ISSN: 2288-7709 © 2016 EABEA. http://www.icma.or.kr
doi: http://dx.doi.org/10.13106/jemm.2016.vol4.no4.1

Intellectual Capital Measurement and Disclosure : A New 'Paradigm' in Financial Reporting

Madan Lal Bhasin

Professor, School of Accountancy, College of Business, Universiti Utara Malaysia (UUM), Sintok, Kedah, Malaysia
E-mail: madan.bhasin@rediffmail.com.

Abstract

In today's knowledge-based economy, measurement and disclosure (M&D) of intellectual capital (IC) are crucial for enhancing business performance and competitiveness. In the global world, M&D of IC are useful means to keep investors well-informed and reduce information asymmetry. At present, very few leading corporations in India have disclosed IC information on a 'voluntary' basis. Traditional accounting practices, therefore, will need to assimilate innovations that seek to meaningfully represent the 'true-value' of the intangible assets of the company. This is an exploratory study of IC M&D by 8 Indian companies over 5-year period, using 'content' analysis and market-value-added (MVA) as research methodologies. The annual reports of companies were collected from their respective websites. As part of present study, various statistical techniques have been used to analyze the data. The findings show that the sample companies, on an average, reported a positive value of IC, along with wide-disparity, low-level of ICD. Unfortunately, the omission of IC information may adversely influence the quality of decisions made by shareholders, or lead to material misstatements. Finally, we recommend to "the international accounting bodies, to take the lead by establishing a harmonized ICD standard, and provide guidance to the big listed-companies for proper measurement and disclosure of IC, both for internal and external users."

Keywords: Intellectual Capital, Measurement and Disclosure, MV and BV, Annual Reports, Empirical Study, Developing Economy, Harmonized ICD Accounting Standard.

1. Introduction

The 21st century is heavily dominated by 'knowledge' economy and the world is changing rapidly from an 'industrial' economy to a 'knowledge' economy. Rise of the knowledge economy underpins the importance of 'knowledge' management, 'intellectual' capital, and 'innovation' in economic development (Rodrigues et al., 2015). In the modern innovation-driven world, learning and the command of intellectual capital (henceforth, IC) have become the 'key' success factors of 'international' competitiveness. "During the last two decades, IC resources, such as, human capital and customer relations, have becomes the new driver for corporate development, and companies which focus on their employee knowledge, innovation, and skills are developing more than those depending on their fiscal assets (Razak et al., 2016). In fact, the term IC collectively refers to all of the 'intangible' resources that determine the value and competitiveness of a company. Recently, Oksana and Inga (2016) have stated, "Over the last two decades, the role of IC in ensuring an organization's competitiveness has increased significantly. It constitutes the 'knowledge' resource, in the form of employees, customers, processes and technologies, which the company can mobilize in its 'value' creation process." Hence, "future drivers of any modern economy will no longer be capital, land or equipment, but the people and their knowledge reservoirs," says Bhasin (2015).

Without an iota of doubt, business dynamics of the present century are increasingly determined and driven by IC elements. For example, Survilaite et al. (2015) have pointed out that "in the era of information and knowledge, effective use of IC is the most important factor that determines the success of a business. The 'traditional' point of view has changed and now companies have shifted their focus from investments into 'tangible' assets (TA) to investments in 'intangible' assets (IA). In fact, IC is considered to be an 'intangible' resource with human, structural and customer capital as its 'key' components." Similarly, Anuonye (2015) stated that "IC is the total of all human

efforts in the form of IA, which can be measured, and through which organizations can gain competitive advantage. The inability of firms to measure and quantify IC has posed fundamental problems overtime in the 'value' measurement of firms." Unfortunately, the concept of IC measurement, management and disclosure is still relatively 'new' and under development process. Indeed, IC measurement is considered to be one of the most important components of IC management practice. It is vital for company's 'strategic' management, 'continuous' improvements and organizational 'development'. Accordingly, IC measurement 'methodology' is one of the cornerstones in IC theory development. Undoubtedly, IC measurement and management practices significantly differ amongst countries, industries or companies. However, it must be kept in mind that the process of managing and reporting on IC is highly 'idiosyncratic' and unique to each and every firm. There is no universally valid recipe; each company should develop its own process of IC measurement and disclosure. As Bhasin (2011) concluded, "After some initial research on business and intangible resources in the Indian corporations, we found that three corporations had published their first IC reports in 1997, which were discontinued later on. These firms are: Balrampur Chini Mills Limited, Reliance Industries Limited, and Shree Cement Limited. However, there were vast differences in the disclosure mechanisms and methodologies followed by these Indian corporations."

