company and the users as well. Some of the respondents suggest to take necessary steps for ensuring more IC reporting by the listed companies. As per the opinions of the stakeholders, corporate governance in the listed companies may ensure proper and sufficient disclosure of information in the corporate annual reports of the listed companies in Bangladesh. Appendix XI presents the perceptions of stakeholders about IC disclosure. Appendix XII, XIII, XIV, XV and XVI present opinions given by the stakeholders regarding general issues, HC items, SC items and RC items, respectively.

References

F-Jardón, C.M. and Martos, M.M. (2009), "Intellectual capital and performance in wood industries of Argentina", *Journal of Intellectual Capital*, Vol. 10, No. 4, pp. 600.

Rentala, S., Shaban, M. and Kavida, V. (2014), "Content Analysis of Reporting Intellectual Capital in Indian Pharmaceutical Industry", *Journal of Contemporary Research in Management,* Vol. 9, No 1, retrieved from www.psgim.ac.in.

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Chapter Eight

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Chapter Outline

Chapter Eight

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

8.1 Introduction

Intangible resources are as important for a business organization as physical or the financial resources are. Intangible resources support organizational activities along with financial and physical resources. These important resources should be reported on the financial statements of a firm for proper communication to stakeholders and thereby an entity can enjoy competitive advantages. But reporting of these items in the financial statements is not obligatory for the listed companies in Bangladesh. Besides, very few studies have been conducted in Bangladesh to show the IC reporting practices. There is no study covering all three components of intellectual capital i.e. HC, SC and RC studying all types of listed Bangladeshi companies. Besides, none of the existing study on the Bangladeshi companies conducted perception survey of different stakeholders of the listed companies, which has been done for the current study. Furthermore, the present study investigates the relationship between corporate governance and extent of intellectual capital reporting in corporate annual reports of the listed companies in Bangladesh.

Stakeholders have to know the status of firms' intellectual capital to take informed decision and they can get this type of information from different sources. Besides, extent of IC reporting may be influenced by different corporate attributes. In addition,

a company may change its reporting pattern and extent with the passage of time. Therefore. the study poses some research questions: to what extent are Bangladeshi listed companies reporting IC in their annual reports; what are the influencing determinants for IC reporting; do IC reporting practices differ among industries and over years and what are the perceptions of stakeholders regarding IC reporting. In connection with these research questions, the study sets some specific objectives. These are to examine the intellectual capital reporting (ICR) practices by listed companies in Bangladesh; to investigate empirically some corporate attributes including corporate governance as determinants of ICR; to compare the ICR level among various industries and years; and to summarize the perceptions of different stakeholders regarding ICR. Descriptive and empirical analyses have been conducted by the researcher to fulfill the objectives of the study. The study covers 149 annual reports of the listed companies for the years 2008 and 2011. Sample covers non-financial institution (NFI), insurance (INS), non-banking financial institution (NBFI) and banking financial institution (BFI). There are 37 intellectual capital items in the ICR checklist including human capital (HC) 19, structural capital (SC) 9 and relationship capital (RC) 9. Perception survey has been conducted on 265 stakeholders grouping as supplier of information, direct user of information and indirect user of the information. For the purpose of regression analysis, "Total Intellectual Capital (TIC)" reporting index has been used as dependent variable. Independent variables are classified into three categories, viz., corporate governance (COG), status in share market (MKT) and corporate attributes (COA) and there are three variables in each category. Moreover, industry type (IND) is also used as an explanatory variable. Four regression models have been developed with these variables. A summary of major findings have been presented in subsequent parts.

8.2 Summary of Major Findings of the Study

Data have been analyzed in accordance with the set objectives and to test the set hypotheses. There are four specific objectives to get answer of three research questions and there are six null hypnoses and six alternative hypotheses as well for testing.

8.2.1 Findings in Relation to the First Objective

First research question was as to what extent are Bangladeshi listed companies reporting IC in their annual reports. To get answer of this question objective of the study has been set as to examine the intellectual capital reporting (ICR) practice by listed companies in Bangladesh. To know the status of ICR practices, data have been presented in tabular form.

Table 8.1. Comparative study of TIC reporting status

Study	Findings of the Study (%)		
• Data Reference • Time Reference	Minimum Score	Maximum Score	Average Score
Oliveira, Rodrigue and Craig (2006) • Portugal • 2003	5.75	72.2	30.3
Ali, Khan and Fatima (2008) • Bangladesh • 2005-2006	14.81	70.37	36.20
Hossain (2011) • Bangladesh • 2007-2008	27.03	72.97	49.89
Nurunnabi, Hossain and Hossain (2011) • Bangladesh • 2008	3.33	45.56	23.02
Lipunga (2013) • Malawi • 2011	N/A	N/A	32
Current Study • Bangladesh • 2008 and 2011	18.92	86.49	More than 45%

Average TIC reporting is more than 45% with minimum reporting score of 18.92% and maximum score of 86.49%. Average IC reporting in Portugal is about 30% and in Malawi 32% (Table 8.1). Results differ among different studies on Bangladeshi firms because of differences in time reference and sample. It is evident that companies do not show equal importance on each group of IC components. Listed companies of Bangladesh furnish IC items in their annual reports as HC 25%, SC 40% and RC 35% of total IC reporting. Therefore, SC items get the highest importance to the listed companies whereas in other studies RC got highest importance for disseminating information among the stakeholders (Table 8.2).

Table 8.2: Proportion of IC reporting within different categories

Study	Percentage of total ICR[1]		
• **Data Reference** **Time Reference**	HC[2]	SC[3]	RC[4]
Guthrie and Petty (2000) • Australia • 1998	30	30	40
Bozzolan, Favotto and Ricceri (2003) • Italy • 2001	21	30	49
Wong and Gardner (2005) • New Zealand • 2004	31	21	48
Sujan, and Abeysekera (2007) • Australia • 2004	19	28	53
Striukova, Unerman and Guthrie (2008) • United Kingdom • 2004	22	17	61
Oliveras et al. (2008) • Span • 2000, 2001 and 2002	22	18	60
Davey, Schneider and Davey (2009) • Europe & North America • 2005	16	34	50

[1] Intellectual capital reporting
[2] Human capital
[3] Structural capital
[4] Relationship capital

| Study | Percentage of total ICR[T] | | |
Data Reference Time Reference	HC[2]	SC[3]	RC[4]
Guthrie, Steane and Farneti (2009) • Australia • 2002/2003, 2003/2004 & 2004/2005	30	37	33
April, Bosma and Deglon (2003) • South Africa • March 2001	30	30	40
Goh and Lim (2004) • Malaysia • 2004 & 2005	22	36	42
Current Study • Bangladesh • 2008 and 2011	25	40	35

8.2.2 Findings in Relation to the Second Objective

The second issue of this study as do IC reporting practices differ among industries and over years. Against this issue objective was set as to compare the ICR level among various industries and years. For this purpose, listed companies have been classified into four groups namely NFI, INS, NBFI and BFI. Besides, to show the changes in ICR level over time, data for the years 2008 and 2011 have been collected and analyzed. Two hypotheses were developed in these regard, viz., the extent of IC reporting is associated with industry type and period of reporting. Results show that insurance companies are reporting more IC items than non-financial companies, non-banking financial institutions are reporting more IC items than insurance companies and banking financial institutions are reporting more IC items than non-banking financial institutions. Besides, in all the industries, IC reporting score in 2011 is higher than that of 2008. Based on Kruskal-Wallis Test results, it can be said that there are statistically significant differences of IC reporting among the industries in both the years. Similarly, the Wilcoxon Signed Ranks Test results show that there is a statistically significant difference in IC reporting at two points in time.

8.2.3 Findings in Relation to the Third Objective

Different independent variables were identified to the association with intellectual capital reporting as dependent variable. For this concern, research quest was as what are the influencing determinants for IC reporting and against this quest research objective was as to investigate empirically some corporate attributes including corporate governance as determinants of ICR. Regression technique has been used in this regards by which three hypotheses were developed and tested. SBOARD, SACOM and NIND were three variables under corporate governance (COG). The coefficients of SBOARD and SACOM show expected sign but the coefficient of NIND shows opposite sign. Out of three variables of this group, SACOM is more influential factor which is statistically significant. Market status (MKT) group includes CAT, PER and PMCAP variables. Regression results show that all variables are positively associated with TIC but PMCAP is only statistically significant determinant of dependent variable. Under corporate attribute group, there were three variables – PASSET, PSALES and PNPAT. The coefficients of PASSETS and PNPAT demonstrate expected sign but the coefficient of PSALES shows negative sign which is unexpected. Among three variables, PNPAT is influencing determinant of IC reporting of a firm. Therefore, inference may be drawn that a firm with more members in audit committee, higher market capitalization and higher net profit after tax is reporting more IC items in its corporate annual report.

8.2.4 Findings in Relation to the Forth Objective

The study has been conducted to summarize the perceptions of different stakeholders regarding ICR for getting answer of research quest as what are the perceptions of stakeholders concerning the issue. Though there is a variation of opinion, in most of the cases, stakeholders expect that the firm will provide IC items in CAR so that they can take informed decision about the firm. A list of hypotheses and their results has been presented in Table 8.3.

Table 8.3: Hy otheses and their results

S/N	H othesis	Result
H_{01}	The extent of IC reporting is not associated with co orate overnance.	Rejected
H_{02}	The extent of IC reporting is not associated with status in ca ital market.	Rejected
H_{03}	The extent of IC reporting is not associated with co orate attributes.	Rejected
H_{04}	The extent of IC reporting is not associated with industry ty e.	Rejected
H_{05}	The extent of IC reporting is not different at two points in time.	Rejected
H_{06}	There is no difference in perceptions among stakeholders about IC re ortin .	Rejected

8.3 Conclusion

A firm possesses three types of capital – physical capital, financial capital, and intellectual capital (IC). IC includes an organization's collective knowledge and learning, leadership talent, the values that shape its culture, routines and processes and the collaborative relationships (Alwis, 2004). To cope up with the opportunities and meet the challenges, a firm should have experienced employees, suitable infrastructure, wide networking system, faultless information system, innovativeness in product and services, brand image, etc. At present, the companies should focus on

intangible assets. It is expected that an enterprise will enhance the accumulation of its IC and go through the corporate governance to improve its organizational performance (Wu, Lee and Wang, 2012). An entity can enjoy competitive advantages by disseminating information regarding IC and stakeholders may take pragmatic decisions on the basis of this kind of information as well. The study covers IC reporting practices in the corporate annual report of different types of firms at different periods.

To sum up the findings of the study it is clear that IC items are not sufficiently reported by the listed companies. Two reasons behind this may be is that they do not have sufficient IC in their firms or they do not address stakeholders' information needs. If they do not have such assets, they should accumulate such precious assets for better performance in the market. It may enhance business profitability and help to sustain in competitive era and to create corporate value. If firms possess such resources but are not reporting in annual report, they are missing in availing of competitive advantages. In that case they may redesign their corporate annual report framing to incorporate IC items there. As BFIs are reporting more such items in annual report, other organizations may follow the style of their presentation of information. Besides, there are some firms in other industries who are providing more intellectual capital items in CAR and thus, they may be considered as role model for others. Appendix XVII presents specimen reporting pattern of IC items in CAR. It is a matter of hope that firms are providing more information now-a-days as compared to previous. Stakeholders are expecting more information in CAR for taking informed decision. Besides, human capital is invaluable asset for an organization which got the least priority in reporting. So, listed companies may take care the issue for creating a

center of attention of the stakeholders. Researchers (e.g. Ho and Wong, 2001; White, Lee and Tower, 2007; Akhtaruddin, et al., 2009; Forker, 1992) argue that audit committee is an effective monitoring tool to improve disclosure level and present study also confirms its positive association with the level of IC reporting. Therefore, firms may formulate audit committee with sufficient and competent members that may improve reporting quality. As IC reporting is cost effective, that perceived by the stakeholders, comparatively lower capitalized firms may follow the reporting pattern of higher capitalized firms. The study also validates that there is a positive association between PNPAT and TIC, firms might consider to report more information in their CAR.

8.4 Recommendations

An attempt is made here to present a few recommendations in light of existing findings and literatures with the expectation that these will provide a helpful direction to Government, policy makers, company management, and other bodies who are intimately involved in reporting aspects of firms.

1. At present, disclosure of IC items in CAR is voluntary for the reporting company. As companies are not playing proactive role, Government may take necessary steps to amend the concern regulations for proper disclosure of IC information by the listed companies.

2. Different types of organizations are being regulated by different regulatory authorities. Besides, a number of regulations are prevailing in Bangladesh which are to be complied with by the reporting organizations. It could be better if there is

proper coordination among the regulators. Besides, all of the regulations governing the disclosure issue of the firms could include similar provisions regarding the aspect.

3. To improve financial literacy of the investors, Government as well as regulatory bodies may take some initiatives which will help the investors to take pragmatic decisions about the company before making investment. For this purpose, they may arrange some short training programs for the existing and potential investors. As a developing country like Bangladesh, it is also to be considered to offer free of cost training program because small investors may not feel interest if there is any cost.

4. It is also found in collecting information regarding IC from annual reports of the concern companies that there is not harmonization in presenting such information. It could be better for the users of information if all of the companies same style of presentation. In connecting with this, regulators may prescribe a specimen format for reporting such items in CAR.

5. It will not be very effective if concerned regulators do not supervise and monitor the reporting issue of the companies. The regulators may set up a dedicated unit who will evaluate level and quality of reporting made by the companies. Regulators may publish a summary report on the issue. Such initiatives may increase awareness among reporting entities to be careful about their quality of disclosure.

6. Concerned regulatory bodies may ensure corporate governance in the listed companies which might ensure proper and sufficient disclosure of information in the corporate annual reports of the listed companies in Bangladesh. Size of board,

appointment of competent independent directors, head of internal audit, company secretary, constitution of the audit committee with qualified members are some issues of corporate governance. If it is possible to ensure full compliance by the reporting entities it would ensure transparency.

7. There are some entities operating in Bangladesh which are not listed with stock exchange but dealing with public money e.g. non-listed banks, non-listed non-banking financial institutions. If these types of organizations are listed with any stock exchanges they are to be regulated by BSEC along with their primary regulator. If they are not listed with stock exchanges they are being regulated only by their primary regulators. So, a coordinated approach is expected so that non-listed companies are to be followed some aspects of disclosure issue. This approach could ensure transparency of an organization that deals with public money.

8. South Asian Federation of Accountants (SAFA) offers award for corporate governance disclosures based on Best Presented Annual Report (BPA) of companies. Best of the criteria set by SAFA, ICAB also offer similar award for the Bangladeshi companies. If they consider IC reporting for selecting the BPA, reporting entity may be encouraged to disclose more IC items.

9. IC reporting issue may be incorporated in business education and accounting professional curriculum. If learners are well aware about the issue, they may improve disclosure of the companies where they will work in professional life. If all of the concerned bodies take synchronized approaches from their end, it may be expected that IC reporting status will be improved in days to come.

8.5 Suggestions for Further Study

The study focuses on intellectual capital reporting (ICR) practices by listed companies in Bangladesh. This study is thus limited to listed firms. Nevertheless, results could be different if all types of firms, listed and non-listed, are studied. Study may be conducted on the firms selected through random sampling that could minimize biasness. It could be more realistic if a study is conducted on companies of different countries grouping based on their economic status and/or region. As far as primary data is concerned, opinions may be collected from a handsome number of respondents related with the issue. Besides, a separate study on valuation and measurement of IC items may be a more effective initiative. There are some items in the ICR checklist which are required by regulations whereas some of the items are not. A research may be conducted by segregating mandatory and voluntary IC items. A time series data for longer duration may give more clear information about disclosure trend. For minimizing human error, double coding process or searching computer software may also be used. Considering both research approaches of content analysis, weighted and unweighted, a comparative study may be undertaken.

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APPENDICES

Appendix I

List of Sample Companies

S/N	Name of Company	Short Name	Industry Type*
1	Aftab Automobiles	AFTABAUTO	Engineering
2	Anwar Galvanizing	ANWARGALV	Engineering
3	Atlas Bangladesh	ATLASBANG	Engineering
4	Aziz Pipes	AZIZPIPES	Engineering
5	BD.Autocars	BDAUTOCA	Engineering
6	Bd.Thai Aluminium	BDTHAI	Engineering
7	Kay and Que	KAY&QUE	Engineering
8	National Polymer	NPOLYMAR	Engineering
9	Quasem Drycells	QSMDRYCELL	Engineering
10	Rangpur Foundry	RANFOUNDRY	Engineering
11	S. Alam Cold Rolled Steels Ltd.	SALAMCRST	Engineering
12	Singer Bangladesh	SINGERBD	Engineering
13	Bangas	BANGAS	Food & Allied
14	Beach Hatchery Ltd.	BEACHHATCH	Food & Allied
15	Meghna Condensed Milk	MEGCONMILK	Food & Allied
16	AMCL (Pran)	AMCL(PRAN)	Food & Allied
17	Apex Foods	APEXFOODS	Food & Allied
18	Shaympur Sugar	SHYAMPSUG	Food & Allied
19	Meghna Pet Industries	MEGHNAPET	Food & Allied
20	National Tea	NTC	Food & Allied
21	Rahima Food	RAHIMAFOOD	Food & Allied
22	Alpha Tobacco Manufac. Co. Ltd.	ALPHATOBA	Food & Allied
23	BOC Bangladesh	BOC	Fuel & Power
24	Eastern Lubricants	EASTRNLUB	Fuel & Power
25	Jamuna Oil Company Limited	JAMUNAOIL	Fuel & Power
26	Meghna Petroleum Limited	MPETROLEUM	Fuel & Power
27	Padma Oil Co.	PADMAOIL	Fuel & Power
28	Power Grid Company of Bd Ltd.	POWERGRID	Fuel & Power
29	Summit Power Limited	SUMITPOWER	Fuel & Power
30	Titas Gas Transmission & Dist. Co. Ltd.	TITASGAS	Fuel & Power
31	Jute Spinners	JUTESPINN	Jute
32	Apex Weaving	APEXWEAV	Textile
33	BEXTEXLtd.	BEXTEX	Textile
34	Tallu Spinning	TALLUSPIN	Textile
35	Alltex Ind. Ltd.	ALLTEX	Textile
36	Delta Spinners Ltd.	DELTASPINN	Textile
37	Dulamia Cotton	DULAMIACOT	Textile
38	Maksons Spinning Mills Limited	MAKSONSPIN	Textile
39	Mithun Knitting	MITHUNKNIT	Textile
40	Monno Fabrics	MONNOFABR	Textile
41	Prime Textile	PRIMETEX	Textile
42	Safko Spinning	SAFKOSPINN	Textile
43	Sonargaon Textiles	SONARGAON	Textile

S/N	Name of Company	Short Name	Industry Type*
44	CMC-Kamal Textile Mills Ltd	CMCKAMTEX	Textile
45	Desh Garments Limited	DESHGLTD	Textile
46	Saiham Textile Mills Ltd.	SAIHAMTEX	Textile
47	Square Textiles Ltd.	SQUARETEX	Textile
48	Ashraf Textile Mills Ltd.	ASHRAFTEX	Textile
49	Tamijuddin Textile Mills Limited	TAMTEXLTD	Textile
50	ACI Limited.	ACI	Pharmaceuticals & Chemicals
51	ACI Formulations Limited	ACIFORMULA	Pharmaceuticals & Chemicals
52	Ambee Pharma	AMBEEPHA	Pharmaceuticals & Chemicals
53	BangIa Process	BANGLAPRO	Pharmaceuticals & Chemicals
54	Beximco Synthetics	BXSYNTH	Pharmaceuticals & Chemicals
55	Reckitt Benckiser (Bd.)Ltd.	RECKITTBEN	Pharmaceuticals & Chemicals
56	Rahman Chemicals Ltd.	RAHCHE	Pharmaceuticals & Chemicals
57	The Ibn Sina	IBNSINA	Pharmaceuticals & Chemicals
58	Imam Button	IMAMBUTTON	Pharmaceuticals & Chemicals
59	Keya Cosmetics	KEYACOSMET	Pharmaceuticals & Chemicals
60	Kohinoor Chemicals	KOHINOOR	Pharmaceuticals & Chemicals
61	Libra Infusions Limited	LIBRAINFU	Pharmaceuticals & Chemicals
62	Orion Infusion	ORIONINFU	Pharmaceuticals & Chemicals
63	Pharma Aids	PHARMAID	Pharmaceuticals & Chemicals
64	Therapeutics	TBL	Pharmaceuticals & Chemicals
65	Sonali Paper and Board Mills Ltd.	SPBML	Paper & Printing
66	Eastern Housing	EHL	Services & Real Estate
67	Samorita Hospital	SAMORITA	Services & Real Estate
68	Summit Alliance Port Limited	SAPORTL	Services & Real Estate
69	Aramit Cement	ARAMITCEM	Cement
70	Confidence Cement	CONFIDCEM	Cement
71	Heidelberg Cement Bd.	HEIDELBCEM	Cement
72	Modem Cement Limited	MODCEML	Cement

S/N	Name of Company	Short Name	Industry Type*
73	BDCOM Online Ltd.	BDCOM	IT Sector
74	In Tech Online Ltd.	INTECH	IT Sector
75	Information Service Network Ltd.	ISNTD	IT Sector
76	Apex Tannery	APEXTANRY	Tannery Industries
77	Bata Shoe	BATASHOE	Tannery Industries
78	Samata Leather	SAMATALETH	Tannery Industries
79	Fu- Wang Ceramic	FUWANGCER	Ceramics Sector
80	Standard Ceramic	STANCERAM	Ceramics Sector
81	GQ Ball Pen	GQBALLPEN	Miscellaneous
82	Miracle Ind.	MIRACLEIND	Miscellaneous
83	Sinobangla Industries	SINOBANGLA	Miscellaneous
84	Sayar Refractories Ltd.	SAVARREFLTD	Miscellaneous
85	Bangladesh Shipping Corporation (BSC)	BSC	Miscellaneous
86	Agrani Insurance Company Ltd.	AGRINCOL	Insurance
87	Asia Pasific General Insurance Co. Ltd.	ASIINCOL	Insurance
88	Bangladesh General Insurance Co. Ltd.	BANINCOL	Insurance
89	Central Insurance Company Ltd.	CENINCOL	Insurance
90	Continental Insurance Ltd.	CONINLTD	Insurance
91	Eastern Insurance Co. Ltd.	ESTINCOL	Insurance
92	Eastland Insurance Co. Ltd.	ESLINCOL	Insurance
93	Federal Insurance Co. Ltd.	FEDINCOL	Insurance
94	Global Insurance Ltd.	GLOINCOL	Insurance
95	Green Delta Insurance Co. Ltd.	GREINCOL	Insurance
96	Karnaphuli Insurance Co. Ltd.	KARINCOL	Insurance
97	Mercantile Insurance Company Ltd.	MERINCOL	Insurance
98	Northern General Insurance Co. Ltd.	NORINCOL	Insurance
99	Paramount Insurance Co. Ltd.	PARINCOL	Insurance
100	Peoples Insurance Company Ltd.	PEOINCOL	Insurance
101	Phoenix Insurance Company Ltd.	PHOINCOL	Insurance
102	Pioneer Insurance Company Ltd.	PIOINCOL	Insurance
103	Pragati Insurance Ltd.	PRAINLTD	Insurance
104	Prime Insurance Company Ltd.	PRIINCOL	Insurance
105	Prime Islami Life Insurance Ltd.	PRIINLTD	Insurance
106	Provati Insurance Company Ltd.	PROINCOL	Insurance
107	Purabi General Insurance Co. Ltd.	PURINCOL	Insurance
108	Reliance Insurance Limited	RELINLTD	Insurance
109	Republic Insurance Company Ltd.	REPINCOL	Insurance
110	Rupali Insurance Company Ltd.	RUPINCOL	Insurance
111	Sandhani Life Insurance Co. Ltd.	SANINCOL	Insurance
112	Sonar Bangla Insurance Ltd.	SONINLTD	Insurance
113	Standard Insurance Ltd.	STAINLTD	Insurance
114	Takaful Islami Insurance Ltd.	TAKINLTD	Insurance

S/N	Name of Company	Short Name	Industry Type*
115	United Insurance Company Ltd.	UNIINCOL	Insurance
116	Bangladesh Finance & Investment Co. Ltd.	BANFICOL	Financial Institutions
117	Bangladesh Industrial Finance Co. Ltd.	BANIFCOL	Financial Institutions
118	DBH Finance Corporation Ltd.	DBHFCLTD	Financial Institutions
119	Fidelity Assets & Securities Co. Ltd.	FIDASCOL	Financial Institutions
120	First Lease International Ltd.	FIRLILTD	Financial Institutions
121	IPDC of Bangladesh Ltd.	IPDBCLTD	Financial Institutions
122	Islamic Finance and Investment Ltd.	ISLFILTD	Financial Institutions
123	LangkaBangla Finance	LANBAFI	Financial Institutions
124	Midas Financing Ltd.	MIDFILTD	Financial Institutions
125	National Housing Finance & Investment Ltd.	NATHFLTD	Financial Institutions
126	Phoenix Finance & Investments Ltd.	PHOIFILTD	Financial Institutions
127	Peoples Leasing & Financial Service Ltd.	PEOLFLTD	Financial Institutions
128	Premier Leasing & Finance Ltd.	PRELFLTD	Financial Institutions
129	Prime Finance & Investment Ltd.	PRIFILTD	Financial Institutions
130	United Leasing Company Ltd.	UNILCOL	Financial Institutions
131	Uttara Finance & Investment Ltd.	UTTFILTD	Financial Institutions
132	Union Capital Ltd.	UNICLTD	Financial Institutions
133	AB Bank Ltd.	ABBLTD	Banks
134	IFIC Bank Ltd.	IFIBLTD	Banks
135	Islami Bank Bangladesh Ltd.	ISLBLTD	Banks
136	Pubali Bank Ltd.	PUBBLTD	Banks
137	Rupali Bank Ltd.	RUPBLTD	Banks
138	Uttara Bank Ltd.	UTTBLTD	Banks
139	ICB Islamic Bank Ltd.	ICBBLTD	Banks
140	Al-Arafah Islami Bank Ltd.	ALABLTD	Banks
141	Southeast Bank Ltd.	SOUBLTD	Banks
142	Dhaka Bank Ltd.	DHABLTD	Banks
143	NCC Bank Ltd.	NCCBLTD	Banks
144	Social Islami Bank Ltd.	SOCBLTD	Banks
145	Standard Bank Ltd.	STABLTD	Banks
146	ONE Bank Ltd.	ONEBLTD	Banks
147	Bank Asia Ltd.	ASIBLTD	Banks
148	EXIM Bank Ltd.	EXIBLTD	Banks
149	Jumuna Bank Ltd.	JUMBLTD	Banks