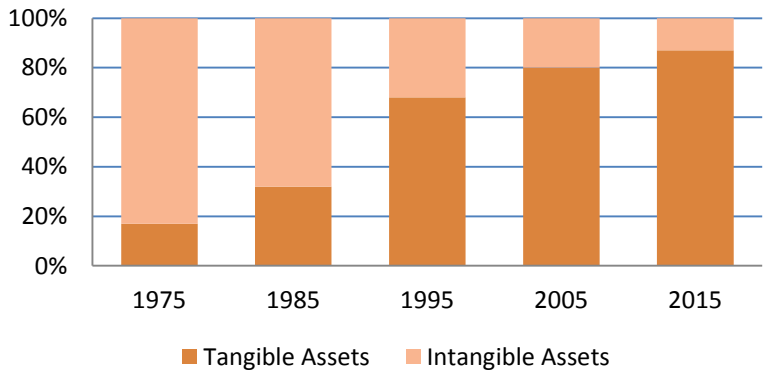
"While IC is relevant to financial and accounting professionals, its measurement and disclosure is an important and complex issue for corporate management. For example, management may use a disclosure strategy to convince 'external' parties of the underlying value of the firm. On the other hand, management may decide to constrain its 'transparency' in order to protect certain important information," says Bhasin (2016). As far as the IC disclosure (henceforth, ICD) is concerned, unfortunately rarely some select organizations from across the world are 'consistently' providing ICD in their Annual Reports (in brief, AR). However, market participants, practitioners and regulators alike argue that there is an important need for greater investigation and understanding of ICD, as the usefulness of financial information contained in FS in explaining firm profitability continues to deteriorate. Bukh (2005), for instance, asserts that "traditional disclosure 'mechanisms' are not able to cope adequately with the disclosure requirements of 'new' economy firms." He observed "an increasing dissatisfaction with 'traditional' financial disclosure and its ability to convey to investors the wealth-creation potential of firms." Similarly, Berzkalne and Zelgalve (2014) have pointed out that "it is necessary to develop a new framework to identify, classify and calculate the value of IC. In addition, the new methodology should be able to better explain the difference between company's book value (BV) and market value (MV) than the existing methodologies." As Bhasin (2016a) stated, "The FS has long 'outlived' itself as the best source of corporate disclosure because it contains 'backward' looking information and is only a one-way means of presenting information rather than engaging with information users." Considering the future prospects of financial reporting system for capital markets and other stakeholders, some organizations are now motivated to evolving a dialogue on finding new ways to measure and report about their IC.

"The limitation of FS, both in measuring and disclosing 'intangible' assets information is the fundamental cause of significant difference between 'book' value (BV) equity and 'market' value (MV) equity," said Bhasin (2015a). However, systematic measurement and disclosure of intangible assets (IA or IC) precisely and accurately is very important, because they have a positive and significant effect on the firm's market value (Gamayuni, 2015). Therefore, accounting standards should be concerned about this, without further delays. The inclusion of IC information in the corporate FS would result in a balance sheet that more realistically describes the value of the company, and displays all relevant assets from which the company expects to obtain benefits in the coming years. Moreover, IC is critical to sustaining competitive advantage and is a valuable source of wealth creation. Thus, in an ever increasing competitive world, ICD are an important and useful means to keep investors well-informed (Abeysekera, 2007). "Although this is an appealing idea, unfortunately, it is not per se definition of value to the disclosing company. In short, traditional financial metrics provide insight into "a company's short-term performance but may not be the best way to measure the long-term value creation," asserts Bhasin (2014).