*Source: DSE (2012)

Appendix II
IC Reporting Checklist

S/N	IC Item	Reference
A	**Human Capital (HC)**	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Sujan and Abeysekera (2007); Ali, Khan and Fatema (2008); Macagnan (2009); Bruggen, Vergauwen and Dao (2009); Davey, Schneider and Davey (2009); Dumay (2009); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011); Lipunga (2013); Majdalany and Henderson (2013) Ngari et al. (2013)
1	Know-how and work-related competencies	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Abeysekera and Guthrie (2004); Goh and Lim (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Sujan and Abeysekera (2007); Ali, Khan and Fatema (2008); Bruggen, Vergauwen and Dao (2009); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011); Córcoles (2013); Lipunga (2013)
2	Vocational qualifications	April, Bosma and Deglon (2003); Abeysekera and Guthrie (2004); Goh and Lim (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Sujan and Abeysekera (2007); Ali, Khan and Fatema (2008); Davey, Schneider and Davey (2009)
3	Career and Development	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Dumay (2009); Guthrie, Steane and Farneti (2009); Macagnan (2009); Hossain (2011); Batista Fontana and Macagnan (2013); Lipunga (2013)

S/N	IC Item	Reference
4	Training Programs	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Sujan and Abeysekera (2007); Abeysekera (2008); Dumay (2009); Macagnan (2009); Guthrie, Steane and Farneti (2009); Davey, Schneider and Davey (2009); Chander and Mehra (2011); Batista Fontana and Macagnan (2013); Córcoles (2013)
5	Equity Issue (Race, Gender and Religion)	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Macagnan (2009); Chander and Mehra (2011); Hossain (2011); Batista Fontana and Macagnan (2013)
6	Equity Issue (Disability)	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Hossain (2011); Nurunnabi, Hossain and Hossain (2011)
7	Employees being thanked and Featured	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Guthrie, Steane and Farneti (2009); Hossain (2011)
8	Employee involvement in the community	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Guthrie, Steane and Farneti (2009); Hossain (2011); Lipunga (2013)
9	Employee and executive compensation	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Guthrie, Steane and Farneti (2009); Macagnan (2009); Chander and Mehra (2011); Batista Fontana and Macagnan (2013)
10	Employee benefits other than salary	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Macagnan (2009); Nurunnabi, Hossain and Hossain (2011); Batista Fontana and Macagnan (2013)

S/N	IC Item	Reference
11	Employee share and option ownership plan	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Hossain (2011); Nurunnabi, Hossain and Hossain (2011)
12	Value-added statement	Abeysekera and Guthrie (2005); Abeysekera (2007); Hossain (2011); Nurunnabi, Hossain and Hossain (2011); Lipunga (2013)
13	Employee and their numbers	Bozzolan, Favotto and Ricceri (2003); Abeysekera and Guthrie (2005); Macagnan (2009) Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011); Batista Fontana and Macagnan (2013); Lipunga (2013)
14	Professional experience of the employee	Abeysekera and Guthrie (2005); Abeysekera (2007); Macagnan (2009); Chander and Mehra (2011); Nurunnabi, Hossain and Hossain (2011); Córcoles (2013); Lipunga (2013)
15	Educational and professional qualification of member of the board and company secretary	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Abeysekera and Guthrie (2004); Goh and Lim (2004); Abeysekera and Guthrie (2005); Sujan and Abeysekera (2007); Abeysekera (2008); Ali, Khan and Fatema (2008); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Hossain (2011)
16	Expert seniority	Abeysekera and Guthrie (2005); Macagnan (2009); Bruggen, Vergauwen and Dao (2009); Hossain (2011); Nurunnabi, Hossain and Hossain (2011); Batista Fontana and Macagnan (2013)
17	Age of employees	Abeysekera and Guthrie (2005); Abeysekera (2007); Macagnan (2009); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Batista Fontana and Macagnan (2013)

S/N	IC Item	Reference
18	Entrepreneurial spirits	April, Bosma and Deglon (2003); Abeysekera and Guthrie (2004); Goh and Lim (2004); Sujan and Abeysekera (2007); Abeysekera (2008); Davey, Schneider and Davey (2009); Chander and Mehra (2011); Lipunga (2013)
19	Employee safety and work environment	Abeysekera and Guthrie (2004); Abeysekera and Guthrie (2005); Dumay (2009); Macagnan (2009) Nurunnabi, Hossain and Hossain (2011); Batista Fontana and Macagnan (2013); Lipunga (2013)
B	**Structural Capital (SC)**	Bozzolan, Favotto and Ricceri (2003); Abeysekera (2008); Ali, Khan and Fatema (2008); Macagnan (2009); Bruggen, Vergauwen and Dao (2009); Dumay (2009); Chander and Mehra (2011); Lipunga (2013); Majdalany and Henderson (2013) Ngari et al. (2013)
20	Management processes and corporate culture	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Sujan and Abeysekera (2007); Ali, Khan and Fatema (2008); Bruggen, Vergauwen and Dao (2009); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011) Lipunga (2013)
21	Technology	Abeysekera and Guthrie (2005); Abeysekera (2007); Davey, Schneider and Davey (2009); Dumay (2009); Guthrie, Steane and Farneti (2009); Macagnan (2009)
22	Management philosophy, mission or vision	April, Bosma and Deglon (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Ali, Khan and Fatema (2008); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Macagnan (2009)

S/N	IC Item	Reference
23	Future plan	Hossain (2011)
24	Research and development	Bozzolan, Favotto and Ricceri (2003); Vandemaele, et. al. (2005) Xiao (2008); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011); Nurunnabi, Hossain and Hossain (2011); Lipunga (2013)
25	Intellectual property (Patent, Copyright and Trademark)	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Sujan and Abeysekera (2007); Abeysekera (2008); Ali, Khan and Fatema (2008); Bruggen, Vergauwen and Dao (2009); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Macagnan (2009); Chander and Mehra (2011); Córcoles (2013); Lipunga (2013)
26	Certificate or Award received	Hossain (2011)
27	Financial relations with other institutions	April, Bosma and Deglon (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Sujan and Abeysekera (2007); Ali, Khan and Fatema (2008); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Lipunga (2013)
28	Innovative products or product focused	Li et al. (2006) Dumay (2009); Guthrie, Steane and Farneti (2009); Macagnan (2009); Nurunnabi, Hossain and Hossain (2011); Lipunga (2013)
C	**Relationship Capital (RC)**	Bozzolan, Favotto and Ricceri (2003); Ali, Khan and Fatema (2008); Macagnan (2009); Bruggen, Vergauwen and Dao (2009); Dumay (2009); Chander and Mehra (2011); Hossain (2011); Lipunga (2013); Majdalany and Henderson (2013) Ngari et al. (2013)

S/N	IC Item	Reference
29	Brands and Company logo	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Goh and Lim (2004); Abeysekera (2007); Sujan and Abeysekera (2007); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011); Lipunga (2013)
30	Customer and their satisfaction & loyalty	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Abeysekera and Guthrie (2005); Sujan and Abeysekera (2007); Abeysekera (2008); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011); Lipunga (2013)
31	Company name and image	April, Bosma and Deglon (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Bruggen, Vergauwen and Dao (2009); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Lipunga (2013)
32	Favorable and/or unfavorable financial contacts	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Goh and Lim (2004); Abeysekera (2007); Sujan and Abeysekera (2007); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009)
33	Business collaborations	Bozzolan, Favotto and Ricceri (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Sujan and Abeysekera (2007); Abeysekera (2008); Davey, Schneider and Davey (2009); Chander and Mehra (2011) Lipunga (2013)
34	Licensing agreement	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Sujan and Abeysekera (2007); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009)

S/N	IC Item	Reference
35	Franchising agreements	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Abeysekera (2007); Sujan and Abeysekera (2007); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009)
36	Distribution channels marketing team	April, Bosma and Deglon (2003); Bozzolan, Favotto and Ricceri (2003); Goh and Lim (2004); Abeysekera and Guthrie (2005); Sujan and Abeysekera (2007); Davey, Schneider and Davey (2009); Guthrie, Steane and Farneti (2009); Chander and Mehra (2011); Lipunga (2013)
37	Market share or other competitive advantages	Abeysekera and Guthrie (2005); Abeysekera (2007); Chander and Mehra (2011); Hossain (2011); Nurunnabi, Hossain and Hossain (2011); Lipunga (2013)

Appendix III

Questionnaire for Primary Data

Description of Five-Level Likert Scale

Scale	Rating
Strongly Agree	1
Agree	2
Neutral	3
Disagree	4
Strongly Disagree	5

A   Information regarding respondent

Name of the respondent	:
Name of affiliated institution	:
Designation/Profession	:
Concern with corporate annual report (CAR) as	(a) Supplier of Information (b) Direct User of Information (c) Indirect User of Information

B   Please, make comment in Five-Level Likert Scale for the following aspects:

S/N	Statement	Comment
1.	Corporate annual report (CAR) is the most suitable way of disseminating company information for the users	
2.	Investors use information provided in CAR of a company before taking investment decision	
3.	Lenders use information provided in CAR of a company before taking lending decision	
4.	Regulators and others use information provided in CAR of a company before taking any decision	
5.	Intellectual capital (IC) is the most important factor for business success	
6.	Regulators should make it mandatory to disclose IC items in CAR	
7.	Disclosure of IC information in CAR is cost-effective	
8.	Disclosure of IC will add value for the company and the users of information	
9.	**Disclosure of the Following HUMAN CAPITAL items in CAR is necessary**	
9-1.	Know-how and work-related competencies	
9-2.	Vocational qualifications	
9-3.	Career and Development	
9-4.	Training Programs	
9-5.	Equity Issue (Race, Gender and Religion)	
9-6.	Equity Issue (Disability)	
9-7.	Employees being thanked and Featured	
9-8.	Employee involvement in the community	
9-9.	Employee and executive compensation	
9-10.	Employee benefits other than salary	

S/N	Statement	Comment
9-11.	Employee share and option ownership plan	
9-12.	Value-added statement	
9-13.	Employee and their numbers	
9-14.	Professional experience of the employee	
9-15.	Educational and professional qualification of member of the board and company secretary	
9-16.	Expert seniority	
9-17.	Age of employees	
9-18.	Entrepreneurial spirits	
9-19.	Employee safety and work environment	
10.	**Disclosure of the Following STRUCTURAL CAPITAL items in CAR is necessary**	
10-1.	Management processes and corporate culture	
10-2.	Technology	
10-3.	Mgt. philosophy/mission/vision etc.	
10-4.	Future plan	
10-5.	Research and development	
10-6.	Intellectual property (Patent, Copyright and Trademark)	
10-7.	Certificate or Award received	
10-8.	Financial relation with other institutions	
10-9.	Innovative products or product focused	
11.	**Disclosure of the Following RELATIONSHIP CAPITAL items in CAR is necessary**	
11-1.	Brands and Company logo	
11-2.	Customer and their satisfaction & loyalty	
11-3.	Company name and image	
11-4.	Favorable and/or unfavorable financial contacts	
11-5.	Business collaborations	
11-6.	Licensing agreement	
11-7.	Franchising agreements	
11-8.	Distribution channels marketing team	
11-9.	Market share or other competitive advantages	

C. Please, put suggestions regarding disclosure of IC information in CAR

   a.

   b.

   c.

   d.

   e.

Appendix IV
Questionnaire for Secondary Data

1. Name of the company	:	
2. Year of annual report studied		2008 / 2011
3. Nature of industry	:	NFI / INS / NBFI / BFI
4. Number of members on the board	:	
5. Number of independent directors on board	:	
6. Number of members in audit committee	:	No.:
7. Share category on DSE	:	A / B / G / N / Z
8. Market performance	:	Top 20 / Bottom 20 / None
9. Market capitalization as on June 30 of the year	:	Tk.
10. Total assets of the firm	:	Tk.
11. Total sales revenue of the firm	:	Tk.
12. Net profit after tax for the period	:	Tk.

13. **Disclosure status of human capital (HC) items**

(1) Know-how and work-related competencies	:	Yes / No
(2) Vocational qualifications		Yes / No
(3) Career and Development	:	Yes / No
(4) Training Programs	:	Yes / No
(5) Equity Issue (Race, Gender and Religion)	:	Yes / No
(6) Equity Issue (Disability)	:	Yes / No
(7) Employees being thanked and Featured	:	Yes / No
(8) Employee involvement in the community	:	Yes / No
(9) Employee and executive compensation	:	Yes / No
(10) Employee benefits other than salary	:	Yes / No
(11) Employee share and option ownership plan	:	Yes / No
(12) Value-added statement	:	Yes / No
(13) Employee and their numbers	:	Yes / No
(14) Professional experience of the employee	:	Yes / No
(15) Educational and professional qualification of member of the board and company secretary	:	Yes / No
(16) Expert seniority	:	Yes / No
(17) Age of employees	:	Yes / No
(18) Entrepreneurial spirits	:	Yes / No
(19) Employee safety and work environment	:	Yes / No

Appendix V

IC Reporting Score of Different Companies in 2008 (%)

S/N	Company	Industry Type	HC	SC	RC	TIC
1	AFTABAUTO	Engineering	31.58	55.56	77.78	48.65
2	ANWARGALV	Engineering	21.05	44.44	33.33	29.73
3	ATLASBANG	Engineering	31.58	55.56	77.78	48.65
4	AZIZPIPES	Engineering	26.32	44.44	33.33	32.43
5	BDAUTOCA	Engineering	15.79	44.44	55.56	32.43
6	BDTHAI	Engineering	36.84	66.67	66.67	51.35
7	KAY&QUE	Engineering	42.11	88.89	66.67	59.46
8	NPOLYMAR	Engineering	42.11	55.56	66.67	51.35
9	QSMDRYCELL	Engineering	57.89	88.89	77.78	70.27
10	RANFOUNDRY	Engineering	42.11	66.67	66.67	54.05
11	SALAMCRST	Engineering	31.58	44.44	44.44	37.84
12	SINGERBD	Engineering	63.16	77.78	100.00	75.68
13	BANGAS	Food & Allied	26.32	66.67	66.67	45.95
14	BEACHHATCH	Food & Allied	21.05	44.44	44.44	32.43
15	MEGCONMILK	Food & Allied	15.79	44.44	66.67	35.14
16	AMCL(PRAN)	Food & Allied	42.11	66.67	66.67	54.05
17	APEXFOODS	Food & Allied	31.58	33.33	33.33	32.43
18	SHYAMPSUG	Food & Allied	31.58	33.33	33.33	32.43
19	MEGHNAPET	Food & Allied	15.79	44.44	44.44	29.73
20	NTC	Food & Allied	31.58	44.44	33.33	35.14
21	RAHIMAFOOD	Food & Allied	31.58	77.78	22.22	40.54
22	ALPHATOBA	Food & Allied	21.05	44.44	33.33	29.73
23	BOC	Fuel & Power	63.16	77.78	44.44	62.16
24	EASTRNLUB	Fuel & Power	31.58	55.56	55.56	43.24
25	JAMUNAOIL	Fuel & Power	47.37	66.67	33.33	48.65
26	MPETROLEUM	Fuel & Power	47.37	55.56	66.67	54.05
27	PADMAOIL	Fuel & Power	47.37	66.67	55.56	54.05
28	POWERGRID	Fuel & Power	63.16	77.78	44.44	62.16
29	SUMITPOWER	Fuel & Power	57.89	66.67	66.67	62.16
30	TITASGAS	Fuel & Power	47.37	55.56	77.78	56.76
31	JUTESPINN	Jute	31.58	44.44	33.33	35.14
32	APEXWEAV	Textile	36.84	44.44	44.44	40.54
33	BEXTEX	Textile	63.16	77.78	66.67	67.57
34	TALLUSPIN	Textile	31.58	77.78	55.56	48.65
35	ALLTEX	Textile	52.63	66.67	66.67	59.46
36	DELTASPINN	Textile	26.32	33.33	22.22	27.03
37	DULAMIACOT	Textile	31.58	44.44	44.44	37.84
38	MAKSONSPIN	Textile	31.58	66.67	44.44	43.24

S/N	Company	Industry Type	HC	SC	RC	TIC
39	MITHUNKNIT	Textile	31.58	88.89	55.56	51.35
40	MONNOFABR	Textile	31.58	55.56	44.44	40.54
41	PRIMETEX	Textile	31.58	44.44	44.44	37.84
42	SAFKOSPINN	Textile	26.32	33.33	33.33	29.73
43	SONARGAON	Textile	47.37	44.44	33.33	43.24
44	CMCKAMTEX	Textile	31.58	44.44	44.44	37.84
45	DESHGLTD	Textile	31.58	33.33	33.33	32.43
46	SAIHAMTEX	Textile	31.58	44.44	44.44	37.84
47	SQUARETEX	Textile	42.11	55.56	44.44	45.95
48	ASHRAFTEX	Textile	21.05	44.44	44.44	32.43
49	TAMTEXLTD	Textile	21.05	44.44	44.44	32.43
50	ACI	Pharmaceuticals & Chemicals	42.11	88.89	77.78	62.16
51	ACIFORMULA	Pharmaceuticals & Chemicals	42.11	66.67	66.67	54.05
52	AMBEEPHA	Pharmaceuticals & Chemicals	26.32	55.56	33.33	35.14
53	BANGLAPRO	Pharmaceuticals & Chemicals	5.26	22.22	44.44	18.92
54	BXSYNTH	Pharmaceuticals & Chemicals	47.37	55.56	44.44	48.65
55	RECKITTBEN	Pharmaceuticals & Chemicals	26.32	55.56	55.56	40.54
56	RAHCHE	Pharmaceuticals & Chemicals	21.05	44.44	66.67	37.84
57	IBNSINA	Pharmaceuticals & Chemicals	57.89	77.78	66.67	64.86
58	IMAMBUTTON	Pharmaceuticals & Chemicals	31.58	33.33	22.22	29.73
59	KEYACOSMET	Pharmaceuticals & Chemicals	47.37	77.78	66.67	59.46
60	KOHINOOR	Pharmaceuticals & Chemicals	21.05	55.56	66.67	40.54
61	LIBRAINFU	Pharmaceuticals & Chemicals	52.63	77.78	66.67	62.16
62	ORIONINFU	Pharmaceuticals & Chemicals	52.63	77.78	66.67	62.16
63	PHARMAID	Pharmaceuticals & Chemicals	26.32	33.33	44.44	32.43
64	TBL	Pharmaceuticals & Chemicals	26.32	33.33	44.44	32.43
65	SPBML	Paper & Printing	36.84	44.44	22.22	35.14
66	EHL	Services & Real Estate	21.05	44.44	33.33	29.73
67	SAMORITA	Services & Real Estate	26.32	44.44	44.44	35.14
68	SAPORTL	Services & Real Estate	47.37	55.56	55.56	51.35
69	ARAMITCEM	Cement	42.11	33.33	33.33	37.84
70	CONFIDCEM	Cement	26.32	44.44	33.33	32.43
71	HEIDELBCEM	Cement	63.16	100.00	55.56	70.27
72	MODCEML	Cement	10.53	44.44	44.44	27.03
73	BDCOM	IT Sector	21.05	55.56	44.44	35.14
74	INTECH	IT Sector	21.05	55.56	55.56	37.84
75	ISNTD	IT Sector	47.37	77.78	66.67	59.46
76	APEXTANRY	Tannery Industries	26.32	55.56	44.44	37.84
77	BATASHOE	Tannery Industries	42.11	66.67	77.78	56.76
78	SAMATALETH	Tannery Industries	21.05	44.44	33.33	29.73
79	FUWANGCER	Ceramics Sector	21.05	44.44	44.44	32.43

S/N	Company	Industry Type	HC	SC	RC	TIC
80	STANCERAM	Ceramics Sector	26.32	33.33	44.44	32.43
81	GQBALLPEN	Miscellaneous	26.32	66.67	66.67	45.95
82	MIRACLEIND	Miscellaneous	36.84	44.44	44.44	40.54
83	SINOBANGLA	Miscellaneous	31.58	66.67	66.67	48.65
84	SAVARREFLTD	Miscellaneous	21.05	44.44	44.44	32.43
85	BSC	Miscellaneous	31.58	66.67	33.33	40.54
86	AGRINCOL	Insurance	42.11	66.67	77.78	56.76
87	ASIINCOL	Insurance	42.11	66.67	44.44	48.65
88	BANINCOL	Insurance	52.63	77.78	55.56	59.46
89	CENINCOL	Insurance	31.58	55.56	44.44	40.54
90	CONINLTD	Insurance	57.89	66.67	55.56	59.46
91	ESTINCOL	Insurance	36.84	66.67	44.44	45.95
92	ESLINCOL	Insurance	31.58	66.67	44.44	43.24
93	FEDINCOL	Insurance	31.58	44.44	44.44	37.84
94	GLOINCOL	Insurance	52.63	66.67	55.56	56.76
95	GREINCOL	Insurance	63.16	66.67	66.67	64.86
96	KARINCOL	Insurance	31.58	44.44	55.56	40.54
97	MERINCOL	Insurance	26.32	55.56	55.56	40.54
98	NORINCOL	Insurance	52.63	66.67	55.56	56.76
99	PARINCOL	Insurance	31.58	44.44	55.56	40.54
100	PEOINCOL	Insurance	36.84	66.67	55.56	48.65
101	PHOINCOL	Insurance	36.84	55.56	55.56	45.95
102	PIOINCOL	Insurance	42.11	77.78	55.56	54.05
103	PRAINLTD	Insurance	42.11	66.67	55.56	51.35
104	PRIINCOL	Insurance	42.11	77.78	66.67	56.76
105	PRIINLTD	Insurance	73.68	66.67	66.67	70.27
106	PROINCOL	Insurance	21.05	55.56	44.44	35.14
107	PURINCOL	Insurance	10.53	33.33	44.44	24.32
108	RELINLTD	Insurance	57.89	77.78	66.67	64.86
109	REPINCOL	Insurance	31.58	55.56	55.56	43.24
110	RUPINCOL	Insurance	42.11	66.67	44.44	48.65
111	SANINCOL	Insurance	26.32	77.78	55.56	45.95
112	SONINLTD	Insurance	47.37	77.78	66.67	59.46
113	STAINLTD	Insurance	42.11	44.44	66.67	48.65
114	TAKINLTD	Insurance	26.32	66.67	55.56	43.24
115	UNIINCOL	Insurance	31.58	66.67	55.56	45.95
116	BANFICOL	Financial Institutions	36.84	66.67	55.56	48.65
117	BANIFCOL	Financial Institutions	31.58	66.67	44.44	43.24
118	DBHFCLTD	Financial Institutions	52.63	88.89	55.56	62.16
119	FIDASCOL	Financial Institutions	42.11	55.56	66.67	51.35
120	FIRLILTD	Financial Institutions	15.79	44.44	55.56	32.43

S/N	Company	Industry Type	HC	SC	RC	TIC
121	IPDBCLTD	Financial Institutions	63.16	77.78	66.67	67.57
122	ISLFILTD	Financial Institutions	52.63	55.56	66.67	56.76
123	LANBAFI	Financial Institutions	78.95	100.00	66.67	81.08
124	MIDFILTD	Financial Institutions	42.11	55.56	55.56	48.65
125	NATHFLTD	Financial Institutions	57.89	66.67	55.56	59.46
126	PHOIFILTD	Financial Institutions	73.68	55.56	55.56	64.86
127	PEOLFLTD	Financial Institutions	57.89	55.56	55.56	56.76
128	PRELFLTD	Financial Institutions	47.37	66.67	55.56	54.05
129	PRIFILTD	Financial Institutions	73.68	88.89	66.67	75.68
130	UNILCOL	Financial Institutions	36.84	55.56	44.44	43.24
131	UTTFILTD	Financial Institutions	57.89	88.89	77.78	70.27
132	UNICLTD	Financial Institutions	68.42	77.78	77.78	72.97
133	ABBLTD	Banks	47.37	77.78	55.56	56.76
134	IFIBLTD	Banks	52.63	77.78	66.67	62.16
135	ISLBLTD	Banks	52.63	88.89	77.78	67.57
136	PUBBLTD	Banks	47.37	77.78	66.67	59.46
137	RUPBLTD	Banks	42.11	55.56	55.56	48.65
138	UTTBLTD	Banks	42.11	66.67	66.67	54.05
139	ICBBLTD	Banks	42.11	66.67	66.67	54.05
140	ALABLTD	Banks	52.63	77.78	66.67	62.16
141	SOUBLTD	Banks	73.68	88.89	66.67	75.68
142	DHABLTD	Banks	63.16	77.78	55.56	64.86
143	NCCBLTD	Banks	31.58	77.78	55.56	48.65
144	SOCBLTD	Banks	42.11	77.78	55.56	54.05
145	STABLTD	Banks	47.37	77.78	55.56	56.76
146	ONEBLTD	Banks	63.16	77.78	55.56	64.86
147	ASIBLTD	Banks	57.89	77.78	55.56	62.16
148	EXIBLTD	Banks	47.37	77.78	66.67	59.46
149	JUMBLTD	Banks	63.16	77.78	66.67	67.57

Appendix VI

IC Reporting Score of Different Companies in 2011 (%)

S/N	Company	Industry Type	HC	SC	RC	TIC
1	AFTABAUTO	Engineering	26.32	66.67	77.78	48.65
2	ANWARGALV	Engineering	15.79	44.44	66.67	35.14
3	ATLASBANG	Engineering	31.58	55.56	77.78	48.65
4	AZIZPIPES	Engineering	26.32	44.44	33.33	32.43
5	BDAUTOCA	Engineering	15.79	55.56	44.44	32.43
6	BDTHAI	Engineering	36.84	77.78	55.56	51.35
7	KAY&QUE	Engineering	47.37	88.89	66.67	62.16
8	NPOLYMAR	Engineering	31.58	55.56	44.44	40.54
9	QSMDRYCELL	Engineering	57.89	88.89	66.67	67.57
10	RANFOUNDRY	Engineering	57.89	77.78	66.67	64.86
11	SALAMCRST	Engineering	36.84	66.67	55.56	48.65
12	SINGERBD	Engineering	73.68	77.78	100.00	81.08
13	BANGAS	Food & Allied	42.11	66.67	66.67	54.05
14	BEACHHATCH	Food & Allied	21.05	44.44	44.44	32.43
15	MEGCONMILK	Food & Allied	15.79	44.44	66.67	35.14
16	AMCL(PRAN)	Food & Allied	42.11	66.67	66.67	54.05
17	APEXFOODS	Food & Allied	31.58	33.33	33.33	32.43
18	SHYAMPSUG	Food & Allied	31.58	33.33	44.44	35.14
19	MEGHNAPET	Food & Allied	15.79	44.44	44.44	29.73
20	NTC	Food & Allied	31.58	55.56	55.56	43.24
21	RAHIMAFOOD	Food & Allied	31.58	77.78	22.22	40.54
22	ALPHATOBA	Food & Allied	21.05	44.44	33.33	29.73
23	BOC	Fuel & Power	57.89	66.67	44.44	56.76
24	EASTRNLUB	Fuel & Power	31.58	55.56	66.67	45.95
25	JAMUNAOIL	Fuel & Power	52.63	44.44	55.56	51.35
26	MPETROLEUM	Fuel & Power	47.37	66.67	77.78	59.46
27	PADMAOIL	Fuel & Power	52.63	66.67	66.67	59.46
28	POWERGRID	Fuel & Power	47.37	77.78	66.67	59.46
29	SUMITPOWER	Fuel & Power	63.16	77.78	77.78	70.27
30	TITASGAS	Fuel & Power	52.63	55.56	77.78	59.46
31	JUTESPINN	Jute	31.58	44.44	33.33	35.14
32	APEXWEAV	Textile	36.84	44.44	44.44	40.54
33	BEXTEX	Textile	63.16	77.78	66.67	67.57
34	TALLUSPIN	Textile	31.58	77.78	55.56	48.65
35	ALLTEX	Textile	52.63	66.67	66.67	59.46
36	DELTASPINN	Textile	26.32	33.33	33.33	29.73
37	DULAMIACOT	Textile	42.11	55.56	44.44	45.95
38	MAKSONSPIN	Textile	73.68	66.67	55.56	67.57

S/N	Company	Industry Type	HC	SC	RC	TIC
39	MITHUNKNIT	Textile	31.58	88.89	66.67	54.05
40	MONNOFABR	Textile	21.05	55.56	33.33	32.43
41	PRIMETEX	Textile	26.32	44.44	44.44	35.14
42	SAFKOSPINN	Textile	31.58	44.44	44.44	37.84
43	SONARGAON	Textile	52.63	55.56	44.44	51.35
44	CMCKAMTEX	Textile	36.84	44.44	44.44	40.54
45	DESHGLTD	Textile	36.84	33.33	44.44	37.84
46	SAIHAMTEX	Textile	31.58	44.44	55.56	40.54
47	SQUARETEX	Textile	47.37	66.67	66.67	56.76
48	ASHRAFTEX	Textile	26.32	44.44	44.44	35.14
49	TAMTEXLTD	Textile	21.05	44.44	44.44	32.43
50	ACI	Pharmaceuticals & Chemicals	47.37	77.78	44.44	54.05
51	ACIFORMULA	Pharmaceuticals & Chemicals	47.37	77.78	55.56	56.76
52	AMBEEPHA	Pharmaceuticals & Chemicals	26.32	55.56	44.44	37.84
53	BANGLAPRO	Pharmaceuticals & Chemicals	5.26	22.22	44.44	18.92
54	BXSYNTH	Pharmaceuticals & Chemicals	36.84	55.56	44.44	43.24
55	RECKITTBEN	Pharmaceuticals & Chemicals	26.32	55.56	77.78	45.95
56	RAHCHE	Pharmaceuticals & Chemicals	21.05	55.56	55.56	37.84
57	IBNSINA	Pharmaceuticals & Chemicals	57.89	88.89	77.78	70.27
58	IMAMBUTTON	Pharmaceuticals & Chemicals	26.32	44.44	33.33	32.43
59	KEYACOSMET	Pharmaceuticals & Chemicals	47.37	88.89	66.67	62.16
60	KOHINOOR	Pharmaceuticals & Chemicals	26.32	55.56	66.67	43.24
61	LIBRAINFU	Pharmaceuticals & Chemicals	57.89	77.78	55.56	62.16
62	ORIONINFU	Pharmaceuticals & Chemicals	57.89	77.78	66.67	64.86
63	PHARMAID	Pharmaceuticals & Chemicals	26.32	33.33	44.44	32.43
64	TBL	Pharmaceuticals & Chemicals	31.58	33.33	44.44	35.14
65	SPBML	Paper & Printing	36.84	44.44	33.33	37.84
66	EHL	Services & Real Estate	26.32	44.44	33.33	32.43
67	SAMORITA	Services & Real Estate	26.32	44.44	44.44	35.14
68	SAPORTL	Services & Real Estate	52.63	77.78	66.67	62.16
69	ARAMITCEM	Cement	36.84	33.33	44.44	37.84
70	CONFIDCEM	Cement	26.32	33.33	44.44	32.43
71	HEIDELBCEM	Cement	68.42	100.00	77.78	78.38
72	MODCEML	Cement	10.53	44.44	44.44	27.03
73	BDCOM	IT Sector	21.05	77.78	44.44	40.54
74	INTECH	IT Sector	21.05	55.56	44.44	35.14
75	ISNTD	IT Sector	36.84	77.78	66.67	54.05
76	APEXTANRY	Tannery Industries	42.11	66.67	44.44	48.65
77	BATASHOE	Tannery Industries	36.84	77.78	66.67	54.05
78	SAMATALETH	Tannery Industries	21.05	44.44	44.44	32.43
79	FUWANGCER	Ceramics Sector	21.05	55.56	44.44	35.14

S/N	Company	Industry Type	HC	SC	RC	TIC
80	STANCERAM	Ceramics Sector	26.32	33.33	44.44	32.43
81	GQBALLPEN	Miscellaneous	36.84	55.56	44.44	43.24
82	MIRACLEIND	Miscellaneous	42.11	44.44	55.56	45.95
83	SINOBANGLA	Miscellaneous	26.32	66.67	55.56	43.24
84	SAVARREFLTD	Miscellaneous	26.32	44.44	44.44	35.14
85	BSC	Miscellaneous	26.32	55.56	33.33	35.14
86	AGRINCOL	Insurance	52.63	77.78	66.67	62.16
87	ASIINCOL	Insurance	26.32	66.67	44.44	40.54
88	BANINCOL	Insurance	52.63	77.78	55.56	59.46
89	CENINCOL	Insurance	26.32	55.56	44.44	37.84
90	CONINLTD	Insurance	47.37	66.67	55.56	54.05
91	ESTINCOL	Insurance	36.84	66.67	44.44	45.95
92	ESLINCOL	Insurance	42.11	66.67	66.67	54.05
93	FEDINCOL	Insurance	26.32	33.33	44.44	32.43
94	GLOINCOL	Insurance	42.11	66.67	55.56	51.35
95	GREINCOL	Insurance	78.95	88.89	66.67	78.38
96	KARINCOL	Insurance	31.58	55.56	55.56	43.24
97	MERINCOL	Insurance	26.32	66.67	55.56	43.24
98	NORINCOL	Insurance	47.37	66.67	55.56	54.05
99	PARINCOL	Insurance	36.84	44.44	55.56	43.24
100	PEOINCOL	Insurance	42.11	55.56	55.56	48.65
101	PHOINCOL	Insurance	57.89	88.89	55.56	64.86
102	PIOINCOL	Insurance	52.63	77.78	55.56	59.46
103	PRAINLTD	Insurance	47.37	66.67	55.56	54.05
104	PRIINCOL	Insurance	63.16	77.78	55.56	64.86
105	PRIINLTD	Insurance	47.37	77.78	66.67	59.46
106	PROINCOL	Insurance	31.58	66.67	55.56	45.95
107	PURINCOL	Insurance	15.79	33.33	55.56	29.73
108	RELINLTD	Insurance	73.68	77.78	66.67	72.97
109	REPINCOL	Insurance	31.58	77.78	55.56	48.65
110	RUPINCOL	Insurance	36.84	66.67	55.56	48.65
111	SANINCOL	Insurance	42.11	77.78	55.56	54.05
112	SONINLTD	Insurance	47.37	77.78	55.56	56.76
113	STAINLTD	Insurance	36.84	55.56	55.56	45.95
114	TAKINLTD	Insurance	26.32	66.67	66.67	45.95
115	UNIINCOL	Insurance	31.58	66.67	55.56	45.95
116	BANFICOL	Financial Institutions	63.16	66.67	55.56	62.16
117	BANIFCOL	Financial Institutions	42.11	55.56	55.56	48.65
118	DBHFCLTD	Financial Institutions	68.42	88.89	55.56	70.27
119	FIDASCOL	Financial Institutions	42.11	66.67	55.56	51.35
120	FIRLILTD	Financial Institutions	31.58	44.44	55.56	40.54

S/N	Company	Industry Type	HC	SC	RC	TIC
121	IPDBCLTD	Financial Institutions	36.84	55.56	55.56	45.95
122	ISLFILTD	Financial Institutions	57.89	66.67	66.67	62.16
123	LANBAFI	Financial Institutions	89.47	100.00	66.67	86.49
124	MIDFILTD	Financial Institutions	57.89	55.56	66.67	59.46
125	NATHFLTD	Financial Institutions	47.37	77.78	55.56	56.76
126	PHOIFILTD	Financial Institutions	57.89	66.67	55.56	59.46
127	PEOLFLTD	Financial Institutions	57.89	55.56	55.56	56.76
128	PRELFLTD	Financial Institutions	57.89	55.56	55.56	56.76
129	PRIFILTD	Financial Institutions	84.21	88.89	66.67	81.08
130	UNILCOL	Financial Institutions	36.84	44.44	55.56	43.24
131	UTTFILTD	Financial Institutions	73.68	77.78	66.67	72.97
132	UNICLTD	Financial Institutions	68.42	66.67	66.67	67.57
133	ABBLTD	Banks	31.58	88.89	66.67	54.05
134	IFIBLTD	Banks	63.16	77.78	77.78	70.27
135	ISLBLTD	Banks	73.68	100.00	77.78	81.08
136	PUBBLTD	Banks	57.89	77.78	77.78	67.57
137	RUPBLTD	Banks	63.16	66.67	66.67	64.86
138	UTTBLTD	Banks	47.37	77.78	66.67	59.46
139	ICBBLTD	Banks	42.11	77.78	66.67	56.76
140	ALABLTD	Banks	47.37	77.78	66.67	59.46
141	SOUBLTD	Banks	73.68	88.89	55.56	72.97
142	DHABLTD	Banks	57.89	77.78	55.56	62.16
143	NCCBLTD	Banks	42.11	88.89	55.56	56.76
144	SOCBLTD	Banks	57.89	77.78	55.56	62.16
145	STABLTD	Banks	47.37	77.78	55.56	56.76
146	ONEBLTD	Banks	63.16	77.78	55.56	64.86
147	ASIBLTD	Banks	73.68	88.89	66.67	75.68
148	EXIBLTD	Banks	42.11	77.78	66.67	56.76
149	JUMBLTD	Banks	68.42	77.78	66.67	70.27

Appendix VII

Increase/(Decrease) of IC Reporting in 2011 from 2008 (%)

S/N	Company	Industry Type	HC	SC	RC	TIC
1	AFTABAUTO	Engineering	(5.26)	11.11	0.00	0.00
2	ANWARGALV	Engineering	(5.26)	0.00	33.33	5.41
3	ATLASBANG	Engineering	0.00	0.00	0.00	0.00
4	AZIZPIPES	Engineering	0.00	0.00	0.00	0.00
5	BDAUTOCA	Engineering	0.00	11.11	(11.11)	0.00
6	BDTHAI	Engineering	0.00	11.11	(11.11)	0.00
7	KAY&QUE	Engineering	5.26	0.00	0.00	2.70
8	NPOLYMAR	Engineering	(10.53)	0.00	(22.22)	(10.81)
9	QSMDRYCELL	Engineering	0.00	0.00	(11.11)	(2.70)
10	RANFOUNDRY	Engineering	15.79	11.11	0.00	10.81
11	SALAMCRST	Engineering	5.26	22.22	11.11	10.81
12	SINGERBD	Engineering	10.53	0.00	0.00	5.41
13	BANGAS	Food & Allied	15.79	0.00	0.00	8.11
14	BEACHHATCH	Food & Allied	0.00	0.00	0.00	0.00
15	MEGCONMILK	Food & Allied	0.00	0.00	0.00	0.00
16	AMCL(PRAN)	Food & Allied	0.00	0.00	0.00	0.00
17	APEXFOODS	Food & Allied	0.00	0.00	0.00	0.00
18	SHYAMPSUG	Food & Allied	0.00	0.00	11.11	2.70
19	MEGHNAPET	Food & Allied	0.00	0.00	0.00	0.00
20	NTC	Food & Allied	0.00	11.11	22.22	8.11
21	RAHIMAFOOD	Food & Allied	0.00	0.00	0.00	0.00
22	ALPHATOBA	Food & Allied	0.00	0.00	0.00	0.00
23	BOC	Fuel & Power	(5.26)	(11.11)	0.00	(5.41)
24	EASTRNLUB	Fuel & Power	0.00	0.00	11.11	2.70
25	JAMUNAOIL	Fuel & Power	5.26	(22.22)	22.22	2.70
26	MPETROLEUM	Fuel & Power	0.00	11.11	11.11	5.41
27	PADMAOIL	Fuel & Power	5.26	0.00	11.11	5.41
28	POWERGRID	Fuel & Power	(15.79)	0.00	22.22	(2.70)
29	SUMITPOWER	Fuel & Power	5.26	11.11	11.11	8.11
30	TITASGAS	Fuel & Power	5.26	0.00	0.00	2.70
31	JUTESPINN	Jute	0.00	0.00	0.00	0.00
32	APEXWEAV	Textile	0.00	0.00	0.00	0.00
33	BEXTEX	Textile	0.00	0.00	0.00	0.00
34	TALLUSPIN	Textile	0.00	0.00	0.00	0.00
35	ALLTEX	Textile	0.00	0.00	0.00	0.00
36	DELTASPINN	Textile	0.00	0.00	11.11	2.70
37	DULAMIACOT	Textile	10.53	11.11	0.00	8.11
38	MAKSONSPIN	Textile	42.11	0.00	11.11	24.32

S/N	Company	Industry Type	HC	SC	RC	TIC
39	MITHUNKNIT	Textile	0.00	0.00	11.11	2.70
40	MONNOFABR	Textile	(10.53)	0.00	(11.11)	(8.11)
41	PRIMETEX	Textile	(5.26)	0.00	0.00	(2.70)
42	SAFKOSPINN	Textile	5.26	11.11	11.11	8.11
43	SONARGAON	Textile	5.26	11.11	11.11	8.11
44	CMCKAMTEX	Textile	5.26	0.00	0.00	2.70
45	DESHGLTD	Textile	5.26	0.00	11.11	5.41
46	SAIHAMTEX	Textile	0.00	0.00	11.11	2.70
47	SQUARETEX	Textile	5.26	11.11	22.22	10.81
48	ASHRAFTEX	Textile	5.26	0.00	0.00	2.70
49	TAMTEXLTD	Textile	0.00	0.00	0.00	0.00
50	ACI	Pharmaceuticals & Chemicals	5.26	(11.11)	(33.33)	(8.11)
51	ACIFORMULA	Pharmaceuticals & Chemicals	5.26	11.11	(11.11)	2.70
52	AMBEEPHA	Pharmaceuticals & Chemicals	0.00	0.00	11.11	2.70
53	BANGLAPRO	Pharmaceuticals & Chemicals	0.00	0.00	0.00	0.00
54	BXSYNTH	Pharmaceuticals & Chemicals	(10.53)	0.00	0.00	(5.41)
55	RECKITTBEN	Pharmaceuticals & Chemicals	0.00	0.00	22.22	5.41
56	RAHCHE	Pharmaceuticals & Chemicals	0.00	11.11	(11.11)	0.00
57	IBNSINA	Pharmaceuticals & Chemicals	0.00	11.11	11.11	5.41
58	IMAMBUTTON	Pharmaceuticals & Chemicals	(5.26)	11.11	11.11	2.70
59	KEYACOSMET	Pharmaceuticals & Chemicals	0.00	11.11	0.00	2.70
60	KOHINOOR	Pharmaceuticals & Chemicals	5.26	0.00	0.00	2.70
61	LIBRAINFU	Pharmaceuticals & Chemicals	5.26	0.00	(11.11)	0.00
62	ORIONINFU	Pharmaceuticals & Chemicals	5.26	0.00	0.00	2.70
63	PHARMAID	Pharmaceuticals & Chemicals	0.00	0.00	0.00	0.00
64	TBL	Pharmaceuticals & Chemicals	5.26	0.00	0.00	2.70
65	SPBML	Paper & Printing	0.00	0.00	11.11	2.70
66	EHL	Services & Real Estate	5.26	0.00	0.00	2.70
67	SAMORITA	Services & Real Estate	0.00	0.00	0.00	0.00
68	SAPORTL	Services & Real Estate	5.26	22.22	11.11	10.81
69	ARAMITCEM	Cement	(5.26)	0.00	11.11	0.00
70	CONFIDCEM	Cement	0.00	(11.11)	11.11	0.00
71	HEIDELBCEM	Cement	5.26	0.00	22.22	8.11
72	MODCEML	Cement	0.00	0.00	0.00	0.00
73	BDCOM	IT Sector	0.00	22.22	0.00	5.41
74	INTECH	IT Sector	0.00	0.00	(11.11)	(2.70)
75	ISNTD	IT Sector	(10.53)	0.00	0.00	(5.41)
76	APEXTANRY	Tannery Industries	15.79	11.11	0.00	10.81
77	BATASHOE	Tannery Industries	(5.26)	11.11	(11.11)	(2.70)
78	SAMATALETH	Tannery Industries	0.00	0.00	11.11	2.70
79	FUWANGCER	Ceramics Sector	0.00	11.11	0.00	2.70

S/N	Company	Industry Type	HC	SC	RC	TIC
80	STANCERAM	Ceramics Sector	0.00	0.00	0.00	0.00
81	GQBALLPEN	Miscellaneous	10.53	(11.11)	(22.22)	(2.70)
82	MIRACLEIND	Miscellaneous	5.26	0.00	11.11	5.41
83	SINOBANGLA	Miscellaneous	(5.26)	0.00	(11.11)	(5.41)
84	SAVARREFLTD	Miscellaneous	5.26	0.00	0.00	2.70
85	BSC	Miscellaneous	(5.26)	(11.11)	0.00	(5.41)
86	AGRINCOL	Insurance	10.53	11.11	(11.11)	5.41
87	ASIINCOL	Insurance	(15.79)	0.00	0.00	(8.11)
88	BANINCOL	Insurance	0.00	0.00	0.00	0.00
89	CENINCOL	Insurance	(5.26)	0.00	0.00	(2.70)
90	CONINLTD	Insurance	(10.53)	0.00	0.00	(5.41)
91	ESTINCOL	Insurance	0.00	0.00	0.00	0.00
92	ESLINCOL	Insurance	10.53	0.00	22.22	10.81
93	FEDINCOL	Insurance	(5.26)	(11.11)	0.00	(5.41)
94	GLOINCOL	Insurance	(10.53)	0.00	0.00	(5.41)
95	GREINCOL	Insurance	15.79	22.22	0.00	13.51
96	KARINCOL	Insurance	0.00	11.11	0.00	2.70
97	MERINCOL	Insurance	0.00	11.11	0.00	2.70
98	NORINCOL	Insurance	(5.26)	0.00	0.00	(2.70)
99	PARINCOL	Insurance	5.26	0.00	0.00	2.70
100	PEOINCOL	Insurance	5.26	(11.11)	0.00	0.00
101	PHOINCOL	Insurance	21.05	33.33	0.00	18.92
102	PIOINCOL	Insurance	10.53	0.00	0.00	5.41
103	PRAINLTD	Insurance	5.26	0.00	0.00	2.70
104	PRIINCOL	Insurance	21.05	0.00	(11.11)	8.11
105	PRIINLTD	Insurance	(26.32)	11.11	0.00	(10.81)
106	PROINCOL	Insurance	10.53	11.11	11.11	10.81
107	PURINCOL	Insurance	5.26	0.00	11.11	5.41
108	RELINLTD	Insurance	15.79	0.00	0.00	8.11
109	REPINCOL	Insurance	0.00	22.22	0.00	5.41
110	RUPINCOL	Insurance	(5.26)	0.00	11.11	0.00
111	SANINCOL	Insurance	15.79	0.00	0.00	8.11
112	SONINLTD	Insurance	0.00	0.00	(11.11)	(2.70)
113	STAINLTD	Insurance	(5.26)	11.11	(11.11)	(2.70)
114	TAKINLTD	Insurance	0.00	0.00	11.11	2.70
115	UNIINCOL	Insurance	0.00	0.00	0.00	0.00
116	BANFICOL	Financial Institutions	26.32	0.00	0.00	13.51
117	BANIFCOL	Financial Institutions	10.53	(11.11)	11.11	5.41
118	DBHFCLTD	Financial Institutions	15.79	0.00	0.00	8.11
119	FIDASCOL	Financial Institutions	0.00	11.11	(11.11)	0.00
120	FIRLILTD	Financial Institutions	15.79	0.00	0.00	8.11

S/N	Company	Industry Type	HC	SC	RC	TIC
121	IPDBCLTD	Financial Institutions	(26.32)	(22.22)	(11.11)	(21.62)
122	ISLFILTD	Financial Institutions	5.26	11.11	0.00	5.41
123	LANBAFI	Financial Institutions	10.53	0.00	0.00	5.41
124	MIDFILTD	Financial Institutions	15.79	0.00	11.11	10.81
125	NATHFLTD	Financial Institutions	(10.53)	11.11	0.00	(2.70)
126	PHOIFILTD	Financial Institutions	(15.79)	11.11	0.00	(5.41)
127	PEOLFLTD	Financial Institutions	0.00	0.00	0.00	0.00
128	PRELFLTD	Financial Institutions	10.53	(11.11)	0.00	2.70
129	PRIFILTD	Financial Institutions	10.53	0.00	0.00	5.41
130	UNILCOL	Financial Institutions	0.00	(11.11)	11.11	0.00
131	UTTFILTD	Financial Institutions	15.79	(11.11)	(11.11)	2.70
132	UNICLTD	Financial Institutions	0.00	(11.11)	(11.11)	(5.41)
133	ABBLTD	Banks	(15.79)	11.11	11.11	(2.70)
134	IFIBLTD	Banks	10.53	0.00	11.11	8.11
135	ISLBLTD	Banks	21.05	11.11	0.00	13.51
136	PUBBLTD	Banks	10.53	0.00	11.11	8.11
137	RUPBLTD	Banks	21.05	11.11	11.11	16.22
138	UTTBLTD	Banks	5.26	11.11	0.00	5.41
139	ICBBLTD	Banks	0.00	11.11	0.00	2.70
140	ALABLTD	Banks	(5.26)	0.00	0.00	(2.70)
141	SOUBLTD	Banks	0.00	0.00	(11.11)	(2.70)
142	DHABLTD	Banks	(5.26)	0.00	0.00	(2.70)
143	NCCBLTD	Banks	10.53	11.11	0.00	8.11
144	SOCBLTD	Banks	15.79	0.00	0.00	8.11
145	STABLTD	Banks	0.00	0.00	0.00	0.00
146	ONEBLTD	Banks	0.00	0.00	0.00	0.00
147	ASIBLTD	Banks	15.79	11.11	11.11	13.51
148	EXIBLTD	Banks	(5.26)	0.00	0.00	(2.70)
149	JUMBLTD	Banks	5.26	0.00	0.00	2.70

Appendix VIII
Dependent, COG and IND Variables

S/N	Short Name	Dependent Variable TIC 2011	Independent Variable COG Variable			IND
			SBOARD	MACOM	NIND	
1	AFTABAUTO	48.65	7	3	1	1
2	ANWARGALV	35.14	10	3	1	1
3	ATLASBANG	48.65	9	0	0	1
4	AZIZPIPES	32.43	7	0	1	1
5	BDAUTOCA	32.43	6	3	1	1
6	BDTHAI	51.35	7	3	1	1
7	KAY&QUE	62.16	6	3	1	1
8	NPOLYMAR	40.54	5	0	1	1
9	QSMDRYCELL	67.57	6	3	1	1
10	RANFOUNDRY	64.86	8	0	1	1
11	SALAMCRST	48.65	3	3	1	1
12	SINGERBD	81.08	9	4	1	1
13	BANGAS	54.05	7	0	1	1
14	BEACHHATCH	32.43	5	0	0	1
15	MEGCONMILK	35.14	7	0	0	1
16	AMCL(PRAN)	54.05	9	0	1	1
17	APEXFOODS	32.43	6	3	1	1
18	SHYAMPSUG	35.14	9	0	1	1
19	MEGHNAPET	29.73	5	0	0	1
20	NTC	43.24	9	0	1	1
21	RAHIMAFOOD	40.54	7	3	1	1
22	ALPHATOBA	29.73	3	0	0	1
23	BOC	56.76	9	6	1	1
24	EASTRNLUB	45.95	5	3	1	1
25	JAMUNAOIL	51.35	9	0	0	1
26	MPETROLEUM	59.46	9	3	1	1
27	PADMAOIL	59.46	8	4	1	1
28	POWERGRID	59.46	9	0	0	1
29	SUMITPOWER	70.27	12	3	1	1
30	TITASGAS	59.46	9	3	1	1
31	JUTESPINN	35.14	5	3	1	1
32	APEXWEAV	40.54	6	3	1	1
33	BEXTEX	67.57	4	3	0	1
34	TALLUSPIN	48.65	10	0	1	1
35	ALLTEX	59.46	7	3	1	1
36	DELTASPINN	29.73	5	3	1	1
37	DULAMIACOT	45.95	7	3	1	1
38	MAKSONSPIN	67.57	7	4	1	1
39	MITHUNKNIT	54.05	7	0	1	1
40	MONNOFABR	32.43	7	0	1	1
41	PRIMETEX	35.14	8	3	1	1
42	SAFKOSPINN	37.84	5	3	1	1

S/N	Short Name	Dependent Variable	Independent Variable COG Variable			IND
		TIC 2011	SBOARD	MACOM	NIND	
43	SONARGAON	51.35	7	0	0	1
44	CMCKAMTEX	40.54	6	0	1	1
45	DESHGLTD	37.84	5	3	1	1
46	SAIHAMTEX	40.54	7	0	1	1
47	SQUARETEX	56.76	9	3	1	1
48	ASHRAFTEX	35.14	8	3	1	1
49	TAMTEXLTD	32.43	3	0	0	1
50	ACI	54.05	8	3	1	1
51	ACIFORMULA	56.76	6	0	1	1
52	AMBEEPHA	37.84	7	0	1	1
53	BANGLAPRO	18.92	4	0	0	1
54	BXSYNTH	43.24	7	0	1	1
55	RECKITTBEN	45.95	8	3	1	1
56	RAHCHE	37.84	5	0	1	1
57	IBNSINA	70.27	9	4	1	1
58	IMAMBUTTON	32.43	6	3	1	1
59	KEYACOSMET	62.16	6	4	1	1
60	KOHINOOR	43.24	7	3	1	1
61	LIBRAINFU	62.16	5	3	1	1
62	ORIONINFU	64.86	4	3	0	1
63	PHARMAID	32.43	9	0	1	1
64	TBL	35.14	5	0	0	1
65	SPBML	37.84	5	3	1	1
66	EHL	32.43	6	3	1	1
67	SAMORITA	35.14	11	4	1	1
68	SAPORTL	62.16	11	4	0	1
69	ARAMITCEM	37.84	7	0	1	1
70	CONFIDCEM	32.43	6	3	1	1
71	HEIDELBCEM	78.38	9	0	1	1
72	MODCEML	27.03	5	3	1	1
73	BDCOM	40.54	8	0	1	1
74	INTECH	35.14	5	0	1	1
75	ISNTD	54.05	13	0	1	1
76	APEXTANRY	48.65	6	3	1	1
77	BATASHOE	54.05	6	7	2	1
78	SAMATALETH	32.43	4	3	0	1
79	FUWANGCER	35.14	6	0	1	1
80	STANCERAM	32.43	9	0	1	1
81	GQBALLPEN	43.24	9	3	1	1
82	MIRACLEIND	45.95	11	3	1	1
83	SINOBANGLA	43.24	7	3	1	1
84	SAVARREFLTD	35.14	6	0	1	1
85	BSC	35.14	7	0	0	1
86	AGRINCOL	62.16	21	5	2	2
87	ASIINCOL	40.54	19	0	1	2

S/N	Short Name	Dependent Variable	Independent Variable COG Variable			IND
		TIC 2011	SBOARD	MACOM	NIND	
88	BANINCOL	59.46	17	3	2	2
89	CENINCOL	37.84	18	0	1	2
90	CONINLTD	54.05	16	3	1	2
91	ESTINCOL	45.95	20	0	1	2
92	ESLINCOL	54.05	20	4	0	2
93	FEDINCOL	32.43	22	0	3	2
94	GLOINCOL	51.35	21	0	2	2
95	GREINCOL	78.38	20	6	2	2
96	KARINCOL	43.24	16	3	1	2
97	MERINCOL	43.24	18	0	1	2
98	NORINCOL	54.05	14	0	0	2
99	PARINCOL	43.24	11	3	1	2
100	PEOINCOL	48.65	17	0	0	2
101	PHOINCOL	64.86	18	4	0	2
102	PIOINCOL	59.46	15	0	1	2
103	PRAINLTD	54.05	20	4	1	2
104	PRIINCOL	64.86	19	3	1	2
105	PRIINLTD	59.46	21	0	1	2
106	PROINCOL	45.95	20	5	2	2
107	PURINCOL	29.73	19	0	2	2
108	RELINLTD	72.97	16	4	0	2
109	REPINCOL	48.65	18	3	2	2
110	RUPINCOL	48.65	21	3	2	2
111	SANINCOL	54.05	19	3	2	2
112	SONINLTD	56.76	21	6	2	2
113	STAINLTD	45.95	10	0	0	2
114	TAKINLTD	45.95	24	5	2	2
115	UNIINCOL	45.95	7	4	1	2
116	BANFICOL	62.16	13	5	1	3
117	BANIFCOL	48.65	9	5	1	3
118	DBHFCLTD	70.27	10	5	0	3
119	FIDASCOL	51.35	9	5	1	3
120	FIRLILTD	40.54	11	4	1	3
121	IPDBCLTD	45.95	10	0	1	3
122	ISLFILTD	62.16	11	5	1	3
123	LANBAFI	86.49	11	4	1	3
124	MIDFILTD	59.46	12	7	1	3
125	NATHFLTD	56.76	12	6	1	3
126	PHOIFILTD	59.46	12	5	0	3
127	PEOLFLTD	56.76	12	5	1	3
128	PRELFLTD	56.76	13	5	1	3
129	PRIFILTD	81.08	11	5	1	3
130	UNILCOL	43.24	9	0	1	3
131	UTTFILTD	72.97	11	3	1	3
132	UNICLTD	67.57	13	5	1	3

Appendix IX

Dependent, MKT and IND Variables

S/N	Short Name	Dependent Variable	Independent Variable			IND
			MKT Variable			
		TIC 2011	CAT	PER	PMCAP	
1	AFTABAUTO	48.65	5	1	9.66026	1
2	ANWARGALV	35.14	1	1	6.03574	1
3	ATLASBANG	48.65	5	1	8.77263	1
4	AZIZPIPES	32.43	1	0	5.16804	1
5	BDAUTOCA	32.43	4	0	5.0528	1
6	BDTHAI	51.35	5	0	7.91281	1
7	KAY&QUE	62.16	4	-1	5.19794	1
8	NPOLYMAR	40.54	5	0	6.38477	1
9	QSMDRYCELL	67.57	5	0	7.5939	1
10	RANFOUNDRY	64.86	5	0	6.74876	1
11	SALAMCRST	48.65	5	0	8.6582	1
12	SINGERBD	81.08	5	0	9.30412	1
13	BANGAS	54.05	5	1	5.20724	1
14	BEACHHATCH	32.43	5	0	7.28377	1
15	MEGCONMILK	35.14	4	0	6.50549	1
16	AMCL(PRAN)	54.05	5	0	7.10775	1
17	APEXFOODS	32.43	5	1	6.30132	1
18	SHYAMPSUG	35.14	1	-1	4.44265	1
19	MEGHNAPET	29.73	1	-1	5.41343	1
20	NTC	43.24	5	1	8.09153	1
21	RAHIMAFOOD	40.54	5	0	6.77709	1
22	ALPHATOBA	29.73	1	0	3.40917	1
23	BOC	56.76	5	1	9.24268	1
24	EASTRNLUB	45.95	5	-1	6.31529	1
25	JAMUNAOIL	51.35	5	0	9.54427	1
26	MPETROLEUM	59.46	5	0	9.1214	1
27	PADMAOIL	59.46	5	0	9.97841	1
28	POWERGRID	59.46	5	0	10.4296	1
29	SUMITPOWER	70.27	5	0	10.3779	1
30	TITASGAS	59.46	5	0	11.233	1
31	JUTESPINN	35.14	5	-1	5.53659	1
32	APEXWEAV	40.54	5	0	6.2634	1
33	BEXTEX	67.57	5	1	9.79346	1
34	TALLUSPIN	48.65	5	-1	7.03205	1
35	ALLTEX	59.46	1	-1	6.92991	1
36	DELTASPINN	29.73	5	0	7.25479	1
37	DULAMIACOT	45.95	1	-1	5.52497	1
38	MAKSONSPIN	67.57	5	0	8.92705	1
39	MITHUNKNIT	54.05	5	-1	6.83384	1
40	MONNOFABR	32.43	1	0	7.26465	1
41	PRIMETEX	35.14	5	1	7.62158	1
42	SAFKOSPINN	37.84	5	-1	6.67638	1

S/N	Short Name	Dependent Variable TIC 2011	CAT	PER	PMCAP	IND
				Independent Variable MKT Variable		
43	SONARGAON	51.35	5	1	7.01388	1
44	CMCKAMTEX	40.54	5	0	8.05702	1
45	DESHGLTD	37.84	4	1	5.05866	1
46	SAIHAMTEX	40.54	5	0	7.37932	1
47	SQUARETEX	56.76	5	0	9.51552	1
48	ASHRAFTEX	35.14	1	0	4.59208	1
49	TAMTEXLTD	32.43	1	0	4.162	1
50	ACI	54.05	5	1	8.5074	1
51	ACIFORMULA	56.76	5	0	8.29305	1
52	AMBEEPHA	37.84	5	-1	6.67809	1
53	BANGLAPRO	18.92	4	0	3.46072	1
54	BXSYNTH	43.24	5	-1	7.99336	1
55	RECKITTBEN	45.95	5	1	8.6543	1
56	RAHCHE	37.84	1	0	3.46574	1
57	IBNSINA	70.27	5	0	7.45222	1
58	IMAMBUTTON	32.43	5	-1	5.66157	1
59	KEYACOSMET	62.16	5	0	8.58568	1
60	KOHINOOR	43.24	5	0	6.98472	1
61	LIBRAINFU	62.16	5	1	6.23936	1
62	ORIONINFU	64.86	5	0	7.20435	1
63	PHARMAID	32.43	5	0	6.67998	1
64	TBL	35.14	1	0	3.94932	1
65	SPBML	37.84	1	0	4.13565	1
66	EHL	32.43	5	0	8.61472	1
67	SAMORITA	35.14	5	0	6.70919	1
68	SAPORTL	62.16	5	0	9.18788	1
69	ARAMITCEM	37.84	5	-1	7.51706	1
70	CONFIDCEM	32.43	5	0	8.8249	1
71	HEIDELBCEM	78.38	5	1	9.75133	1
72	MODCEML	27.03	1	0	4.55671	1
73	BDCOM	40.54	5	0	6.85916	1
74	INTECH	35.14	5	0	6.03763	1
75	ISNTD	54.05	5	0	5.76186	1
76	APEXTANRY	48.65	5	0	7.66235	1
77	BATASHOE	54.05	5	1	9.06514	1
78	SAMATALETH	32.43	1	-1	5.33975	1
79	FUWANGCER	35.14	5	0	7.82655	1
80	STANCERAM	32.43	4	1	5.72224	1
81	GQBALLPEN	43.24	5	0	7.09778	1
82	MIRACLEIND	45.95	4	0	6.43914	1
83	SINOBANGLA	43.24	5	0	6.09789	1
84	SAVARREFLTD	35.14	1	0	4.5523	1
85	BSC	35.14	5	0	8.39084	1
86	AGRINCOL	62.16	5	0	6.95575	2
87	ASIINCOL	40.54	5	0	7.7139	2

S/N	Short Name	Dependent Variable	Independent Variable MKT Variable			IND
		TIC 2011	CAT	PER	PMCAP	
88	BANINCOL	59.46	5	0	7.87839	2
89	CENINCOL	37.84	5	0	7.37895	2
90	CONINLTD	54.05	5	0	7.33595	2
91	ESTINCOL	45.95	5	0	8.08528	2
92	ESLINCOL	54.05	5	0	8.15898	2
93	FEDINCOL	32.43	5	1	7.38192	2
94	GLOINCOL	51.35	5	0	7.15641	2
95	GREINCOL	78.38	5	1	8.928	2
96	KARINCOL	43.24	5	0	7.7487	2
97	MERINCOL	43.24	5	0	7.52884	2
98	NORINCOL	54.05	5	0	7.30298	2
99	PARINCOL	43.24	5	0	6.77223	2
100	PEOINCOL	48.65	5	0	7.71248	2
101	PHOINCOL	64.86	5	0	7.89937	2
102	PIOINCOL	59.46	5	0	7.91217	2
103	PRAINLTD	54.05	5	0	8.32735	2
104	PRIINCOL	64.86	5	0	7.56916	2
105	PRIINLTD	59.46	5	0	8.53611	2
106	PROINCOL	45.95	1	0	6.84315	2
107	PURINCOL	29.73	5	0	6.73705	2
108	RELINLTD	72.97	5	0	8.44502	2
109	REPINCOL	48.65	5	0	7.04062	2
110	RUPINCOL	48.65	5	0	7.64712	2
111	SANINCOL	54.05	5	0	8.57267	2
112	SONINLTD	56.76	5	0	6.87788	2
113	STAINLTD	45.95	5	0	6.86802	2
114	TAKINLTD	45.95	5	0	7.19712	2
115	UNIINCOL	45.95	5	0	8.0013	2
116	BANFICOL	62.16	5	0	8.50142	3
117	BANIFCOL	48.65	5	0	8.05225	3
118	DBHFCLTD	70.27	5	0	9.38969	3
119	FIDASCOL	51.35	1	0	7.05445	3
120	FIRLILTD	40.54	5	0	8.59083	3
121	IPDBCLTD	45.95	5	0	8.21846	3
122	ISLFILTD	62.16	5	0	8.05876	3
123	LANBAFI	86.49	5	1	9.75763	3
124	MIDFILTD	59.46	5	-1	8.68618	3
125	NATHFLTD	56.76	5	0	8.71587	3
126	PHOIFILTD	59.46	5	0	8.8127	3
127	PEOLFLTD	56.76	5	0	10.0261	3
128	PRELFLTD	56.76	5	0	8.24861	3
129	PRIFILTD	81.08	5	0	10.1169	3
130	UNILCOL	43.24	5	0	8.94044	3
131	UTTFILTD	72.97	5	0	9.49927	3
132	UNICLTD	67.57	5	0	9.14052	3

| S/N | Short Name | Dependent Variable | Independent Variable MKT Variable | | | IND |
		TIC 2011	CAT	PER	PMCAP	
133	ABBLTD	54.05	5	-1	10.2138	4
134	IFIBLTD	70.27	5	0	9.76582	4
135	ISLBLTD	81.08	5	0	10.8452	4
136	PUBBLTD	67.57	5	0	10.5212	4
137	RUPBLTD	64.86	5	1	9.86616	4
138	UTTBLTD	59.46	5	0	10.0358	4
139	ICBBLTD	56.76	1	-1	8.91525	4
140	ALABLTD	59.46	5	0	9.91122	4
141	SOUBLTD	72.97	5	-1	10.1908	4
142	DHABLTD	62.16	5	0	9.68342	4
143	NCCBLTD	56.76	5	-1	9.91057	4
144	SOCBLTD	62.16	5	0	9.58288	4
145	STABLTD	56.76	5	0	9.49558	4
146	ONEBLTD	64.86	5	-1	9.68675	4
147	ASIBLTD	75.68	5	0	9.90872	4
148	EXIBLTD	56.76	5	-1	10.3204	4
149	JUMBLTD	70.27	5	-1	9.45481	4

Appendix X

Dependent, COA and IND Variables

S/N	Short Name	Dependent Variable	Independent Variable COA Variable			
		TIC2011	PASSET	PSALES	PNPAT	IND
1	AFTABAUTO	48.65	0.028139529	0.149442192	0.12683	1
2	ANWARGALV	35.14	0.006100748	0.027386596	0.01211	1
3	ATLASBANG	48.65	0.063252304	1.210806015	0.52363	1
4	AZIZPIPES	32.43	0.016363218	0.084014288	-0.0084	1
5	BDAUTOCA	32.43	0.005237662	0.013491459	0.00311	1
6	BDTHAI	51.35	0.097278282	0.093874373	0.03199	1
7	KAY&QUE	62.16	0.009836131	0.031888922	0.00431	1
8	NPOLYMAR	40.54	0.032233487	0.183833085	0.0361	1
9	QSMDRYCELL	67.57	0.078510423	0.240301646	0.08281	1
10	RANFOUNDRY	64.86	0.013638884	0.143056382	0.04564	1
11	SALAMCRST	48.65	0.247489456	0.632750523	0.45334	1
12	SINGERBD	81.08	0.132951505	1.107168799	0.70204	1
13	BANGAS	54.05	0.002724835	0.014357315	0.00509	1
14	BEACHHATCH	32.43	0.015657007	0.033016001	0.09878	1
15	MEGCONMILK	35.14	0.046671384	0.056668875	-0.1244	1
16	AMCL(PRAN)	54.05	0.04236324	0.274520016	0.07992	1
17	APEXFOODS	32.43	0.053651986	0.668876096	0.01897	1
18	SHYAMPSUG	35.14	0.062082783	0.010229159	-0.2351	1
19	MEGHNAPET	29.73	0.005698052	0	-0.0133	1
20	NTC	43.24	0.051222714	0.119647471	0.09398	1
21	RAHIMAFOOD	40.54	0.012168613	0.280166605	0.01904	1
22	ALPHATOBA	29.73	0.013383468	0	-0.0895	1
23	BOC	56.76	0.000108385	0.000777829	0.0012	1
24	EASTRNLUB	45.95	6.1581E-06	3.21121E-06	1.3E-05	1
25	JAMUNAOIL	51.35	0.539084094	0.237623463	1.78231	1
26	MPETROLEUM	59.46	0.8130246	0.211717225	1.5676	1
27	PADMAOIL	59.46	0.002005926	0.000318124	0.00154	1
28	POWERGRID	59.46	2.691486302	1.304487229	1.62442	1
29	SUMITPOWER	70.27	0.723640947	0.992101909	5.39703	1
30	TITASGAS	59.46	2.158460811	14.2961591	16.1238	1
31	JUTESPINN	35.14	0.01515499	0.182838597	0.01455	1
32	APEXWEAV	40.54	0.055207445	0.039499988	-0.3069	1
33	BEXTEX	67.57	0.689502589	0.992734114	-1.0693	1
34	TALLUSPIN	48.65	0.056523635	0.203329202	0.03181	1
35	ALLTEX	59.46	0.096906123	0.50349902	0.00865	1
36	DELTASPINN	29.73	0.074803638	0.279459576	0.07427	1
37	DULAMIACOT	45.95	0.021279097	0.081829843	-0.0266	1
38	MAKSONSPIN	67.57	0.215244381	0.363802453	0.16075	1
39	MITHUNKNIT	54.05	0.019958209	0.158737814	0.05062	1
40	MONNOFABR	32.43	0.105390935	0.084369572	-1.1059	1
41	PRIMETEX	35.14	0.128054723	0.40611268	0.1218	1
42	SAFKOSPINN	37.84	0.012855288	0.07233776	0.0343	1

S/N	Short Name	Dependent Variable TIC2011	Independent Variable COA Variable			IND
			PASSET	PSALES	PNPAT	
43	SONARGAON	51.35	0.070797066	0.163076275	0.02903	1
44	CMCKAMTEX	40.54	0.059399444	0.097650121	0.10699	1
45	DESHGLTD	37.84	0.004418413	0.054009748	0.00184	1
46	SAIHAMTEX	40.54	0.023036946	0.118934949	0.14539	1
47	SQUARETEX	56.76	0.313385049	1.958637122	1.45212	1
48	ASHRAFTEX	35.14	0.003019091	0	-0.0058	
49	TAMTEXLTD	32.43	0.165442579	0.288537568	0.03069	1
50	ACI	54.05	0.580749262	3.641257065	0.3269	1
51	ACIFORMULA	56.76	0.103277651	0.509617697	0.25799	1
52	AMBEEPHA	37.84	0.010205381	0.05662194	0.01338	1
53	BANGLAPRO	18.92	0.000486822	0.000757852	0.00216	1
54	BXSYNTH	43.24	0.111364468	0.322208863	0.19005	1
55	RECKITTBEN	45.95	0.037716972	0.442323692	0.23553	1
56	RAHCHE	37.84	0.003268096	0.034817155	0.00565	1
57	IBNSINA	70.27	0.025061378	0.366054503	0.12441	1
58	IMAMBUTTON	32.43	0.005927841	0.01941663	-0.0235	1
59	KEYACOSMET	62.16	0.102974373	0.502553762	0.47151	1
60	KOHINOOR	43.24	0.053162984	0.385940368	0.07481	1
61	LIBRAINFU	62.16	0.089890076	0.073289597	0.01237	1
62	ORIONINFU	64.86	0.026697557	0.124368205	0.05769	1
63	PHARMAID	32.43	0.832091497	1.645486833	2.10567	1
64	TBL	35.14	0.005067343	4.73629E-05	-0.0191	1
65	SPBML	37.84	0.032951471	0.17410222	0.01249	1
66	EHL	32.43	0.564998662	0.465904002	0.44082	1
67	SAMORITA	35.14	0.008298627	0.043565458	0.05058	1
68	SAPORTL	62.16	0.235099567	0.148404262	0.34228	1
69	ARAMITCEM	37.84	0.023620313	0.159040542	0.00424	1
70	CONFIDCEM	32.43	0.134912008	0.467310497	0.34826	1
71	HEIDELBCEM	78.38	0.000289395	0.00177603	0.00132	1
72	MODCEML	27.03	0.00722802	0	-0.0418	1
73	BDCOM	40.54	0.016887306	0.036019703	0.04944	1
74	INTECH	35.14	0.006605118	0.008488914	0.02857	1
75	ISNTD	54.05	0.007554256	0.010858607	0.00964	1
76	APEXTANRY	48.65	5.82813E-05	0.000524677	0.00017	1
77	BATASHOE	54.05	0.128127356	1.386388821	1.02008	1
78	SAMATALETH	32.43	0.013836166	0.005644413	-0.0023	1
79	FUWANGCER	35.14	0.04006117	0.12675522	0.11861	1
80	STANCERAM	32.43	0.008308087	0.043853962	0.00704	1
81	GQBALLPEN	43.24	0.034107532	0.045613193	0.09404	1
82	MIRACLEIND	45.95	0.025433225	0.116440822	0.008	1
83	SINOBANGLA	43.24	0.040533637	0.19134114	0.04994	1
84	SAVARREFLTD	35.14	0.001605461	0.012402468	0.00287	1
85	BSC	35.14	0.124904933	0.556030053	0.03065	1
86	AGRINCOL	62.16	0.016661997	0.032260987	0.06223	2
87	ASIINCOL	40.54	0.03085307	0.033251674	0.073	2

S/N	Short Name	Dependent Variable	Independent Variable COA Variable			
		TIC2011	PASSET	PSALES	PNPAT	IND
88	BANINCOL	59.46	0.05182971	0.078615024	0.10602	2
89	CENINCOL	37.84	0.038380674	0.036496136	0.05783	2
90	CONINLTD	54.05	0.024021913	0.047618692	0.12736	2
91	ESTINCOL	45.95	0.059993573	0.067258192	0.16961	2
92	ESLINCOL	54.05	0.0475899	0.079279008	0.13383	2
93	FEDINCOL	32.43	0.035578089	0.070233607	0.11683	2
94	GLOINCOL	51.35	0.018106737	0.029274825	0.07021	2
95	GREINCOL	78.38	0.180584027	0.22521815	0.21816	2
96	KARINCOL	43.24	0.038587982	0.067170808	0.1783	2
97	MERINCOL	43.24	0.031748451	0.038136207	0.04917	2
98	NORINCOL	54.05	0.029149171	0.047524707	0.13776	2
99	PARINCOL	43.24	0.011774687	0.014327556	0.03524	2
100	PEOINCOL	48.65	0.048140943	0.06576764	0.03646	2
101	PHOINCOL	64.86	0.040714626	0.088676491	0.08958	2
102	PIOINCOL	59.46	0.054970882	0.185806877	0.21716	2
103	PRAINLTD	54.05	0.125042736	0.121837568	0.15692	2
104	PRIINCOL	64.86	0.028014279	0.045651287	0.04546	2
105	PRIINLTD	59.46	0.179365152	0.491214575	3.6066	2
106	PROINCOL	45.95	0.016335678	0.044884157	0.07122	2
107	PURINCOL	29.73	0.013703899	0.012527792	0.0192	2
108	RELINLTD	72.97	0.16367906	0.265428999	0.38712	2
109	REPINCOL	48.65	0.017501628	0.042878811	0.06181	2
110	RUPINCOL	48.65	0.047827879	0.159776089	0.16963	2
111	SANINCOL	54.05	0.326475782	0.685616948	1.04831	2
112	SONINLTD	56.76	0.017981085	0.045979892	0.07896	2
113	STAINLTD	45.95	0.015884277	0.04053686	0.05954	2
114	TAKINLTD	45.95	0.018833414	0.051702716	0.1004	2
115	UNIINCOL	45.95	0.034270058	0.042157108	0.04753	2
116	BANFICOL	62.16	0.204504144	0.110561045	0.00086	3
117	BANIFCOL	48.65	0.275358069	0.2256376	0.02637	3
118	DBHFCLTD	70.27	0.885093977	0.639151991	0.88207	3
119	FIDASCOL	51.35	0.096139867	0.08804608	0.01382	3
120	FIRLILTD	40.54	0.118421807	0.078679753	0.14459	3
121	IPDBCLTD	45.95	0.244247895	0.145399394	0.1962	3
122	ISLFILTD	62.16	0.17727727	0.130146919	0.0485	3
123	LANBAFI	86.49	0.808489136	0.711214616	1.50927	3
124	MIDFILTD	59.46	0.247085392	0.163713265	0.11662	3
125	NATHFLTD	56.76	0.183825325	0.157383492	0.20426	3
126	PHOIFILTD	59.46	0.436963203	0.335681074	0.47364	3
127	PEOLFLTD	56.76	0.56407349	0.414362976	0.92284	3
128	PRELFLTD	56.76	0.237308255	0.139125575	0.12707	3
129	PRIFILTD	81.08	0.546082155	0.468139192	1.35774	3
130	UNILCOL	43.24	0.372259877	0.259908777	0.37481	3
131	UTTFILTD	72.97	0.60394611	0.52322981	1.42529	3
132	UNICLTD	67.57	5.525862633	3.791267803	2.33311	3

S/N	Short Name	Dependent Variable TIC2011	Independent Variable COA Variable			
			PASSET	PSALES	PNPAT	IND
133	ABBLTD	54.05	3.316206043	2.179435722	1.46136	4
134	IFIBLTD	70.27	3.316206043	2.179435722	1.46136	4
135	ISLBLTD	81.08	14.06639775	8.034198056	8.12487	4
136	PUBBLTD	67.57	5.682227794	3.19958178	3.98079	4
137	RUPBLTD	64.86	5.232287648	2.598963765	1.91731	4
138	UTTBLTD	59.46	3.515690322	2.224610158	2.90755	4
139	ICBBLTD	56.76	0.650807207	0.188598913	-3.1556	4
140	ALABLTD	59.46	3.857056486	2.36337971	3.86295	4
141	SOUBLTD	72.97	5.710671914	4.156740783	3.35949	4
142	DHABLTD	62.16	3.794524393	2.923475505	3.94007	4
143	NCCBLTD	56.76	3.745629147	2.942086796	3.9301	4
144	SOCBLTD	62.16	3.033158514	1.811733347	1.81391	4
145	STABLTD	56.76	2.707718576	2.102262403	2.27781	4
146	ONEBLTD	64.86	2.443558629	1.914470867	2.23433	4
147	ASIBLTD	75.68	4.267996115	3.21448865	3.58976	4
148	EXIBLTD	56.76	4.685835106	3.327361467	3.54489	4
149	JUMBLTD	70.27	3.145273478	2.407110779	2.33699	4

Appendix XI

Perception of Stakeholders about IC Disclosure (n=265)

Respondents' Opinion / Intellectual Capital Items	Opinion on Likert Scale (%)				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Disclosure of the following HUMAN CAPITAL items in CAR is necessary					
Know-how and work-related competencies	39.25	45.28	14.34	0.00	1.13
Vocational qualifications	26.04	52.45	16.98	3.40	1.13
Career and Development	36.60	50.19	9.81	2.26	1.13
Training Programs	52.08	44.53	2.26	0.00	1.13
Equity Issue (Race, Gender and Religion)	19.25	51.70	17.74	7.92	3.40
Equity Issue (Disability)	12.83	53.21	24.91	7.92	1.13
Employees being thanked and Featured	28.30	55.47	13.96	2.26	0.00
Employee involvement in the community	15.09	69.43	12.08	2.26	1.13
Employee and executive compensation	54.72	36.23	5.66	2.26	1.13
Employee benefits other than salary	62.64	30.19	3.77	2.26	1.13
Employee share and option ownership plan	41.51	39.62	14.34	3.40	1.13
Value-added statement	60.38	25.66	10.57	3.40	0.00
Employee and their numbers	51.70	38.49	7.55	2.26	0.00
Professional experience of the employee	35.85	60.38	3.77	0.00	0.00
Educational and professional qualification of member of the board and company secretary	70.19	23.02	6.79	0.00	0.00
Expert seniority	41.13	41.51	17.36	0.00	0.00
Age of employees	9.06	52.45	33.96	4.53	0.00
Entrepreneurial spirits	49.06	37.74	13.21	0.00	0.00
Employee safety and work environment	71.32	24.15	4.53	0.00	0.00
Disclosure of the Following STRUCTURAL CAPITAL items in CAR is necessary					
Management processes and corporate culture	67.92	28.68	2.26	0.00	1.13
Technology	57.74	38.11	4.15	0.00	0.00
Mgt. philosophy/ mission/ vision etc.	69.43	26.04	4.53	0.00	0.00
Future plan	74.72	23.02	2.26	0.00	0.00
Research and development	70.57	24.53	3.77	0.00	1.13

Intellectual Capital Items \ Respondents' Opinion	Opinion on Likert Scale (%)				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Intellectual property (Patent, Copyright and Trademark)	65.66	26.42	6.79	0.00	1.13
Certificate or Award received	60.38	26.79	10.57	2.26	0.00
Financial relation with other institutions	29.43	61.89	8.68	0.00	0.00
Innovative products or product focused	60.38	34.72	4.91	0.00	0.00
Disclosure of the Following RELATIONSHIP CAPITAL items in CAR is necessary					
Brands and Company logo	67.92	23.02	7.92	1.13	0.00
Customer and their satisfaction & loyalty	42.64	51.70	4.53	0.00	1.13
Company name and image	72.08	25.66	2.26	0.00	0.00
Favorable and/or unfavorable financial contacts	30.57	56.23	13.21	0.00	0.00
Business collaborations	24.91	67.55	7.55	0.00	0.00
Licensing agreement	26.04	61.51	12.45	0.00	0.00
Franchising agreements	21.89	63.77	13.58	0.75	0.00
Distribution channels marketing team	33.96	52.08	12.08	1.89	0.00
Market share or other competitive advantages	50.94	38.11	10.94	0.00	0.00

Appendix XII*

Opinions of Stakeholders about General Statements on Likert Scale

Respondent No.	Respondent Group	Opinion against General Statement Regardin IC Reporting							
		G1	G2	G3	G4	G5	G6	G7	G8
S 1	1	1	1	2	1	2	2	1	1
S 2	1	2	2	2	2	3	2	2	1
S 3	1	2	1	1	2	3	1	4	1
S 4	1	1	2	1	1	2	2	3	2
S 5	1	1	2	1	1	2	3	2	2
S 6	1	2	2	2	2	2	2	4	2
S 7	1	2	3	1	1	3	1	2	2
S 8	1	1	1	2	2	2	1	1	2
S 9	1	3	2	3	2	2	2	2	2
S 10	1	2	3	2	2	2	2	3	2
S 11	1	2	2	2	3	2	3	4	2
S 12	1	3	2	2	2	3	2	2	2
S 13	1	4	2	2	2	3	2	2	2
S 14	1	2	4	4	3	2	2	3	2
S 15	1	2	2	2	2	2	2	2	2
S 16	1	2	3	1	3	2	3	2	2
S 17	1	1	2	4	1	1	4	2	4
S 18	1	2	2	1	2	1	2	4	2
S 19	1	3	2	3	2	1	2	3	1
S 20	1	1	1	1	2	2	1	2	2
S 21	1	2	2	3	3	2	2	2	2
S 22	1	1	2	2	1	1	1	1	1
S 23	1	1	1	1	1	1	2	2	1
S 24	1	1	2	2	3	3	2	4	2
S 25	1	3	2	2	3	3	2	2	2
S 26	1	3	2	2	3	3	2	2	2
S 27	1	2	2	1	2	1	1	2	2
S 28	1	2	2	2	2	3	2	2	3
S 29	1	2	3	3	2	3	3	3	3
S 30	1	4	1	2	1	1	1	2	1
S 31	1	2	2	2	2	1	4	4	3
S 32	1	2	2	3	2	4	4	3	3
S 33	1	2	1	2	2	2	2	3	3
S 34	1	3	3	2	4	2	2	2	2
S 35	1	1	2	1	2	1	2	2	2
S 36	1	2	2	3	3	2	3	3	4
S 37	1	2	2	2	2	1	2	2	2
S 38	1	2	3	2	2	2	3	3	2
S 39	1	1	3	2	1	2	2	3	2
S 40	1	2	2	2	2	1	4	3	3
S 41	1	2	2	2	2	1	4	3	3
S 42	1	2	2	2	2	1	4	3	3
S 43	1	2	2	2	2	1	4	3	3
S 44	1	2	2	2	2	1	4	3	3
S 45	1	2	2	2	2	1	4	3	3
S 46	1	2	2	2	2	1	4	3	3
S 47	1	2	2	2	2	1	4	3	3

Respondent No.	Respondent Group	Opinion against General Statement Regarding IC Reporting							
		G1	G2	G3	G4	G5	G6	G7	G8
S 48	1	2	2	2	2	1	4	3	3
S 49	1	2	2	2	2	1	4	3	3
S 50	1	2	2	1	2	3	4	3	1
S 51	1	2	2	1	2	3	4	3	1
S 52	1	2	2	1	2	3	4	3	1
S 53	1	2	2	1	2	3	4	3	1
S 54	1	2	2	1	2	3	4	3	1
S 55	1	2	2	1	2	3	4	3	1
S 56	1	2	2	1	2	3	4	3	1
S 57	1	2	2	1	2	3	4	3	1
S 58	1	2	2	1	2	3	4	3	1
S 59	1	2	2	1	2	3	4	3	1
S 60	2	1	2	2	2	1	1	2	1
S 61	2	1	2	1	2	1	1	3	1
S 62	2	4	2	2	2	3	2	3	1
S 63	2	1	2	1	2	2	1	1	1
S 64	2	1	2	1	1	1	2	3	1
S 65	2	1	1	1	2	1	1	1	1
S 66	2	2	2	1	2	4	3	2	2
S 67	2	2	2	1	2	4	3	2	2
S 68	2	1	3	2	2	2	1	3	1
S 69	2	1	1	2	1	2	2	1	1
S 70	2	2	2	2	2	3	2	2	1
S 71	2	2	1	1	2	3	1	4	1
S 72	2	1	2	1	1	2	2	3	2
S 73	2	1	2	1	1	2	3	2	2
S 74	2	2	2	2	2	2	2	4	2
S 75	2	2	2	2	2	2	2	4	2
S 76	2	1	1	2	1	2	2	1	1
S 77	2	2	2	2	2	3	2	2	1
S 78	2	2	1	1	2	3	1	4	1
S 79	2	1	2	1	1	2	2	3	2
S 80	2	1	2	1	1	2	3	2	2
S 81	2	2	3	1	1	3	1	2	2
S 82	2	2	3	1	1	3	1	2	2
S 83	2	1	1	2	2	2	1	1	2
S 84	2	1	1	2	2	2	1	1	2
S 85	2	3	2	3	2	2	2	2	2
S 86	2	3	2	3	2	2	2	2	2
S 87	2	2	3	2	2	2	2	3	2
S 88	2	2	3	2	2	2	2	3	2
S 89	2	2	2	2	3	2	3	4	2
S 90	2	2	2	2	3	2	3	4	2
S 91	2	3	2	2	2	3	2	2	2
S 92	2	3	2	2	2	3	2	2	2
S 93	2	4	2	2	2	3	2	2	2
S 94	2	4	2	2	2	3	2	2	2
S 95	2	2	4	4	3	2	2	3	2
S 96	2	2	4	4	3	2	2	3	2
S 97	2	2	2	2	2	2	2	2	2
S 98	2	2	2	2	2	2	2	2	2

Respondent No.	Respondent Group	Opinion against General Statement Regardin						IC Reporting	
		G1	G2	G3	G4	G5	G6	G7	G8
S 99	2	2	3	1	3	2	3	2	2
S 100	2	2	3	1	3	2	3	2	2
S 101	2	1	2	4	1	1	4	2	4
S 102	2	1	2	4	1	1	4	2	4
S 103	2	2	2	1	2	1	2	4	2
S 104	2	2	2	1	2	1	2	4	2
S 105	2	3	2	3	2	1	2	3	1
S 106	2	3	2	3	2	1	2	3	1
S 107	2	1	1	1	2	2	1	2	2
S 108	2	1	1	1	2	2	1	2	2
S 109	2	2	2	3	3	2	2	2	2
S 110	2	2	2	3	3	2	2	2	2
S 111	2	1	2	2	1	1	1	1	1
S 112	2	1	2	2	1	1	1	1	1
S 113	2	1	1	1	1	1	2	2	1
S 114	2	1	1	1	1	1	2	2	1
S 115	2	1	2	2	3	3	2	4	2
S 116	2	1	2	2	3	3	2	4	2
S 117	2	3	2	2	3	3	2	2	2
S 118	2	3	2	2	3	3	2	2	2
S 119	2	3	2	2	3	3	2	2	2
S 120	2	3	2	2	3	3	2	2	2
S 121	2	2	2	1	2	1	1	2	2
S 122	2	2	2	1	2	1	1	2	2
S 123	2	2	2	2	2	3	2	2	3
S 124	2	2	2	2	2	3	2	2	3
S 125	2	2	3	3	2	3	3	3	3
S 126	2	2	3	3	2	3	3	3	3
S 127	2	4	1	2	1	1	1	2	1
S 128	2	4	1	2	1	1	1	2	1
S 129	2	2	2	2	2	1	4	4	3
S 130	2	2	2	2	2	1	4	4	3
S 131	2	2	2	3	2	4	4	3	3
S 132	2	2	2	3	2	4	4	3	3
S 133	2	2	1	2	2	2	2	3	3
S 134	2	2	1	2	2	2	2	3	3
S 135	2	3	3	2	4	2	2	2	2
S 136	2	3	3	2	4	2	2	2	2
S 137	2	1	2	1	2	1	2	2	2
S 138	2	1	2	1	2	1	2	2	2
S 139	2	2	2	3	3	2	3	3	4
S 140	2	2	2	3	3	2	3	3	4
S 141	2	2	2	2	2	1	2	2	2
S 142	2	2	2	2	2	1	2	2	2
S 143	2	2	3	2	2	2	3	3	2
S 144	2	2	3	2	2	2	3	3	2
S 145	2	2	2	3	2	1	2	4	1
S 146	2	1	4	2	3	5	1	2	1
S 147	2	1	3	2	1	2	2	3	2
S 148	2	1	2	2	1	2	1	2	2
S 149	2	1	1	2	2	3	1	1	1

Respondent No.	Respondent Group	Opinion against General Statement Regarding IC Reporting							
		G1	G2	G3	G4	G5	G6	G7	G8
S 150	2	1	1	2	2	3	1	1	1
S 151	2	1	1	2	2	3	1	1	1
S 152	2	1	1	2	2	3	1	1	1
S 153	2	1	1	2	2	3	1	1	1
S 154	2	1	1	2	2	3	1	1	1
S 155	2	1	1	2	2	3	1	1	1
S 156	2	1	1	2	2	3	1	1	1
S 157	2	1	1	2	2	3	1	1	1
S 158	2	1	1	2	2	2	1	2	1
S 159	2	1	1	2	2	2	1	2	1
S 160	2	1	1	2	2	2	1	2	1
S 161	2	1	1	2	2	2	1	2	1
S 162	2	1	1	2	2	2	1	2	1
S 163	2	1	1	2	2	2	1	2	1
S 164	2	1	1	2	2	2	1	2	1
S 165	2	1	1	2	2	2	1	2	1
S 166	2	1	1	2	2	2	1	2	1
S 167	2	1	1	2	2	2	1	2	1
S 168	2	1	1	1	2	2	1	1	1
S 169	2	1	1	1	2	2	1	1	1
S 170	2	1	1	1	2	2	1	1	1
S 171	2	1	1	1	2	2	1	1	1
S 172	2	1	1	1	2	2	1	1	1
S 173	2	1	1	1	2	2	1	1	1
S 174	2	1	1	1	2	2	1	1	1
S 175	2	1	1	1	2	2	1	1	1
S 176	2	1	1	1	2	2	1	1	1
S 177	2	1	1	1	2	2	1	1	1
S 178	2	1	1	1	2	2	1	1	1
S 179	2	3	2	2	2	2	1	2	1
S 180	2	3	2	2	2	2	1	2	1
S 181	2	3	2	2	2	2	1	2	1
S 182	2	3	2	2	2	2	1	2	1
S 183	2	3	2	2	2	2	1	2	1
S 184	2	3	2	2	2	2	1	2	1
S 185	2	3	2	2	2	2	1	2	1
S 186	2	3	2	2	2	2	1	2	1
S 187	2	3	2	2	2	2	1	2	1
S 188	2	3	2	2	2	2	1	2	1
S 189	2	1	1	1	2	4	1	2	1
S 190	2	1	1	1	2	4	1	2	1
S 191	2	1	1	1	2	4	1	2	1
S 192	2	1	1	1	2	4	1	2	1
S 193	2	1	1	1	2	4	1	2	1
S 194	2	1	1	1	2	4	1	2	1
S 195	2	1	1	1	2	4	1	2	1
S 196	3	1	2	1	2	1	1	3	1
S 197	3	1	2	2	2	2	1	2	1
S 198	3	1	3	1	2	1	3	2	1
S 199	3	1	2	1	1	2	2	2	1
S 200	3	1	2	2	2	1	1	2	1

Respondent No.	Respondent Group	Opinion against General Statement Regarding IC Reporting							
		G1	G2	G3	G4	G5	G6	G7	G8
S 201	3	1	3	1	2	1	3	2	1
S 202	3	1	2	1	1	2	2	2	1
S 203	3	1	2	1	1	2	1	1	1
S 204	3	1	2	1	1	2	1	1	1
S 205	3	1	2	1	1	2	1	1	1
S 206	3	2	2	1	1	2	1	1	1
S 207	3	1	2	2	1	3	4	3	1
S 208	3	1	2	2	1	3	4	3	1
S 209	3	1	1	1	1	3	4	2	1
S 210	3	1	2	2	1	3	3	2	1
S 211	3	1	2	2	1	3	4	2	1
S 212	3	2	2	2	2	3	2	2	2
S 213	3	1	1	1	1	2	3	2	1
S 214	3	1	1	1	1	2	3	2	1
S 215	3	1	1	1	1	2	3	2	1
S 216	3	1	1	1	1	2	3	2	1
S 217	3	1	2	2	2	1	1	2	1
S 218	3	1	2	2	1	2	1	2	2
S 219	3	1	2	2	1	2	1	2	2
S 220	3	1	2	2	1	2	1	2	2
S 221	3	1	2	2	1	2	1	2	2
S 222	3	1	2	2	2	1	1	2	1
S 223	3	2	3	3	2	1	1	2	2
S 224	3	4	2	2	2	3	2	3	1
S 225	3	1	2	1	2	2	1	1	1
S 226	3	1	2	1	1	1	2	3	1
S 227	3	1	1	1	2	1	1	1	1
S 228	3	1	3	2	2	2	1	3	1
S 229	3	2	2	3	2	1	2	4	1
S 230	3	1	4	2	3	5	1	2	1
S 231	3	1	2	2	1	2	1	2	2
S 232	3	1	1	2	2	3	1	1	1
S 233	3	1	1	2	2	3	1	1	1
S 234	3	1	1	2	2	3	1	1	1
S 235	3	1	1	2	2	3	1	1	1
S 236	3	1	1	2	2	3	1	1	1
S 237	3	1	1	2	2	3	1	1	1
S 238	3	1	1	2	2	3	1	1	1
S 239	3	1	1	2	2	3	1	1	1
S 240	3	1	1	2	2	3	1	1	1
S 241	3	1	3	2	2	2	2	1	1
S 242	3	1	2	2	2	1	1	2	1
S 243	3	1	2	2	1	2	1	2	2
S 244	3	1	2	2	1	2	1	2	2
S 245	3	1	2	2	1	2	1	2	2
S 246	3	1	2	2	1	2	1	2	2
S 247	3	2	3	3	2	1	1	2	2
S 248	3	4	2	2	2	3	2	3	1
S 249	3	1	2	1	2	2	1	1	1
S 250	3	1	2	1	1	1	2	3	1
S 251	3	1	1	1	2	1	1	1	1

Respondent	Respondent	Opinion against General Statement Regardin IC Reporting							
No.	Group	G1	G2	G3	G4	G5	G6	G7	G8
S 252	3	1	3	2	2	2	1	3	1
S 253	3	2	2	3	2	1	2	4	1
S 254	3	1	4	2	3	5	1	2	1
S 255	3	1	2	2	1	2	1	2	2
S 256	3	1	1	2	2	3	1	1	1
S 257	3	1	1	2	2	3	1	1	1
S 258	3	1	1	2	2	3	1	1	1
S 259	3	1	1	2	2	3	1	1	1
S 260	3	1	1	2	2	3	1	1	1
S 261	3	1	1	2	2	3	1	1	1
S 262	3	1	1	2	2	3	1	1	1
S 263	3	1	1	2	2	3	1	1	1
S 264	3	1	1	2	2	3	1	1	1
S 265	3	1	3	2	2	2	2	1	1

*Note:

Symbol	Explanation
Respondent No.	After getting feedback, all respondents have been coded
Respondent Grou	'1' for Supplier of Information; '2' for Direct User of Information '3' 'or Indirect User o Information
G1	Corporate annual report (CAR) is the most suitable way of disseminating com an in'ormation 'or the users
G2	Investors use information provided in CAR of a company before taking investment decision
G3	Lenders use information provided in CAR of a company before taking lendin decision
G4	Regulators and others use information provided in CAR of a company be'ore takin˛ an˛ decision
G5	Intellectual capital (IC) is the most important factor for business success
G6	Regulators should make it mandatory to disclose IC items in CAR
G7	Disclosure of IC information in CAR is cost-effective
G8	Disclosure of IC will add value for the company and the users of information
G9	Corporate annual report (CAR) is the most suitable way of disseminating com an in'ormation 'or the users

Source: Survey

Appendix XIII*

Opinion of the Stakeholders against HC Reporting in CAR

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR								
		HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HC9
S 1	1	1	2	3	2	4	2	2	2	2
S 2	1	1	1	1	2	4	2	2	2	2
S 3	1	2	2	2	2	2	4	4	4	4
S 4	1	2	3	1	1	3	4	2	1	2
S 5	1	2	2	1	2	2	3	1	2	2
S 6	1	2	2	2	2	1	2	2	2	1
S 7	1	3	2	1	1	1	3	3	2	3
S 8	1	2	2	2	1	4	3	2	2	2
S 9	1	2	1	2	2	2	1	3	3	2
S 10	1	2	2	3	2	2	3	3	2	3
S 11	1	2	2	2	2	2	3	2	2	2
S 12	1	2	3	1	1	2	3	2	2	1
S 13	1	3	4	3	2	2	2	2	1	2
S 14	1	1	1	2	2	5	4	3	1	1
S 15	1	2	2	2	2	2	2	2	2	2
S 16	1	2	3	2	2	2	3	2	3	2
S 17	1	2	2	2	2	2	2	2	2	2
S 18	1	2	2	2	2	2	2	2	2	2
S 19	1	3	2	1	1	1	1	3	2	2
S 20	1	1	4	4	3	2	2	2	1	2
S 21	1	2	2	2	2	2	2	2	2	2
S 22	1	1	3	3	1	3	2	3	2	1
S 23	1	1	2	2	1	2	2	1	1	1
S 24	1	2	2	2	1	2	2	2	1	2
S 25	1	2	3	2	2	4	4	3	4	2
S 26	1	2	3	2	2	2	4	2	2	4
S 27	1	1	2	1	1	1	1	1	1	1
S 28	1	1	3	2	2	2	1	3	2	2
S 29	1	3	3	2	2	2	3	3	3	2
S 30	1	1	1	1	1	1	1	1	1	1
S 31	1	2	2	1	1	2	3	2	2	2
S 32	1	3	2	2	2	4	4	2	2	2
S 33	1	1	2	2	2	4	4	3	2	3
S 34	1	2	2	2	2	2	2	2	2	1
S 35	1	2	2	1	1	1	2	3	2	2
S 36	1	2	4	4	3	4	3	4	3	3
S 37	1	2	2	2	2	2	2	2	2	1
S 38	1	2	2	2	2	2	2	2	2	2
S 39	1	3	2	2	1	2	2	1	2	3
S 40	1	3	2	2	1	3	3	1	2	1
S 41	1	3	2	2	1	3	3	1	2	1
S 42	1	3	2	2	1	3	3	1	2	1
S 43	1	3	2	2	1	3	3	1	2	1
S 44	1	3	2	2	1	3	3	1	2	1
S 45	1	3	2	2	1	3	3	1	2	1
S 46	1	3	2	2	1	3	3	1	2	1
S 47	1	3	2	2	1	3	3	1	2	1

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR								
		HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HC9
S 48	1	3	2	2	1	3	3	1	2	1
S 49	1	3	2	2	1	3	3	1	2	1
S 50	1	3	3	3	1	3	3	1	3	1
S 51	1	3	3	3	1	3	3	1	3	1
S 52	1	3	3	3	1	3	3	1	3	1
S 53	1	3	3	3	1	3	3	1	3	1
S 54	1	3	3	3	1	3	3	1	3	1
S 55	1	3	3	3	1	3	3	1	3	1
S 56	1	3	3	3	1	3	3	1	3	1
S 57	1	3	3	3	1	3	3	1	3	1
S 58	1	3	3	3	1	3	3	1	3	1
S 59	1	3	3	3	1	3	3	1	3	1
S 60	2	1	1	1	1	5	2	2	2	1
S 61	2	2	3	2	2	3	3	2	2	2
S 62	2	2	3	3	2	3	3	2	2	2
S 63	2	1	2	1	1	3	3	1	2	1
S 64	2	2	2	1	2	3	1	2	2	2
S 65	2	2	2	2	1	1	1	1	1	1
S 66	2	1	2	2	2	1	2	1	2	2
S 67	2	1	2	2	2	1	2	1	2	2
S 68	2	2	3	2	2	3	3	2	3	2
S 69	2	1	2	3	2	4	2	2	2	2
S 70	2	1	1	1	2	4	2	2	2	2
S 71	2	2	2	2	2	2	4	4	4	4
S 72	2	2	3	1	1	3	4	2	1	2
S 73	2	2	2	1	2	2	3	1	2	2
S 74	2	2	2	2	2	1	2	2	2	1
S 75	2	2	2	2	2	1	2	2	2	1
S 76	2	1	2	3	2	4	2	2	2	2
S 77	2	1	1	1	2	4	2	2	2	2
S 78	2	2	2	2	2	2	4	4	4	4
S 79	2	2	3	1	1	3	4	2	1	2
S 80	2	2	2	1	2	2	3	1	2	2
S 81	2	3	2	1	1	1	3	3	2	3
S 82	2	3	2	1	1	1	3	3	2	3
S 83	2	2	2	2	1	4	3	2	2	2
S 84	2	2	2	2	1	4	3	2	2	2
S 85	2	2	1	2	2	2	1	3	3	2
S 86	2	2	1	2	2	2	1	3	3	2
S 87	2	2	2	3	2	2	3	3	2	3
S 88	2	2	2	3	2	2	3	3	2	3
S 89	2	2	2	2	2	2	3	2	2	2
S 90	2	2	2	2	2	2	3	2	2	2
S 91	2	2	3	1	1	2	3	2	2	1
S 92	2	2	3	1	1	2	3	2	2	1
S 93	2	3	4	3	2	2	2	2	1	2
S 94	2	3	4	3	2	2	2	2	1	2
S 95	2	1	1	2	2	5	4	3	1	1
S 96	2	1	1	2	2	5	4	3	1	1
S 97	2	2	2	2	2	2	2	2	2	2
S 98	2	2	2	2	2	2	2	2	2	2

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR								
		HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HC9
S 99	2	2	3	2	2	2	3	2	3	2
S 100	2	2	3	2	2	2	3	2	3	2
S 101	2	2	2	2	2	2	2	2	2	2
S 102	2	2	2	2	2	2	2	2	2	2
S 103	2	2	2	2	2	2	2	2	2	2
S 104	2	2	2	2	2	2	2	2	2	2
S 105	2	3	2	1	1	1	1	3	2	2
S 106	2	3	2	1	1	1	1	3	2	2
S 107	2	1	4	4	3	2	2	2	1	2
S 108	2	1	4	4	3	2	2	2	1	2
S 109	2	2	2	2	2	2	2	2	2	2
S 110	2	2	2	2	2	2	2	2	2	2
S 111	2	1	3	3	1	3	2	3	2	1
S 112	2	1	3	3	1	3	2	3	2	1
S 113	2	1	2	2	1	2	2	1	1	1
S 114	2	1	2	2	1	2	2	1	1	1
S 115	2	2	2	2	1	2	2	2	1	2
S 116	2	2	2	2	1	2	2	2	1	2
S 117	2	2	3	2	2	4	4	3	4	2
S 118	2	2	3	2	2	4	4	3	4	2
S 119	2	2	3	2	2	2	4	2	2	4
S 120	2	2	3	2	2	2	4	2	2	4
S 121	2	1	2	1	1	1	1	1	1	1
S 122	2	1	2	1	1	1	1	1	1	1
S 123	2	1	3	2	2	2	1	3	2	2
S 124	2	1	3	2	2	2	1	3	2	2
S 125	2	3	3	2	2	2	3	3	3	2
S 126	2	3	3	2	2	2	3	3	3	2
S 127	2	1	1	1	1	1	1	1	1	1
S 128	2	1	1	1	1	1	1	1	1	1
S 129	2	2	2	1	1	2	3	2	2	2
S 130	2	2	2	1	1	2	3	2	2	2
S 131	2	3	2	2	2	4	4	2	2	2
S 132	2	3	2	2	2	4	4	2	2	2
S 133	2	1	2	2	2	4	4	3	2	3
S 134	2	1	2	2	2	4	4	3	2	3
S 135	2	2	2	2	2	2	2	2	2	1
S 136	2	2	2	2	2	2	2	2	2	1
S 137	2	2	2	1	1	1	2	3	2	2
S 138	2	2	2	1	1	1	2	3	2	2
S 139	2	2	4	4	3	4	3	4	3	3
S 140	2	2	4	4	3	4	3	4	3	3
S 141	2	2	2	2	2	2	2	2	2	1
S 142	2	2	2	2	2	2	2	2	2	1
S 143	2	2	2	2	2	2	2	2	2	2
S 144	2	2	2	2	2	2	2	2	2	2
S 145	2	1	2	2	1	3	2	2	2	1
S 146	2	5	5	5	5	5	5	3	5	5
S 147	2	3	2	2	1	2	2	1	2	3
S 148	2	2	2	2	2	2	2	1	1	1
S 149	2	1	1	1	1	2	2	2	2	1

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR								
		HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HC9
S 150	2	1	1	1	1	2	2	2	2	1
S 151	2	1	1	1	1	2	2	2	2	1
S 152	2	1	1	1	1	2	2	2	2	1
S 153	2	1	1	1	1	2	2	2	2	1
S 154	2	1	1	1	1	2	2	2	2	1
S 155	2	1	1	1	1	2	2	2	2	1
S 156	2	1	1	1	1	2	2	2	2	1
S 157	2	1	1	1	1	2	2	2	2	1
S 158	2	1	1	2	1	1	2	2	2	1
S 159	2	1	1	2	1	1	2	2	2	1
S 160	2	1	1	2	1	1	2	2	2	1
S 161	2	1	1	2	1	1	2	2	2	1
S 162	2	1	1	2	1	1	2	2	2	1
S 163	2	1	1	2	1	1	2	2	2	1
S 164	2	1	1	2	1	1	2	2	2	1
S 165	2	1	1	2	1	1	2	2	2	1
S 166	2	1	1	2	1	1	2	2	2	1
S 167	2	1	1	2	1	1	2	2	2	1
S 168	2	1	1	1	1	1	1	1	2	1
S 169	2	1	1	1	1	1	1	1	2	1
S 170	2	1	1	1	1	1	1	1	2	1
S 171	2	1	1	1	1	1	1	1	2	1
S 172	2	1	1	1	1	1	1	1	2	1
S 173	2	1	1	1	1	1	1	1	2	1
S 174	2	1	1	1	1	1	1	1	2	1
S 175	2	1	1	1	1	1	1	1	2	1
S 176	2	1	1	1	1	1	1	1	2	1
S 177	2	1	1	1	1	1	1	1	2	1
S 178	2	1	1	1	1	1	1	1	2	1
S 179	2	2	2	2	2	2	2	2	2	2
S 180	2	2	2	2	2	2	2	2	2	2
S 181	2	2	2	2	2	2	2	2	2	2
S 182	2	2	2	2	2	2	2	2	2	2
S 183	2	2	2	2	2	2	2	2	2	2
S 184	2	2	2	2	2	2	2	2	2	2
S 185	2	2	2	2	2	2	2	2	2	2
S 186	2	2	2	2	2	2	2	2	2	2
S 187	2	2	2	2	2	2	2	2	2	2
S 188	2	2	2	2	2	2	2	2	2	2
S 189	2	2	2	2	2	2	2	2	2	1
S 190	2	2	2	2	2	2	2	2	2	1
S 191	2	2	2	2	2	2	2	2	2	1
S 192	2	2	2	2	2	2	2	2	2	1
S 193	2	2	2	2	2	2	2	2	2	1
S 194	2	2	2	2	2	2	2	2	2	1
S 195	2	2	2	2	2	2	2	2	2	1
S 196	3	2	3	2	2	3	3	2	2	2
S 197	3	1	1	1	1	2	2	1	2	1
S 198	3	1	1	1	1	1	1	1	1	1
S 199	3	1	1	1	1	2	2	1	2	1
S 200	3	1	1	1	1	5	2	2	2	1

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR								
		HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HC9
S 201	3	1	1	1	1	1	1	1	1	1
S 202	3	1	1	1	1	2	2	1	2	1
S 203	3	1	2	1	1	1	2	1	2	1
S 204	3	1	2	1	1	1	2	1	2	1
S 205	3	1	2	1	1	1	2	1	2	1
S 206	3	3	3	3	1	2	2	2	2	1
S 207	3	2	2	2	2	2	2	2	2	2
S 208	3	2	2	2	2	2	2	2	2	2
S 209	3	1	1	1	1	2	2	2	2	1
S 210	3	2	2	1	1	2	2	1	2	1
S 211	3	2	2	2	1	2	2	2	2	1
S 212	3	2	2	2	2	2	3	3	3	3
S 213	3	1	2	1	1	3	3	2	3	1
S 214	3	1	2	1	1	3	3	2	3	1
S 215	3	1	2	1	1	3	3	2	3	1
S 216	3	1	2	1	1	3	3	2	3	1
S 217	3	1	2	1	1	1	2	2	2	1
S 218	3	2	2	2	2	2	2	1	1	1
S 219	3	2	2	2	2	2	2	1	1	1
S 220	3	2	2	2	2	2	2	1	1	1
S 221	3	2	2	2	2	2	2	1	1	1
S 222	3	1	1	1	1	5	2	2	2	1
S 223	3	2	2	1	2	2	2	2	2	2
S 224	3	2	3	3	2	3	3	2	2	2
S 225	3	1	2	1	1	3	3	1	2	1
S 226	3	2	2	1	2	3	1	2	2	2
S 227	3	2	2	2	1	1	1	1	1	1
S 228	3	2	3	2	2	3	3	2	3	2
S 229	3	1	2	2	1	3	2	2	2	1
S 230	3	5	5	5	5	5	5	3	5	5
S 231	3	2	2	2	2	2	2	1	1	1
S 232	3	1	1	1	1	2	2	2	2	1
S 233	3	1	1	1	1	2	2	2	2	1
S 234	3	1	1	1	1	2	2	2	2	1
S 235	3	1	1	1	1	2	2	2	2	1
S 236	3	1	1	1	1	2	2	2	2	1
S 237	3	1	1	1	1	2	2	2	2	1
S 238	3	1	1	1	1	2	2	2	2	1
S 239	3	1	1	1	1	2	2	2	2	1
S 240	3	1	1	1	1	2	2	2	2	1
S 241	3	2	3	1	1	2	2	1	3	1
S 242	3	1	2	1	1	1	2	2	2	1
S 243	3	2	2	2	2	2	2	1	1	1
S 244	3	2	2	2	2	2	2	1	1	1
S 245	3	2	2	2	2	2	2	1	1	1
S 246	3	2	2	2	2	2	2	1	1	1
S 247	3	2	2	1	2	2	2	2	2	2
S 248	3	2	3	3	2	3	3	2	2	2
S 249	3	1	2	1	1	3	3	1	2	1
S 250	3	2	2	1	2	3	1	2	2	2
S 251	3	2	2	2	1	1	1	1	1	1

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR								
		HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HC9
S 252	3	2	3	2	2	3	3	2	3	2
S 253	3	1	2	2	1	3	2	2	2	1
S 254	3	5	5	5	5	5	5	3	5	5
S 255	3	2	2	2	2	2	2	1	1	1
S 256	3	1	1	1	1	2	2	2	2	1
S 257	3	1	1	1	1	2	2	2	2	1
S 258	3	1	1	1	1	2	2	2	2	1
S 259	3	1	1	1	1	2	2	2	2	1
S 260	3	1	1	1	1	2	2	2	2	1
S 261	3	1	1	1	1	2	2	2	2	1
S 262	3	1	1	1	1	2	2	2	2	1
S 263	3	1	1	1	1	2	2	2	2	1
S 264	3	1	1	1	1	2	2	2	2	1
S 265	3	2	3	1	1	2	2	1	3	1

Cont…..

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR									
		HC10	HC11	HC12	HC13	HC14	HC15	HC16	HC17	HC18	HC19
S 1	1	2	2	2	2	2	1	1	1	2	2
S 2	1	2	3	4	1	1	1	1	3	1	2
S 3	1	4	1	1	1	1	1	1	4	1	1
S 4	1	2	4	2	2	2	1	1	1	2	2
S 5	1	2	2	1	2	1	2	2	1	2	1
S 6	1	2	1	1	1	2	2	2	2	2	2
S 7	1	1	1	2	2	1	1	1	1	1	1
S 8	1	2	1	2	2	2	2	2	2	2	1
S 9	1	2	1	2	3	3	3	3	3	3	3
S 10	1	2	4	3	4	2	2	2	3	3	3
S 11	1	2	2	2	2	2	2	2	2	2	2
S 12	1	1	2	1	2	1	1	1	2	1	1
S 13	1	2	3	3	4	1	1	2	2	2	2
S 14	1	1	1	3	2	2	1	1	2	1	1
S 15	1	2	3	2	2	2	1	1	2	2	1
S 16	1	2	2	2	2	2	2	2	2	3	3
S 17	1	2	2	2	2	2	2	2	2	2	2
S 18	1	2	2	2	2	2	1	2	1	2	1
S 19	1	1	2	1	1	2	2	1	1	2	2
S 20	1	2	2	1	2	3	2	3	3	3	2
S 21	1	2	2	3	3	2	3	3	3	3	2
S 22	1	1	1	1	1	1	1	2	2	2	1
S 23	1	1	3	2	2	2	1	2	2	1	1
S 24	1	1	3	3	2	2	2	2	3	3	1
S 25	1	2	2	2	2	2	3	2	3	2	2
S 26	1	4	3	4	2	2	2	2	3	3	2
S 27	1	1	1	1	2	1	1	1	1	1	1
S 28	1	3	4	4	2	1	1	2	2	2	3
S 29	1	3	3	3	3	2	2	2	3	2	2
S 30	1	1	5	1	1	2	1	2	2	2	2
S 31	1	1	1	2	2	2	2	2	2	2	1
S 32	1	2	3	3	2	2	2	2	3	3	2
S 33	1	3	2	2	3	2	1	1	3	2	2

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR									
		HC10	HC11	HC12	HC13	HC14	HC15	HC16	HC17	HC18	HC19
S 34	1	1	1	1	1	1	1	1	2	2	2
S 35	1	1	1	2	2	1	1	3	3	2	1
S 36	1	1	1	1	2	2	3	1	3	1	1
S 37	1	1	1	1	2	1	1	1	2	2	1
S 38	1	2	2	3	2	2	2	2	2	2	1
S 39	1	2	1	2	1	2	1	2	3	3	2
S 40	1	1	2	1	1	2	1	3	3	1	1
S 41	1	1	2	1	1	2	1	3	3	1	1
S 42	1	1	2	1	1	2	1	3	3	1	1
S 43	1	1	2	1	1	2	1	3	3	1	1
S 44	1	1	2	1	1	2	1	3	3	1	1
S 45	1	1	2	1	1	2	1	3	3	1	1
S 46	1	1	2	1	1	2	1	3	3	1	1
S 47	1	1	2	1	1	2	1	3	3	1	1
S 48	1	1	2	1	1	2	1	3	3	1	1
S 49	1	1	2	1	1	2	1	3	3	1	1
S 50	1	1	1	1	1	2	1	3	3	1	1
S 51	1	1	1	1	1	2	1	3	3	1	1
S 52	1	1	1	1	1	2	1	3	3	1	1
S 53	1	1	1	1	1	2	1	3	3	1	1
S 54	1	1	1	1	1	2	1	3	3	1	1
S 55	1	1	1	1	1	2	1	3	3	1	1
S 56	1	1	1	1	1	2	1	3	3	1	1
S 57	1	1	1	1	1	2	1	3	3	1	1
S 58	1	1	1	1	1	2	1	3	3	1	1
S 59	1	1	1	1	1	2	1	3	3	1	1
S 60	2	1	1	1	1	1	1	1	1	1	1
S 61	2	2	2	2	2	1	1	1	4	2	1
S 62	2	1	1	2	2	2	1	1	3	2	1
S 63	2	1	1	1	1	1	3	1	4	3	1
S 64	2	1	3	3	2	1	1	1	2	2	2
S 65	2	1	2	2	1	2	2	1	3	2	1
S 66	2	2	1	2	3	2	2	1	2	2	1
S 67	2	2	1	2	3	2	2	1	2	2	1
S 68	2	1	1	2	3	2	2	3	4	3	2
S 69	2	2	2	2	2	2	1	1	1	2	2
S 70	2	2	3	4	1	1	1	1	3	1	2
S 71	2	4	1	1	1	1	1	1	4	1	1
S 72	2	2	4	2	2	2	1	1	1	2	2
S 73	2	2	2	1	2	1	2	2	1	2	1
S 74	2	2	1	1	1	2	2	2	2	2	2
S 75	2	2	1	1	1	2	2	2	2	2	2
S 76	2	2	2	2	2	2	1	1	1	2	2
S 77	2	2	3	4	1	1	1	1	3	1	2
S 78	2	4	1	1	1	1	1	1	4	1	1
S 79	2	2	4	2	2	2	1	1	1	2	2
S 80	2	2	2	1	2	1	2	2	1	2	1
S 81	2	1	1	2	2	1	1	1	1	1	1
S 82	2	1	1	2	2	1	1	1	1	1	1
S 83	2	2	1	2	2	2	2	2	2	2	1
S 84	2	2	1	2	2	2	2	2	2	2	1

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR									
		HC10	HC11	HC12	HC13	HC14	HC15	HC16	HC17	HC18	HC19
S 85	2	2	1	2	3	3	3	3	3	3	3
S 86	2	2	1	2	3	3	3	3	3	3	3
S 87	2	2	4	3	4	2	2	2	3	3	3
S 88	2	2	4	3	4	2	2	2	3	3	3
S 89	2	2	2	2	2	2	2	2	2	2	2
S 90	2	2	2	2	2	2	2	2	2	2	2
S 91	2	1	2	1	2	1	1	1	2	1	1
S 92	2	1	2	1	2	1	1	1	2	1	1
S 93	2	2	3	3	4	1	1	2	2	2	2
S 94	2	2	3	3	4	1	1	2	2	2	2
S 95	2	1	1	3	2	2	1	1	2	1	1
S 96	2	1	1	3	2	2	1	1	2	1	1
S 97	2	2	3	2	2	2	1	1	2	2	1
S 98	2	2	3	2	2	2	1	1	2	2	1
S 99	2	2	2	2	2	2	2	2	2	3	3
S 100	2	2	2	2	2	2	2	2	2	3	3
S 101	2	2	2	2	2	2	2	2	2	2	2
S 102	2	2	2	2	2	2	2	2	2	2	2
S 103	2	2	2	2	2	2	1	2	1	2	1
S 104	2	2	2	2	2	2	1	2	1	2	1
S 105	2	1	2	1	1	2	2	1	1	2	2
S 106	2	1	2	1	1	2	2	1	1	2	2
S 107	2	2	2	1	2	3	2	3	3	3	2
S 108	2	2	2	1	2	3	2	3	3	3	2
S 109	2	2	2	3	3	2	3	3	3	3	2
S 110	2	2	2	3	3	2	3	3	3	3	2
S 111	2	1	1	1	1	1	1	2	2	2	1
S 112	2	1	1	1	1	1	1	2	2	2	1
S 113	2	1	3	2	2	2	1	2	2	1	1
S 114	2	1	3	2	2	2	1	2	2	1	1
S 115	2	1	3	3	2	2	2	2	3	3	1
S 116	2	1	3	3	2	2	2	2	3	3	1
S 117	2	2	2	2	2	2	3	2	3	2	2
S 118	2	2	2	2	2	2	3	2	3	2	2
S 119	2	4	3	4	2	2	2	2	3	3	2
S 120	2	4	3	4	2	2	2	2	3	3	2
S 121	2	1	1	1	2	1	1	1	1	1	1
S 122	2	1	1	1	2	1	1	1	1	1	1
S 123	2	3	4	4	2	1	1	2	2	2	3
S 124	2	3	4	4	2	1	1	2	2	2	3
S 125	2	3	3	3	3	2	2	2	3	2	2
S 126	2	3	3	3	3	2	2	2	3	2	2
S 127	2	1	5	1	1	2	1	2	2	2	2
S 128	2	1	5	1	1	2	1	2	2	2	2
S 129	2	1	1	2	2	2	2	2	2	2	1
S 130	2	1	1	2	2	2	2	2	2	2	1
S 131	2	2	3	3	2	2	2	2	3	3	2
S 132	2	2	3	3	2	2	2	2	3	3	2
S 133	2	3	2	2	3	2	1	1	3	2	2
S 134	2	3	2	2	3	2	1	1	3	2	2
S 135	2	1	1	1	1	1	1	1	2	2	2

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR									
		HC10	HC11	HC12	HC13	HC14	HC15	HC16	HC17	HC18	HC19
S 136	2	1	1	1	1	1	1	1	2	2	2
S 137	2	1	1	2	2	1	1	3	3	2	1
S 138	2	1	1	2	2	1	1	3	3	2	1
S 139	2	1	1	1	2	2	3	1	3	1	1
S 140	2	1	1	1	2	2	3	1	3	1	1
S 141	2	1	1	1	2	1	1	1	2	2	1
S 142	2	1	1	1	2	1	1	1	2	2	1
S 143	2	2	2	3	2	2	2	2	2	2	1
S 144	2	2	2	3	2	2	2	2	2	2	1
S 145	2	2	1	1	3	2	2	2	2	1	1
S 146	2	5	2	2	2	3	3	3	3	3	1
S 147	2	2	1	2	1	2	1	2	3	3	2
S 148	2	1	1	1	2	2	1	1	2	2	1
S 149	2	1	2	1	1	2	1	1	2	1	1
S 150	2	1	2	1	1	2	1	1	2	1	1
S 151	2	1	2	1	1	2	1	1	2	1	1
S 152	2	1	2	1	1	2	1	1	2	1	1
S 153	2	1	2	1	1	2	1	1	2	1	1
S 154	2	1	2	1	1	2	1	1	2	1	1
S 155	2	1	2	1	1	2	1	1	2	1	1
S 156	2	1	2	1	1	2	1	1	2	1	1
S 157	2	1	2	1	1	2	1	1	2	1	1
S 158	2	1	3	1	1	1	1	1	2	1	1
S 159	2	1	3	1	1	1	1	1	2	1	1
S 160	2	1	3	1	1	1	1	1	2	1	1
S 161	2	1	3	1	1	1	1	1	2	1	1
S 162	2	1	3	1	1	1	1	1	2	1	1
S 163	2	1	3	1	1	1	1	1	2	1	1
S 164	2	1	3	1	1	1	1	1	2	1	1
S 165	2	1	3	1	1	1	1	1	2	1	1
S 166	2	1	3	1	1	1	1	1	2	1	1
S 167	2	1	3	1	1	1	1	1	2	1	1
S 168	2	1	2	1	1	1	1	2	2	1	1
S 169	2	1	2	1	1	1	1	2	2	1	1
S 170	2	1	2	1	1	1	1	2	2	1	1
S 171	2	1	2	1	1	1	1	2	2	1	1
S 172	2	1	2	1	1	1	1	2	2	1	1
S 173	2	1	2	1	1	1	1	2	2	1	1
S 174	2	1	2	1	1	1	1	2	2	1	1
S 175	2	1	2	1	1	1	1	2	2	1	1
S 176	2	1	2	1	1	1	1	2	2	1	1
S 177	2	1	2	1	1	1	1	2	2	1	1
S 178	2	1	2	1	1	1	1	2	2	1	1
S 179	2	2	1	1	1	1	1	2	3	1	1
S 180	2	2	1	1	1	1	1	2	3	1	1
S 181	2	2	1	1	1	1	1	2	3	1	1
S 182	2	2	1	1	1	1	1	2	3	1	1
S 183	2	2	1	1	1	1	1	2	3	1	1
S 184	2	2	1	1	1	1	1	2	3	1	1
S 185	2	2	1	1	1	1	1	2	3	1	1
S 186	2	2	1	1	1	1	1	2	3	1	1

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR									
		HC10	HC11	HC12	HC13	HC14	HC15	HC16	HC17	HC18	HC19
S 187	2	2	1	1	1	1	1	2	3	1	1
S 188	2	2	1	1	1	1	1	2	3	1	1
S 189	2	1	1	1	1	1	1	3	3	1	1
S 190	2	1	1	1	1	1	1	3	3	1	1
S 191	2	1	1	1	1	1	1	3	3	1	1
S 192	2	1	1	1	1	1	1	3	3	1	1
S 193	2	1	1	1	1	1	1	3	3	1	1
S 194	2	1	1	1	1	1	1	3	3	1	1
S 195	2	1	1	1	1	1	1	3	3	1	1
S 196	3	2	2	2	2	1	1	1	4	2	1
S 197	3	1	2	1	1	2	1	2	2	1	1
S 198	3	1	1	1	1	1	1	2	2	1	1
S 199	3	1	2	1	1	2	1	2	2	2	1
S 200	3	1	1	1	1	1	1	1	1	1	1
S 201	3	1	1	1	1	1	1	2	2	1	1
S 202	3	1	2	1	1	2	1	2	2	2	1
S 203	3	1	1	1	1	2	1	2	2	1	1
S 204	3	1	1	1	1	2	1	2	2	1	1
S 205	3	1	1	1	1	2	1	2	2	1	1
S 206	3	1	1	1	1	3	1	3	4	2	1
S 207	3	2	2	2	2	2	2	2	2	2	2
S 208	3	2	2	2	2	2	2	2	2	2	2
S 209	3	1	2	1	1	2	1	2	2	2	1
S 210	3	1	2	2	1	2	1	2	2	2	1
S 211	3	1	2	1	1	2	1	2	2	1	1
S 212	3	3	3	3	2	2	2	2	3	2	2
S 213	3	1	1	1	1	1	1	2	2	1	1
S 214	3	1	1	1	1	1	1	2	2	1	1
S 215	3	1	1	1	1	1	1	2	2	1	1
S 216	3	1	1	1	1	1	1	2	2	1	1
S 217	3	1	1	1	1	1	1	2	2	1	1
S 218	3	1	1	1	2	2	1	1	2	2	1
S 219	3	1	1	1	2	2	1	1	2	2	1
S 220	3	1	1	1	2	2	1	1	2	2	1
S 221	3	1	1	1	2	2	1	1	2	2	1
S 222	3	1	1	1	1	1	1	1	1	1	1
S 223	3	2	2	2	2	1	2	2	2	2	2
S 224	3	1	1	2	2	2	1	1	3	2	1
S 225	3	1	1	1	1	1	3	1	4	3	1
S 226	3	1	3	3	2	1	1	1	2	2	2
S 227	3	1	2	2	1	2	2	1	3	2	1
S 228	3	1	1	2	3	2	2	3	4	3	2
S 229	3	2	1	1	3	2	2	2	2	1	1
S 230	3	5	2	2	2	3	3	3	3	3	1
S 231	3	1	1	1	2	2	1	1	2	2	1
S 232	3	1	2	1	1	2	1	1	2	1	1
S 233	3	1	2	1	1	2	1	1	2	1	1
S 234	3	1	2	1	1	2	1	1	2	1	1
S 235	3	1	2	1	1	2	1	1	2	1	1
S 236	3	1	2	1	1	2	1	1	2	1	1
S 237	3	1	2	1	1	2	1	1	2	1	1

Respondent No.	Respondent Group	Opinion against HC Reporting in CAR									
		HC10	HC11	HC12	HC13	HC14	HC15	HC16	HC17	HC18	HC19
S 238	3	1	2	1	1	2	1	1	2	1	1
S 239	3	1	2	1	1	2	1	1	2	1	1
S 240	3	1	2	1	1	2	1	1	2	1	1
S 241	3	1	1	1	1	2	1	2	3	1	1
S 242	3	1	1	1	1	1	1	2	2	1	1
S 243	3	1	1	1	2	2	1	1	2	2	1
S 244	3	1	1	1	2	2	1	1	2	2	1
S 245	3	1	1	1	2	2	1	1	2	2	1
S 246	3	1	1	1	2	2	1	1	2	2	1
S 247	3	2	2	2	2	1	2	2	2	2	2
S 248	3	1	1	2	2	2	1	1	3	2	1
S 249	3	1	1	1	1	1	3	1	4	3	1
S 250	3	1	3	3	2	1	1	1	2	2	2
S 251	3	1	2	2	1	2	2	1	3	2	1
S 252	3	1	1	2	3	2	2	3	4	3	2
S 253	3	2	1	1	3	2	2	2	2	1	1
S 254	3	5	2	2	2	3	3	3	3	3	1
S 255	3	1	1	1	2	2	1	1	2	2	1
S 256	3	1	2	1	1	2	1	1	2	1	1
S 257	3	1	2	1	1	2	1	1	2	1	1
S 258	3	1	2	1	1	2	1	1	2	1	1
S 259	3	1	2	1	1	2	1	1	2	1	1
S 260	3	1	2	1	1	2	1	1	2	1	1
S 261	3	1	2	1	1	2	1	1	2	1	1
S 262	3	1	2	1	1	2	1	1	2	1	1
S 263	3	1	2	1	1	2	1	1	2	1	1
S 264	3	1	2	1	1	2	1	1	2	1	1
S 265	3	1	1	1	1	2	1	2	3	1	1

*Note:

Symbol	*Explanation*
Respondent No.	*After getting feedback all respondents have been coded*
Group	*'1' = Supplier, '2' = Direct User and '3' = Indirect User of Information*
HC1	*Know-how and work-related competencies*
HC2	*Vocational qualifications*
HC3	*Career and Development*
HC4	*Training Programs*
HC5	*Equity Issue (Race, Gender and Religion)*
HC6	*Equity Issue (Disability)*
HC7	*Employees being thanked and Featured*
HC8	*Employee involvement in the community*
HC9	*Employee and executive compensation*
HC10	*Employee benefits other than salary*
HC11	*Employee share and option ownership plan*
HC12	*Value-added statement*
HC13	*Employee and their numbers*
HC14	*Professional experience of the employee*
HC15	*Educational and professional qualification of director and company secretary*
HC16	*Expert seniority*
HC17	*Age of employees*
HC18	*Entrepreneurial spirits*
HC19	*Employee safety and work environment*

Source: Survey

Appendix XIV*

Opinion of the Stakeholders against SC Reporting in CAR

Respondent No.	Respondent Group	Opinion against SC Reporting in CAR								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
S 1	1	2	2	2	2	2	1	4	2	2
S 2	1	1	1	1	1	1	3	2	2	2
S 3	1	1	1	1	1	1	2	1	1	1
S 4	1	2	2	2	1	1	1	2	2	2
S 5	1	1	2	2	2	2	2	2	1	2
S 6	1	1	1	1	1	1	2	2	3	1
S 7	1	5	1	1	1	1	2	1	1	2
S 8	1	1	1	1	2	2	2	2	1	2
S 9	1	2	3	2	2	2	2	3	3	3
S 10	1	3	2	2	2	2	2	3	2	2
S 11	1	2	2	2	2	1	2	2	2	2
S 12	1	1	2	1	1	1	2	1	1	1
S 13	1	2	2	3	1	1	1	2	1	1
S 14	1	1	1	2	1	1	1	1	1	1
S 15	1	2	1	1	1	1	2	1	2	2
S 16	1	2	2	2	2	3	2	3	3	2
S 17	1	1	2	2	2	2	2	2	2	2
S 18	1	2	2	2	2	2	2	3	2	2
S 19	1	1	1	1	1	1	1	1	2	2
S 20	1	2	2	1	1	2	1	1	1	1
S 21	1	2	2	2	2	2	2	2	2	2
S 22	1	2	2	1	1	2	1	2	1	1
S 23	1	1	2	1	1	1	1	1	1	1
S 24	1	1	1	2	3	2	3	3	2	2
S 25	1	2	2	2	2	2	2	1	1	1
S 26	1	2	2	2	2	2	2	1	1	1
S 27	1	2	1	2	1	1	2	1	2	2
S 28	1	2	2	2	1	3	2	2	2	2
S 29	1	3	2	3	3	2	3	3	2	3
S 30	1	1	1	1	1	1	1	2	2	2
S 31	1	2	1	2	2	2	2	2	2	2
S 32	1	2	2	3	2	2	3	3	2	2
S 33	1	2	1	1	2	2	1	1	1	1
S 34	1	1	1	2	1	1	1	2	2	2
S 35	1	2	1	2	1	2	2	1	2	2
S 36	1	2	2	3	2	1	1	2	2	3
S 37	1	1	1	1	1	1	1	1	1	1
S 38	1	1	1	2	1	1	1	3	2	1
S 39	1	1	1	1	2	2	2	1	1	2
S 40	1	1	2	1	1	1	1	1	2	1
S 41	1	1	2	1	1	1	1	1	2	1
S 42	1	1	2	1	1	1	1	1	2	1
S 43	1	1	2	1	1	1	1	1	2	1
S 44	1	1	2	1	1	1	1	1	2	1
S 45	1	1	2	1	1	1	1	1	2	1
S 46	1	1	2	1	1	1	1	1	2	1
S 47	1	1	2	1	1	1	1	1	2	1

Respondent No.	Respondent Group	Opinion against SC Reporting in CAR								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
S 48	1	1	2	1	1	1	1	1	2	1
S 49	1	1	2	1	1	1	1	1	2	1
S 50	1	1	2	1	1	1	1	1	3	1
S 51	1	1	2	1	1	1	1	1	3	1
S 52	1	1	2	1	1	1	1	1	3	1
S 53	1	1	2	1	1	1	1	1	3	1
S 54	1	1	2	1	1	1	1	1	3	1
S 55	1	1	2	1	1	1	1	1	3	1
S 56	1	1	2	1	1	1	1	1	3	1
S 57	1	1	2	1	1	1	1	1	3	1
S 58	1	1	2	1	1	1	1	1	3	1
S 59	1	1	2	1	1	1	1	1	3	1
S 60	2	1	1	1	1	1	1	1	1	1
S 61	2	1	2	1	2	2	2	1	2	2
S 62	2	1	2	1	1	1	2	2	2	2
S 63	2	2	2	1	1	1	1	1	1	1
S 64	2	2	1	2	2	2	3	3	2	2
S 65	2	1	2	1	1	1	1	1	2	1
S 66	2	1	2	1	1	2	2	1	2	1
S 67	2	1	2	1	1	2	2	1	2	1
S 68	2	2	1	1	2	3	3	4	3	3
S 69	2	2	2	2	2	2	1	4	2	2
S 70	2	1	1	1	1	1	3	2	2	2
S 71	2	1	1	1	1	1	2	1	1	1
S 72	2	2	2	2	1	1	1	2	2	2
S 73	2	1	2	2	2	2	2	2	1	2
S 74	2	1	1	1	1	1	2	2	3	1
S 75	2	1	1	1	1	1	2	2	3	1
S 76	2	2	2	2	2	2	1	4	2	2
S 77	2	1	1	1	1	1	3	2	2	2
S 78	2	1	1	1	1	1	2	1	1	1
S 79	2	2	2	2	1	1	1	2	2	2
S 80	2	1	2	2	2	2	2	2	1	2
S 81	2	5	1	1	1	1	2	1	1	2
S 82	2	5	1	1	1	1	2	1	1	2
S 83	2	1	1	1	2	2	2	2	1	2
S 84	2	1	1	1	2	2	2	2	1	2
S 85	2	2	3	2	2	2	2	3	3	3
S 86	2	2	3	2	2	2	2	3	3	3
S 87	2	3	2	2	2	2	2	3	2	2
S 88	2	3	2	2	2	2	2	3	2	2
S 89	2	2	2	2	2	1	2	2	2	2
S 90	2	2	2	2	2	1	2	2	2	2
S 91	2	1	2	1	1	1	2	1	1	1
S 92	2	1	2	1	1	1	2	1	1	1
S 93	2	2	2	3	1	1	1	2	1	1
S 94	2	2	2	3	1	1	1	2	1	1
S 95	2	1	1	2	1	1	1	1	1	1
S 96	2	1	1	2	1	1	1	1	1	1
S 97	2	2	1	1	1	1	2	1	2	2
S 98	2	2	1	1	1	1	2	1	2	2

Respondent No.	Respondent Group	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
S 99	2	2	2	2	2	3	2	3	3	2
S 100	2	2	2	2	2	3	2	3	3	2
S 101	2	1	2	2	2	2	2	2	2	2
S 102	2	1	2	2	2	2	2	2	2	2
S 103	2	2	2	2	2	2	2	3	2	2
S 104	2	2	2	2	2	2	2	3	2	2
S 105	2	1	1	1	1	1	1	1	2	2
S 106	2	1	1	1	1	1	1	1	2	2
S 107	2	2	2	1	1	2	1	1	1	1
S 108	2	2	2	1	1	2	1	1	1	1
S 109	2	2	2	2	2	2	2	2	2	2
S 110	2	2	2	2	2	2	2	2	2	2
S 111	2	2	2	1	1	2	1	2	1	1
S 112	2	2	2	1	1	2	1	2	1	1
S 113	2	1	2	1	1	1	1	1	1	1
S 114	2	1	2	1	1	1	1	1	1	1
S 115	2	1	1	2	3	2	3	3	2	2
S 116	2	1	1	2	3	2	3	3	2	2
S 117	2	2	2	2	2	2	2	1	1	1
S 118	2	2	2	2	2	2	2	1	1	1
S 119	2	2	2	2	2	2	2	1	1	1
S 120	2	2	2	2	2	2	2	1	1	1
S 121	2	2	1	2	1	1	2	1	2	2
S 122	2	2	1	2	1	1	2	1	2	2
S 123	2	2	2	2	1	3	2	2	2	2
S 124	2	2	2	2	1	3	2	2	2	2
S 125	2	3	2	3	3	2	3	3	2	3
S 126	2	3	2	3	3	2	3	3	2	3
S 127	2	1	1	1	1	1	1	2	2	2
S 128	2	1	1	1	1	1	1	2	2	2
S 129	2	2	1	2	2	2	2	2	2	2
S 130	2	2	1	2	2	2	2	2	2	2
S 131	2	2	2	3	2	2	3	3	2	2
S 132	2	2	2	3	2	2	3	3	2	2
S 133	2	2	1	1	2	2	1	1	1	1
S 134	2	2	1	1	2	2	1	1	1	1
S 135	2	1	1	2	1	1	1	2	2	2
S 136	2	1	1	2	1	1	1	2	2	2
S 137	2	2	1	2	1	2	2	1	2	2
S 138	2	2	1	2	1	2	2	1	2	2
S 139	2	2	2	3	2	1	1	2	2	3
S 140	2	2	2	3	2	1	1	2	2	3
S 141	2	1	1	1	1	1	1	1	1	1
S 142	2	1	1	1	1	1	1	1	1	1
S 143	2	1	1	2	1	1	1	3	2	1
S 144	2	1	1	2	1	1	1	3	2	1
S 145	2	2	1	2	1	1	1	2	2	1
S 146	2	1	2	1	1	5	5	1	1	2
S 147	2	1	1	1	2	2	2	1	1	2
S 148	2	1	1	1	1	1	1	2	2	2
S 149	2	1	1	1	1	1	1	1	2	1

Respondent No.	Respondent Group	Opinion against SC Reporting in CAR								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
S 150	2	1	1	1	1	1	1	1	2	1
S 151	2	1	1	1	1	1	1	1	2	1
S 152	2	1	1	1	1	1	1	1	2	1
S 153	2	1	1	1	1	1	1	1	2	1
S 154	2	1	1	1	1	1	1	1	2	1
S 155	2	1	1	1	1	1	1	1	2	1
S 156	2	1	1	1	1	1	1	1	2	1
S 157	2	1	1	1	1	1	1	1	2	1
S 158	2	1	1	1	1	1	1	1	2	1
S 159	2	1	1	1	1	1	1	1	2	1
S 160	2	1	1	1	1	1	1	1	2	1
S 161	2	1	1	1	1	1	1	1	2	1
S 162	2	1	1	1	1	1	1	1	2	1
S 163	2	1	1	1	1	1	1	1	2	1
S 164	2	1	1	1	1	1	1	1	2	1
S 165	2	1	1	1	1	1	1	1	2	1
S 166	2	1	1	1	1	1	1	1	2	1
S 167	2	1	1	1	1	1	1	1	2	1
S 168	2	1	1	1	1	1	1	1	1	1
S 169	2	1	1	1	1	1	1	1	1	1
S 170	2	1	1	1	1	1	1	1	1	1
S 171	2	1	1	1	1	1	1	1	1	1
S 172	2	1	1	1	1	1	1	1	1	1
S 173	2	1	1	1	1	1	1	1	1	1
S 174	2	1	1	1	1	1	1	1	1	1
S 175	2	1	1	1	1	1	1	1	1	1
S 176	2	1	1	1	1	1	1	1	1	1
S 177	2	1	1	1	1	1	1	1	1	1
S 178	2	1	1	1	1	1	1	1	1	1
S 179	2	1	1	1	1	1	1	1	2	1
S 180	2	1	1	1	1	1	1	1	2	1
S 181	2	1	1	1	1	1	1	1	2	1
S 182	2	1	1	1	1	1	1	1	2	1
S 183	2	1	1	1	1	1	1	1	2	1
S 184	2	1	1	1	1	1	1	1	2	1
S 185	2	1	1	1	1	1	1	1	2	1
S 186	2	1	1	1	1	1	1	1	2	1
S 187	2	1	1	1	1	1	1	1	2	1
S 188	2	1	1	1	1	1	1	1	2	1
S 189	2	1	3	1	1	1	1	1	2	1
S 190	2	1	3	1	1	1	1	1	2	1
S 191	2	1	3	1	1	1	1	1	2	1
S 192	2	1	3	1	1	1	1	1	2	1
S 193	2	1	3	1	1	1	1	1	2	1
S 194	2	1	3	1	1	1	1	1	2	1
S 195	2	1	3	1	1	1	1	1	2	1
S 196	3	1	2	1	2	2	2	1	2	2
S 197	3	1	1	1	1	1	1	1	1	1
S 198	3	1	1	1	1	1	1	1	1	1
S 199	3	1	1	1	1	1	1	1	2	1
S 200	3	1	1	1	1	1	1	1	1	1

Respondent No.	Respondent Group	Opinion against SC Reporting in CAR								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
S 201	3	1	1	1	1	1	1	1	1	1
S 202	3	1	1	1	1	1	1	1	2	1
S 203	3	1	1	1	1	1	1	1	1	1
S 204	3	1	1	1	1	1	1	1	1	1
S 205	3	1	1	1	1	1	1	1	1	1
S 206	3	2	3	1	1	1	1	1	2	1
S 207	3	1	1	1	1	1	1	2	2	1
S 208	3	1	1	1	1	1	1	2	2	1
S 209	3	1	1	1	1	1	1	2	1	1
S 210	3	1	2	1	1	1	1	2	2	1
S 211	3	1	2	1	1	1	1	2	1	1
S 212	3	2	2	2	2	3	2	3	3	3
S 213	3	1	1	1	1	1	1	1	1	1
S 214	3	1	1	1	1	1	1	1	1	1
S 215	3	1	1	1	1	1	1	1	1	1
S 216	3	1	1	1	1	1	1	1	1	1
S 217	3	1	1	1	1	1	1	2	1	1
S 218	3	1	1	1	1	1	1	2	2	2
S 219	3	1	1	1	1	1	1	2	2	2
S 220	3	1	1	1	1	1	1	2	2	2
S 221	3	1	1	1	1	1	1	2	2	2
S 222	3	1	1	1	1	1	1	1	1	1
S 223	3	2	2	2	2	2	1	2	2	2
S 224	3	1	2	1	1	1	2	2	2	2
S 225	3	2	2	1	1	1	1	1	1	1
S 226	3	2	1	2	2	2	3	3	2	2
S 227	3	1	2	1	1	1	1	1	2	1
S 228	3	2	1	1	2	3	3	4	3	3
S 229	3	2	1	2	1	1	1	2	2	1
S 230	3	1	2	1	1	5	5	1	1	2
S 231	3	1	1	1	1	1	1	2	2	2
S 232	3	1	1	1	1	1	1	1	2	1
S 233	3	1	1	1	1	1	1	1	2	1
S 234	3	1	1	1	1	1	1	1	2	1
S 235	3	1	1	1	1	1	1	1	2	1
S 236	3	1	1	1	1	1	1	1	2	1
S 237	3	1	1	1	1	1	1	1	2	1
S 238	3	1	1	1	1	1	1	1	2	1
S 239	3	1	1	1	1	1	1	1	2	1
S 240	3	1	1	1	1	1	1	1	2	1
S 241	3	1	1	1	1	1	1	1	2	1
S 242	3	1	1	1	1	1	1	2	1	1
S 243	3	1	1	1	1	1	1	2	2	2
S 244	3	1	1	1	1	1	1	2	2	2
S 245	3	1	1	1	1	1	1	2	2	2
S 246	3	1	1	1	1	1	1	2	2	2
S 247	3	2	2	2	2	2	1	2	2	2
S 248	3	1	2	1	1	1	2	2	2	2
S 249	3	2	2	1	1	1	1	1	1	1
S 250	3	2	1	2	2	2	3	3	2	2
S 251	3	1	2	1	1	1	1	1	2	1

Respondent No.	Respondent Group	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
S 252	3	2	1	1	2	3	3	4	3	3
S 253	3	2	1	2	1	1	1	2	2	1
S 254	3	1	2	1	1	5	5	1	1	2
S 255	3	1	1	1	1	1	1	2	2	2
S 256	3	1	1	1	1	1	1	1	2	1
S 257	3	1	1	1	1	1	1	1	2	1
S 258	3	1	1	1	1	1	1	1	2	1
S 259	3	1	1	1	1	1	1	1	2	1
S 260	3	1	1	1	1	1	1	1	2	1
S 261	3	1	1	1	1	1	1	1	2	1
S 262	3	1	1	1	1	1	1	1	2	1
S 263	3	1	1	1	1	1	1	1	2	1
S 264	3	1	1	1	1	1	1	1	2	1
S 265	3	1	1	1	1	1	1	1	2	1

Opinion against SC Reporting in CAR

*Note:

Symbol	Explanation
Respondent No.	After getting feedback all respondents have been coded
Respondent Group	'1' = Supplier of Information, '2' = Direct User of Information and '3' = Indirect User of Information
SC1	Management processes and corporate culture
SC2	Technology
SC3	Mgt. philosophy/mission/vision etc.
SC4	Future plan
SC5	Research and development
SC6	Intellectual property (Patent, Copyright and Trademark)
SC7	Certificate or Award received
SC8	Financial relation with other institutions
SC9	Innovative products or product focused

Source: Survey

Appendix XV*

Opinion of the Stakeholders against RC Reporting in CAR

Respondent No.	Respondent Group	Opinion against RC Reporting in CAR								
		RC1	RC2	RC3	RC4	RC5	RC6	RC7	RC8	RC9
S 1	1	4	2	2	2	2	2	2	2	1
S 2	1	1	1	1	2	1	1	2	2	2
S 3	1	1	1	2	3	2	1	2	1	2
S 4	1	2	2	2	2	2	2	2	2	1
S 5	1	1	2	1	2	2	3	3	2	1
S 6	1	1	1	1	2	2	1	2	2	2
S 7	1	1	1	1	2	2	1	1	2	1
S 8	1	2	1	2	2	3	3	2	3	3
S 9	1	3	2	2	2	2	2	2	2	2
S 10	1	2	2	2	2	2	2	2	2	2
S 11	1	2	2	2	2	2	2	2	2	2
S 12	1	1	2	1	2	2	2	2	2	2
S 13	1	2	2	2	2	2	2	2	1	1
S 14	1	2	1	1	2	2	2	2	1	1
S 15	1	1	1	1	2	2	2	2	2	2
S 16	1	2	2	3	2	2	2	2	2	2
S 17	1	2	2	2	2	2	2	1	2	2
S 18	1	3	2	2	2	2	2	2	2	2
S 19	1	3	2	1	3	1	1	2	2	3
S 20	1	1	1	1	2	2	1	3	3	2
S 21	1	3	2	2	3	3	2	3	2	3
S 22	1	1	2	1	2	2	2	3	4	3
S 23	1	1	1	1	2	2	2	2	2	2
S 24	1	3	2	2	2	2	3	3	2	2
S 25	1	2	1	1	2	2	3	3	3	3
S 26	1	2	1	1	2	2	3	3	3	3
S 27	1	1	1	1	2	1	1	1	1	1
S 28	1	2	2	2	1	2	2	2	1	2
S 29	1	2	2	2	3	3	3	3	3	3
S 30	1	1	2	2	1	1	1	1	1	1
S 31	1	2	2	2	2	2	3	3	2	2
S 32	1	3	2	2	2	2	2	2	3	3
S 33	1	1	2	1	2	1	2	2	3	2
S 34	1	2	2	1	1	1	1	2	2	2
S 35	1	1	2	2	2	3	3	2	3	2
S 36	1	1	1	1	2	2	2	2	1	2
S 37	1	1	1	1	1	1	1	1	1	1
S 38	1	2	1	2	1	1	1	1	2	2
S 39	1	1	2	1	2	1	1	2	2	2
S 40	1	1	1	1	2	2	2	2	1	2
S 41	1	1	1	1	2	2	2	2	1	2
S 42	1	1	1	1	2	2	2	2	1	2
S 43	1	1	1	1	2	2	2	2	1	2
S 44	1	1	1	1	2	2	2	2	1	2
S 45	1	1	1	1	2	2	2	2	1	2
S 46	1	1	1	1	2	2	2	2	1	2
S 47	1	1	1	1	2	2	2	2	1	2

Respondent	Respondent	Opinion against RC Reporting in CAR								
No.	Group	RC1	RC2	RC3	RC4	RC5	RC6	RC7	RC8	RC9
S 48	1	1	1	1	2	2	2	2	1	2
S 49	1	1	1	1	2	2	2	2	1	2
S 50	1	1	3	1	3	2	2	2	1	1
S 51	1	1	3	1	3	2	2	2	1	1
S 52	1	1	3	1	3	2	2	2	1	1
S 53	1	1	3	1	3	2	2	2	1	1
S 54	1	1	3	1	3	2	2	2	1	1
S 55	1	1	3	1	3	2	2	2	1	1
S 56	1	1	3	1	3	2	2	2	1	1
S 57	1	1	3	1	3	2	2	2	1	1
S 58	1	1	3	1	3	2	2	2	1	1
S 59	1	1	3	1	3	2	2	2	1	1
S 60	2	1	1	1	1	1	1	1	1	1
S 61	2	2	2	2	2	3	3	4	4	2
S 62	2	2	1	2	1	2	2	2	2	2
S 63	2	1	1	1	1	1	1	1	1	1
S 64	2	2	2	1	2	2	2	2	2	2
S 65	2	1	1	1	1	1	2	1	2	2
S 66	2	1	1	1	2	2	3	3	1	1
S 67	2	1	1	1	2	2	3	3	1	1
S 68	2	3	2	3	2	3	2	3	3	2
S 69	2	4	2	2	2	2	2	2	2	1
S 70	2	1	1	1	2	1	1	2	2	2
S 71	2	1	1	2	3	2	1	2	1	2
S 72	2	2	2	2	2	2	2	2	2	1
S 73	2	1	2	1	2	2	3	3	2	1
S 74	2	1	1	1	2	2	1	2	2	2
S 75	2	1	1	1	2	2	1	2	2	2
S 76	2	4	2	2	2	2	2	2	2	1
S 77	2	1	1	1	2	1	1	2	2	2
S 78	2	1	1	2	3	2	1	2	1	2
S 79	2	2	2	2	2	2	2	2	2	1
S 80	2	1	2	1	2	2	3	3	2	1
S 81	2	1	1	1	2	2	1	1	2	1
S 82	2	1	1	1	2	2	1	1	2	1
S 83	2	2	1	2	2	3	3	2	3	3
S 84	2	2	1	2	2	3	3	2	3	3
S 85	2	3	2	2	2	2	2	2	2	2
S 86	2	3	2	2	2	2	2	2	2	2
S 87	2	2	2	2	2	2	2	2	2	2
S 88	2	2	2	2	2	2	2	2	2	2
S 89	2	2	2	2	2	2	2	2	2	2
S 90	2	2	2	2	2	2	2	2	2	2
S 91	2	1	2	1	2	2	2	2	2	2
S 92	2	1	2	1	2	2	2	2	2	2
S 93	2	2	2	2	2	2	2	2	1	1
S 94	2	2	2	2	2	2	2	2	1	1
S 95	2	2	1	1	2	2	2	2	1	1
S 96	2	2	1	1	2	2	2	2	1	1
S 97	2	1	1	1	2	2	2	2	2	2
S 98	2	1	1	1	2	2	2	2	2	2

Respondent No.	Respondent Group	Opinion against RC Reporting in CAR								
		RC1	RC2	RC3	RC4	RC5	RC6	RC7	RC8	RC9
S 99	2	2	2	3	2	2	2	2	2	2
S 100	2	2	2	3	2	2	2	2	2	2
S 101	2	2	2	2	2	2	2	1	2	2
S 102	2	2	2	2	2	2	2	1	2	2
S 103	2	3	2	2	2	2	2	2	2	2
S 104	2	3	2	2	2	2	2	2	2	2
S 105	2	3	2	1	3	1	1	2	2	3
S 106	2	3	2	1	3	1	1	2	2	3
S 107	2	1	1	1	2	2	1	3	3	2
S 108	2	1	1	1	2	2	1	3	3	2
S 109	2	3	2	2	3	3	2	3	2	3
S 110	2	3	2	2	3	3	2	3	2	3
S 111	2	1	2	1	2	2	2	3	4	3
S 112	2	1	2	1	2	2	2	3	4	3
S 113	2	1	1	1	2	2	2	2	2	2
S 114	2	1	1	1	2	2	2	2	2	2
S 115	2	3	2	2	2	2	3	3	2	2
S 116	2	3	2	2	2	2	3	3	2	2
S 117	2	2	1	1	2	2	3	3	3	3
S 118	2	2	1	1	2	2	3	3	3	3
S 119	2	2	1	1	2	2	3	3	3	3
S 120	2	2	1	1	2	2	3	3	3	3
S 121	2	1	1	1	2	1	1	1	1	1
S 122	2	1	1	1	2	1	1	1	1	1
S 123	2	2	2	2	1	2	2	2	1	2
S 124	2	2	2	2	1	2	2	2	1	2
S 125	2	2	2	2	3	3	3	3	3	3
S 126	2	2	2	2	3	3	3	3	3	3
S 127	2	1	2	2	1	1	1	1	1	1
S 128	2	1	2	2	1	1	1	1	1	1
S 129	2	2	2	2	2	2	3	3	2	2
S 130	2	2	2	2	2	2	3	3	2	2
S 131	2	3	2	2	2	2	2	2	3	3
S 132	2	3	2	2	2	2	2	2	3	3
S 133	2	1	2	1	2	1	2	2	3	2
S 134	2	1	2	1	2	1	2	2	3	2
S 135	2	2	2	1	1	1	1	2	2	2
S 136	2	2	2	1	1	1	1	2	2	2
S 137	2	1	2	2	2	3	3	2	3	2
S 138	2	1	2	2	2	3	3	2	3	2
S 139	2	1	1	1	2	2	2	2	1	2
S 140	2	1	1	1	2	2	2	2	1	2
S 141	2	1	1	1	1	1	1	1	1	1
S 142	2	1	1	1	1	1	1	1	1	1
S 143	2	2	1	2	1	1	1	1	2	2
S 144	2	2	1	2	1	1	1	1	2	2
S 145	2	2	1	2	2	2	3	2	2	3
S 146	2	1	5	1	3	1	2	2	3	1
S 147	2	1	2	1	2	1	1	2	2	2
S 148	2	1	1	1	1	2	2	2	2	1
S 149	2	1	2	1	1	2	2	2	2	1

Respondent No.	Respondent Group	Opinion against RC Reporting in CAR								
		RC1	RC2	RC3	RC4	RC5	RC6	RC7	RC8	RC9
S 150	2	1	2	1	1	2	2	2	2	1
S 151	2	1	2	1	1	2	2	2	2	1
S 152	2	1	2	1	1	2	2	2	2	1
S 153	2	1	2	1	1	2	2	2	2	1
S 154	2	1	2	1	1	2	2	2	2	1
S 155	2	1	2	1	1	2	2	2	2	1
S 156	2	1	2	1	1	2	2	2	2	1
S 157	2	1	2	1	1	2	2	2	2	1
S 158	2	1	2	1	2	1	1	1	1	1
S 159	2	1	2	1	2	1	1	1	1	1
S 160	2	1	2	1	2	1	1	1	1	1
S 161	2	1	2	1	2	1	1	1	1	1
S 162	2	1	2	1	2	1	1	1	1	1
S 163	2	1	2	1	2	1	1	1	1	1
S 164	2	1	2	1	2	1	1	1	1	1
S 165	2	1	2	1	2	1	1	1	1	1
S 166	2	1	2	1	2	1	1	1	1	1
S 167	2	1	2	1	2	1	1	1	1	1
S 168	2	1	1	1	1	1	1	1	1	1
S 169	2	1	1	1	1	1	1	1	1	1
S 170	2	1	1	1	1	1	1	1	1	1
S 171	2	1	1	1	1	1	1	1	1	1
S 172	2	1	1	1	1	1	1	1	1	1
S 173	2	1	1	1	1	1	1	1	1	1
S 174	2	1	1	1	1	1	1	1	1	1
S 175	2	1	1	1	1	1	1	1	1	1
S 176	2	1	1	1	1	1	1	1	1	1
S 177	2	1	1	1	1	1	1	1	1	1
S 178	2	1	1	1	1	1	1	1	1	1
S 179	2	1	2	1	2	2	2	2	2	1
S 180	2	1	2	1	2	2	2	2	2	1
S 181	2	1	2	1	2	2	2	2	2	1
S 182	2	1	2	1	2	2	2	2	2	1
S 183	2	1	2	1	2	2	2	2	2	1
S 184	2	1	2	1	2	2	2	2	2	1
S 185	2	1	2	1	2	2	2	2	2	1
S 186	2	1	2	1	2	2	2	2	2	1
S 187	2	1	2	1	2	2	2	2	2	1
S 188	2	1	2	1	2	2	2	2	2	1
S 189	2	1	1	1	3	2	2	2	2	2
S 190	2	1	1	1	3	2	2	2	2	2
S 191	2	1	1	1	3	2	2	2	2	2
S 192	2	1	1	1	3	2	2	2	2	2
S 193	2	1	1	1	3	2	2	2	2	2
S 194	2	1	1	1	3	2	2	2	2	2
S 195	2	1	1	1	3	2	2	2	2	2
S 196	3	2	2	2	2	3	3	4	4	2
S 197	3	1	1	1	1	1	1	1	1	1
S 198	3	1	1	1	1	1	1	1	1	1
S 199	3	1	1	1	1	1	1	1	1	1
S 200	3	1	1	1	1	1	1	1	1	1

Respondent No.	Respondent Group	Opinion against RC Reporting in CAR								
		RC1	RC2	RC3	RC4	RC5	RC6	RC7	RC8	RC9
S 201	3	1	1	1	1	1	1	1	1	1
S 202	3	1	1	1	1	1	1	1	1	1
S 203	3	1	2	1	2	2	2	1	1	1
S 204	3	1	2	1	2	2	2	1	1	1
S 205	3	1	2	1	2	2	2	1	1	1
S 206	3	1	1	1	2	2	2	2	2	2
S 207	3	2	3	1	3	3	3	3	2	2
S 208	3	2	3	1	3	3	3	3	2	2
S 209	3	1	2	1	2	2	2	2	1	1
S 210	3	1	2	1	2	2	2	2	2	1
S 211	3	1	2	1	2	2	2	2	2	2
S 212	3	2	2	2	3	3	2	2	2	2
S 213	3	1	2	1	2	2	2	2	1	1
S 214	3	1	2	1	2	2	2	2	1	1
S 215	3	1	2	1	2	2	2	2	1	1
S 216	3	1	2	1	2	2	2	2	1	1
S 217	3	1	1	2	2	1	1	1	1	1
S 218	3	1	1	1	1	2	2	2	2	1
S 219	3	1	1	1	1	2	2	2	2	1
S 220	3	1	1	1	1	2	2	2	2	1
S 221	3	1	1	1	1	2	2	2	2	1
S 222	3	1	1	1	1	1	1	1	1	1
S 223	3	2	1	1	2	2	2	3	3	3
S 224	3	2	1	2	1	2	2	2	2	2
S 225	3	1	1	1	1	1	1	1	1	1
S 226	3	2	2	1	2	2	2	2	2	2
S 227	3	1	1	1	1	1	2	1	2	2
S 228	3	3	2	3	2	3	2	3	3	2
S 229	3	2	1	2	2	2	3	2	2	3
S 230	3	1	5	1	3	1	2	2	3	1
S 231	3	1	1	1	1	2	2	2	2	1
S 232	3	1	2	1	1	2	2	2	2	1
S 233	3	1	2	1	1	2	2	2	2	1
S 234	3	1	2	1	1	2	2	2	2	1
S 235	3	1	2	1	1	2	2	2	2	1
S 236	3	1	2	1	1	2	2	2	2	1
S 237	3	1	2	1	1	2	2	2	2	1
S 238	3	1	2	1	1	2	2	2	2	1
S 239	3	1	2	1	1	2	2	2	2	1
S 240	3	1	2	1	1	2	2	2	2	1
S 241	3	1	1	1	2	2	2	2	1	1
S 242	3	1	1	2	2	1	1	1	1	1
S 243	3	1	1	1	1	2	2	2	2	1
S 244	3	1	1	1	1	2	2	2	2	1
S 245	3	1	1	1	1	2	2	2	2	1
S 246	3	1	1	1	1	2	2	2	2	1
S 247	3	2	1	1	2	2	2	3	3	3
S 248	3	2	1	2	1	2	2	2	2	2
S 249	3	1	1	1	1	1	1	1	1	1
S 250	3	2	2	1	2	2	2	2	2	2
S 251	3	1	1	1	1	1	2	1	2	2

Respondent No.	Respondent Group	Opinion against RC Reporting in CAR								
		RC1	RC2	RC3	RC4	RC5	RC6	RC7	RC8	RC9
S 252	3	3	2	3	2	3	2	3	3	2
S 253	3	2	1	2	2	2	3	2	2	3
S 254	3	1	5	1	3	1	2	2	3	1
S 255	3	1	1	1	1	2	2	2	2	1
S 256	3	1	2	1	1	2	2	2	2	1
S 257	3	1	2	1	1	2	2	2	2	1
S 258	3	1	2	1	1	2	2	2	2	1
S 259	3	1	2	1	1	2	2	2	2	1
S 260	3	1	2	1	1	2	2	2	2	1
S 261	3	1	2	1	1	2	2	2	2	1
S 262	3	1	2	1	1	2	2	2	2	1
S 263	3	1	2	1	1	2	2	2	2	1
S 264	3	1	2	1	1	2	2	2	2	1
S 265	3	1	1	1	2	2	2	2	1	1

*Note:

Symbol	Explanation
Respondent No.	After getting feedback all respondents have been coded
Respondent Group	'1' = Supplier of Information, '2' = Direct User of Information and '3' = Indirect User of Information
RC1	Brands and Company logo
RC2	Customer and their satisfaction & loyalty
RC3	Company name and image
RC4	Favorable and/or unfavorable financial contacts
RC5	Business collaborations
RC6	Licensing agreement
RC7	Franchising agreements
RC8	Distribution channels marketing team
RC9	Market share or other competitive advantages

Source: Survey

Appendix XVI

Kruskal-Wallis Test on Perception Survey

(Grouping Variable: Type of Respondents)

Statement No.	Type of Respondents	N	Mean Rank	Kruskal-Wallis Test	
				Chi-Square	Asymp. Sig.
General No. 1	Supplier of Information	59	171.31	53.151	.000
	Direct User	136	140.97		
	Indirect User	70	85.23		
	Total	265			
General No. 2	Supplier of Information	59	156.02	8.767	.012
	Direct User	136	124.85		
	Indirect User	70	129.43		
	Total	265			
General No. 3	Supplier of Information	59	132.86	.037	.982
	Direct User	136	133.69		
	Indirect User	70	131.79		
	Total	265			
General No. 4	Supplier of Information	59	143.62	21.346	.000
	Direct User	136	143.76		
	Indirect User	70	103.14		
	Total	265			
General No. 5	Supplier of Information	59	122.57	1.7	.427
	Direct User	136	134.78		
	Indirect User	70	138.33		
	Total	265			
General No. 6	Supplier of Information	59	190.82	52.772	.000
	Direct User	136	122.59		
	Indirect User	70	104.49		
	Total	265			
General No. 7	Supplier of Information	59	177.03	36.91	.000
	Direct User	136	130.72		
	Indirect User	70	100.32		
	Total	265			
General No. 8	Supplier of Information	59	172.88	42.589	.000
	Direct User	136	135.65		
	Indirect User	70	94.23		
	Total	265			

Statement No.	Type of Respondents	N	Mean Rank	Kruskal-Wallis Test	
				Chi-Square	Asymp. Sig.
HC No. 1	Supplier of Information	59	180.33	38.13	.000
	Direct User	136	126.33		
	Indirect User	70	106.07		
	Total	265			
HC No. 2	Supplier of Information	59	166.07	18.742	.000
	Direct User	136	128.20		
	Indirect User	70	114.46		
	Total	265			
HC No. 3	Supplier of Information	59	166.61	31.856	.000
	Direct User	136	136.44		
	Indirect User	70	97.98		
	Total	265			
HC No. 4	Supplier of Information	59	128.01	9.004	.011
	Direct User	136	144.28		
	Indirect User	70	115.29		
	Total	265			
HC No. 5	Supplier of Information	59	162.08	15.461	.000
	Direct User	136	119.00		
	Indirect User	70	135.69		
	Total	265			
HC No. 6	Supplier of Information	59	167.65	18.896	.000
	Direct User	136	124.77		
	Indirect User	70	119.79		
	Total	265			
HC No. 7	Supplier of Information	59	122.97	13.06	.001
	Direct User	136	147.49		
	Indirect User	70	113.30		
	Total	265			
HC No. 8	Supplier of Information	59	147.25	4.011	.000
	Direct User	136	129.53		
	Indirect User	70	127.74		
	Total	265			
HC No. 9	Supplier of Information	59	141.21	22.739	.000
	Direct User	136	146.47		
	Indirect User	70	99.91		
	Total	265			

Statement No.	Type of Respondents	N	Mean Rank	Kruskal-Wallis Test	
				Chi-Square	Asymp. Sig.
HC No. 10	Supplier of Information	59	139.70		
	Direct User	136	145.35	19.891	.000
	Indirect User	70	103.36		
	Total	265			
HC No. 11	Supplier	59	135.51		
	Direct User	136	141.77	7.197	.027
	Indirect User	70	113.85		
	Total	265			
HC No. 12	Supplier	59	142.56		
	Direct User	136	140.57	11.046	.004
	Indirect User	70	110.24		
	Total	265			
HC No. 13	Supplier	59	138.43		
	Direct User	136	138.94	5.239	.073
	Indirect User	70	116.87		
	Total	265			
HC No. 14	Supplier	59	152.45		
	Direct User	136	116.75	17.251	.000
	Indirect User	70	148.18		
	Total	265			
HC No. 15	Supplier	59	135.95		
	Direct User	136	137.27	2.951	.229
	Indirect User	70	122.22		
	Total	265			
HC No. 16	Supplier	59	170.25		
	Direct User	136	129.16	24.419	.000
	Indirect User	70	109.06		
	Total	265			
HC No. 17	Supplier	59	153.12		
	Direct User	136	130.67	7.393	.025
	Indirect User	70	120.58		
	Total	265			
HC No. 18	Supplier	59	136.22		
	Direct User	136	135.46	1.108	.575
	Indirect User	70	125.50		
	Total	265			
HC No. 19	Supplier of Information	59	144.75		
	Direct User	136	139.09	12.639	.002
	Indirect User	70	111.26		
	Total	265			

Statement No.	Type of Respondents	N	Mean Rank	Kruskal-Wallis Test	
				Chi-Square	Asymp. Sig.
SC No. 1	Supplier of Information	59	142.56	10.425	.005
	Direct User	136	139.43		
	Indirect User	70	112.44		
	Total	265			
SC No. 2	Supplier of Information	59	166.20	27.132	.000
	Direct User	136	133.00		
	Indirect User	70	105.01		
	Total	265			
SC No. 3	Supplier of Information	59	146.70	19.704	.000
	Direct User	136	141.39		
	Indirect User	70	105.15		
	Total	265			
SC No. 4	Supplier of Information	59	142.34	10.097	.006
	Direct User	136	138.57		
	Indirect User	70	114.30		
	Total	265			
SC No. 5	Supplier of Information	59	140.12	8.412	.015
	Direct User	136	139.25		
	Indirect User	70	114.86		
	Total	265			
SC No. 6	Supplier of Information	59	142.18	13.367	.001
	Direct User	136	141.37		
	Indirect User	70	109.00		
	Total	265			
SC No. 7	Supplier of Information	59	135.32	0.1544	.926
	Direct User	136	133.17		
	Indirect User	70	130.72		
	Total	265			
SC No. 8	Supplier of Information	59	150.34	5.36	.069
	Direct User	136	127.06		
	Indirect User	70	129.94		
	Total	265			
SC No. 9	Supplier of Information	59	138.69	2.557	.278
	Direct User	136	136.01		
	Indirect User	70	122.35		
	Total	265			

Statement No.	Type of Respondents	N	Mean Rank	Kruskal-Wallis Test Chi-Square	Asymp. Sig.
RC No. 1	Supplier of Information	59	140.50	7.17	.028
	Direct User	136	138.61		
	Indirect User	70	115.77		
	Total	265			
RC No. 2	Supplier of Information	59	141.66	1.269	.53
	Direct User	136	131.13		
	Indirect User	70	129.33		
	Total	265			
RC No. 3	Supplier of Information	59	140.53	8.133	.017
	Direct User	136	138.71		
	Indirect User	70	115.56		
	Total	265			
RC No. 4	Supplier of Information	59	168.08	37.644	.000
	Direct User	136	137.23		
	Indirect User	70	95.21		
	Total	265			
RC No. 5	Supplier of Information	59	144.06	4.243	.12
	Direct User	136	125.49		
	Indirect User	70	138.28		
	Total	265			
RC No. 6	Supplier of Information	59	140.69	2.968	.227
	Direct User	136	126.18		
	Indirect User	70	139.77		
	Total	265			
RC No. 7	Supplier of Information	59	147.09	3.574	.167
	Direct User	136	129.68		
	Indirect User	70	127.58		
	Total	265			
RC No. 8	Supplier of Information	59	118.68	3.444	.179
	Direct User	136	138.67		
	Indirect User	70	134.06		
	Total	265			
RC No. 9	Supplier of Information	59	156.81	21.982	.000
	Direct User	136	138.60		
	Indirect User	70	102.06		
	Total	265			

Appendix XVII

Specimen Reporting Pattern of IC Items in CAR

S/N	IC Item	Sepecimen Report with Reference
A	**Human Capital (HC)**	
1	Know-how and work-related competencies	You would be pleased to know that we have been able to develop skilled manpower by deploying experienced technicians in the project to run the hi-tech machinery at the best of their efficiency… Maksons Spinning Mills Limited. (2011). *Annual Report,* p. 18.
2	Vocational qualifications	Our employees are smart, professional, well qualified, energetic and sincere. They are passionate about what they do. Since they enjou their work, it becomes easy for them to work hard. They do not aspire to follow any set model, rather they create model themselves. They completely own what they plan to do. Southeast Bank Limited. (2011). *Annual Report,* p. 10.
3	Career and Development	The bank also provides vast scope for career progression for the deserving employees. In the year 2011, a total number of 239 officials were promoted to their next higher grades. Southeast Bank Limited. (2011). *Annual Report,* p. 37.
4	Training Programs	……We gave them adequate training to enhance their competence and capability. Southeast Bank Limited. (2011). *Annual Report,* p. 11. Southeast bank places utmost importance in training and development. …. The bank's training institute provides a unique platform for capacity building of the employees through organizing various in-house training programs, workshops and seminars. Southeast Bank Limited. (2011). *Annual Report,* p. 37.

S/N	IC Item	Sepecimen Report with Reference
5	Equity Issue (Race, Gender and Religion)	Bank Asia has en enabling environment and culture wher equal employment opportunities and advancement pathway have been created for members of both gender. .....The current gender mix is female 28.2% and male 71.79%.
		Bank Asia Limited. (2011). *Annual Report,* p. 80.
6	Equity Issue (Disability)	Equal Opportunity Employer: BD Finance aims to be an equal opportunity employer and is determined to ensure that no applicant or employee receives less favourable treatment on the grounds of sex, disability, religious belief, marial status, color, race or ethnic origins, or a is disadvantaged by conditions or requirements which cannot be shown to be justifiable.
		BD Finance. (2011). *Annual Report,* p. 7.
7	Employees being thanked and Featured	I would like to thank all our employeesand shareholders for your unwavering confidence and trust in us, and look forward to you continued support.
		BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report,* p. 11.
8	Employee involvement in the community	Management – employee relationship:
		In a meeting held between the leaders of the existing four registered Trade Unions of the company with TGTDCL management, the trade union leaders vowed to work together for improvement of customer Services, reduction of system loss and realizing accounts receivables, thereby upholding the reputation of TGTDCL.
		Titas Gas Transmission and Distrition Company Limited. (2011). *Annual Report,* p. 48.
9	Employee and executive compensation	.......We believe a suitable remuneration policy is the key to employee retention and productivity. Our employees are our agents to serve.
		Southeast Bank Limited. (2011). *Annual Report,* p. 11.

S/N	IC Item	Sepecimen Report with Reference
10	Employee benefits other than salary	With a view to attracting and retaining competent human resources, the bank offers a competitive compensation package for its employees. In addition, the bank also offers incentive bonuses every ear to motivate its employees. Southeast Bank Limited. (2011). *Annual Report*, p. 37. Employees of Singer Bangladesh Limited enjoy participation in long-standing profit sharing under Labor Act 2006.... Singer Bangladsh Limited. (2011). *Annual Report*, p. 27.
11	Employee share and option ownership plan	No. of Share hold by executives: Mr. Mokbul Ahmed 700 Singer Bangladsh Limited. (2011). *Annual Report*, p. 21.
12	Value-added statement	Statement of Value Addition and its Distribution: Economic Value Added Statement Market Value Added Statement... Islami Bank Bangladsh Limited. (2011). *Annual Report*, p. 52.
13	Employee and their numbers	The bank's total manpower strength stood at 1848 as on December 31, 2011 out of which number of male employees was 1526 and female employees was 322. Southeast Bank Limited. (2011). *Annual Report*, p. 37.
14	Professional experience of the employee	Our employees are smart, professional, well qualified, energetic and sincere. Southeast Bank Limited. (2011). *Annual Report*, p. 10.
15	Educational and professional qualification of member of the board and company secretary	Directors' Profile................ Bank Asia Limited. (2011). *Annual Report*, p. 40. Short Profile of Directors..... Islami Bank Bangladsh Limited. (2011). *Annual Report*, p. 24.

S/N	IC Item	Sepecimen Report with Reference
16	Expert seniority	Service Analysis:

Service Analysis:

Service Years	Level	Total
Above 20		32
16-20		103
11-15		53
6-10		101
Below 6		637
Total		926

Singer Bangladsh Limited. (2011). *Annual Report*, p. 27.

17	Age of employees	Age Analysis of the Employee 2011:

Age Analysis of the Employee 2011:

Age (Years)	Level	Total
20 and Below		
21-25		
26-30		
31-35		
36-40		
41-45		
46-50		
Total		

LankaBangla Finance Limited. (2011). *Annual Report*, p. 54.

| 18 | Entrepreneurial spirits | Our objectives are to be the market leader in our product range and market segment… |

Singer Bangladsh Limited. (2011). *Annual Report*, p. 7.

| 19 | Employee safety and work environment | Safety in workplace is one of our major priorities. We continuously oversee and revaluate the working condition of our employees, assess the possibility of them being exposed to light and heat or any other hazardous material in their work place. We maintain a top notch safety protocol against fire or earth quack or any other natual disaster and drill our employee to act most cautiously and sensibly in such event. |

Bank Asia Limited. (2011). *Annual Report*, p. 35.

S/N	IC Item	Sepecimen Report with Reference
B	**Structural Capital (SC)**	
20	Management processes and corporate culture	Beximco Pharma's well defined organizational structure, policy guidelines and internal controls ensure efficiency of operations, and compoliance with applicable regulations……….. BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report,* p. 33. Corporate Culture:………… Bank Asia Limited. (2011). *Annual Report,* p. 15.
21	Technology	Information technoloty infrastructure of the bank has been setup with cost effective as well as cutting edge technology, emphasis has been given to bring quality in banking service through technology driven efficient delivery channels. Southeast Bank Limited. (2011). *Annual Report,* p. 36.
22	Management philosophy, mission or vision	Vision, Mission, Core Values and Business Ethics: Bank Asia Limited. (2011). *Annual Report,* pp. 4-9.
23	Future plan	Future Orientation: Challenges and Opportutnites. Bank Asia Limited. (2011). *Annual Report,* p. 13.
24	Research and development	…….We continue to make substantial investment in research and development to create differentiation and enable us to compete in the global marketplace…… …..Our research and development activities are closely focused on market needs and driven by technological progess in order to create product differentiation. BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report,* p. 10 and 33.
25	Intellectual property (Patent, Copyright and Trademark)	Intangible assets are recorded at historical cost less accumulated amortization……. Delta Brac Housing Finance Corporation Limited. (2011). *Annual Report,* p. 67.

S/N	IC Item	Specimen Report with Reference
26	Certificate or Award received	Awards and Recognition: Bank Asia's Glorious Triumph for Best Published Accounts and Reports 2010 by ICAB and SAFA.
		Bank Asia Limited. (2011). *Annual Report,* p. 2.
27	Financial relations with other institutions	Bankers: Citibank N.A. Trust Bank Ltd. Pubali Bank Limited.
		....
		Singer Bangladsh Limited. (2011). *Annual Report,* p. 6.
28	Innovative products or product focused	....In the year our team successfully introduced 40 new generic formulations in 55 different presentations and expanded our dosage............
		BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report,* p. 33.
C	**Relationship Capital (RC)**	
29	Brands and Company logo	Brand: Tallu
		Tallu Spinning Mills Ltd. (2011). *Annual Report,* p. 2.
		Branding: There is a need to barnd all productgs so that they create an imange and feeling that occupies the mind of the customers.........
		Bank Asia Limited. (2011). *Annual Report,* p. 79.
30	Customer and their satisfaction & loyalty	Customer base: Over 2 million households.
		Singer Bangladsh Limited. (2011). *Annual Report,* p. 2.
		Bank Asia is sincere to create higher customer satisfaction and loyalty by its brand enhancement programs, personalizing banking, creating brand ambassadors, online product innovation, measure and reduce customer effort, creating differentiated customer value porpostion.
		Bank Asia Limited. (2011). *Annual Report,* p. 12.

S/N	IC Item	Sepecimen Report with Reference
31	Company name and image	Strong brand image and easy installment will keep us going smooth.... Singer Bangladsh Limited. (2011). *Annual Report*, p. 8. Bank Asia at a Glance: Bank Asia Limited. (2011). *Annual Report*, p. 14.
32	Favorable and/or unfavorable financial contacts	The above syndicate loan received from Southeast Bank Limited, The City Bank Limited, NCC Bank Limited and Exim Bank Limited which is repayable by 23 equal installment Tk. 166.66 lac per installment within June 2015. This loan is secured against land, building, plant and machinery. Maksons Spinning Mills Limited. (2011). *Annual Report*, p. 47.
33	Business collaborations	We acknowledge and appreciate the value of collaborations with our strategic alliances and partnership. We believe that mutually beneficaial partnerships are key to accomplishing our goals....... BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report*, p. 38.
34	Licensing agreement	We have had a sound track record of working with global partners as early as 1980 when we commenced manufacturing operations with products under licenses of Bayer AG of Germany and Upjohn INc of USA.......... BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report*, p. 38.
35	Franchising agreements	The country wide network of Company retail outlets and service centres, together with its Franchise Technicians form a bulwark agaisnst this risk. Singer Bangladesh Limited. (2011). *Annual Report*, p. 40.

S/N	IC Item	Sepecimen Report with Reference
36	Distribution channels marketing team	Distribution Channel: Through Direct Marketing for Export.
		Tallu Spinning Mills Ltd. (2011). *Annual Report*, p. 2.
		2011 was a year of restructuring and renewed spirits for our marketing and Sales teams.........To keep the impetus flowing, the Company shall continue to strengthen penetration beyond urban areas through ou wholly-owned distribution network and further augment our value added services for doctors.
		BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report*, p. 17.
37	Market share or other competitive advantages	.......On a bright note, Beximco Pharma's prescription (Rx) share in terms of both product and value crossed the double digits Rx share benchmark during the year.
		BEXIMCO Pharmaceuticals Ltd. (2011). *Annual Report*, p. 17.
		Singer Reaches Most of the Parts of Bangladesh ....and this is the Power of the Singer Brand...
		Singer Bangladsh Limited. (2011). *Annual Report*, p. 7.