It should be noted that "the terms intangible assets, knowledge assets/capital, or intellectual assets/capital are mostly 'interchangeable' and very often used as 'synonyms'. The term IA can often be found in the 'accounting' literature, whereas the term knowledge assets is used by 'economists', and IC is used in 'management' and legal literature, but all refer essentially to the same thing," sums up Bhasin (2007). The terms IA and IC are used to refer to the same concept. Both are applied to 'non-physical' sources of 'future' economic benefits that may or may not appear in corporate 'financial' reports. However, these two terms tend to be used slightly differently: Intangibles is an accounting term, whereas the IC was coined in the human resources literature and is mainly used in this field. Further, Bhasin (2015) argued that "a firm's most valuable and important resources are its IC or IA. Tangible assets (TA) can be easily imitated or acquired in the open market. Therefore, by definition, they cannot be strategic assets or advantage creating resources. Conversely, IC is most often internally generated and embedded in the skills and experience of its employees, its processes, procedures and routines, and its information repositories. Because of

these characteristics, they are unique, difficult to imitate and valuable. In other words, they are advantage-creating resources."

Various estimates indicate that "intangible" assets (IA) currently constitute about 60-75% of corporate value, on an average. In 1995 it was found that a major part (68%) of investment goes into IA, such as research and development, IT software, education and competences and internet. However, in 2009, IA was 81% of investments, which jumped to the level of 87% in 2015, an all-time high for the years covered by the firm's research, which extends back to 1975, as shown in <Figure 1>. Hopefully, the rising trend will continue in future. Data reflected in the chart below reveals that IA value of the S&P 500 grew to an average of 84% by Jan. 1st, 2015, an increase of 4% points over ten years. Here, Stathis (2015) reported, "Within the last quarter century, the market value of the S&P 500 companies has deviated greatly from their book value. This 'value gap' indicates that physical and financial accountable assets reflected on a company's balance sheet comprises less than 20% of the true value of the average firm explained Malackowski, Ocean Tomo's Chairman." Further, Lev (2001) compared that relationship between market value (MV) and book value (BV) of shares. In 1970, it was 1:1 and in mid-1990 it had increased to an average of three times. This statistical information provided an insight into the growing importance of IC. According to Zambon and Monciardini (2015), "Lev pointed out that intangibles per se are inert, like bricks." In fact, 'inert' means to be in a state of doing little or nothing. Therefore, the only interest in intangibles per se, is when you try to sell them (patents, brands, software etc.). What is interesting to managers, policy-makers and investors is how intangibles interplay with other resources to create value. In other words, focusing only (or mainly) on the issue of measuring intangibles (accounting, disclosing and surveying IC), one runs the risk of looking at the 'finger' rather than the 'moon'. Looking at the moon, in this case, means to focus on IC as strategic resources, i.e., resources that create economic value, are rare, and difficult for competitors to imitate."



Source: Ocean Tomo, Llc

Figure 1: Components of S&P 500 Market Value

No doubt, IA (or IC) is "enablers and sources of value to business, as they transform resources into value-added performance. Therefore, the corporate world is now devoting a lot of time and effort to manage its "intellectual" assets (IC) in order to improve its shareholder's wealth," stated Bhasin (2011c). According to Heitman (2016), "For centuries, executives expertly managed the total productivity of tangible assets (TA), such as plants and equipment. They monitored both efficiency and effectiveness because TA, or "things," historically accounted for more than 80% of business value. But in the last 40 years, TA has declined to 15% of business value, while intangible assets (IA) now generate 85% of value." The 'traditional' point of view has changed and companies have shifted their focus from investments into TA to investments in IA (Survilaite et al., 2015). Despite growing interest and demand for IC information, prior research till date suggests a persistent and significant variation, both in the 'quantity' and 'quality' of information reported by firms on this pivotal resource. As existing economic and business metrics track a declining proportion of the real-economy, the deficiency and inconsistency in the disclosure of IC-related information is creating growing information "asymmetry" between 'informed' and 'uninformed' investors. This provides a fertile ground for informed investors to extract higher abnormal returns (Chiucchi et al., 2008). Thus, IC is increasingly being recognized as having much greater significance in creating and maintaining 'competitive' advantage and shareholder 'value'. This clearly calls for a refreshed understanding of business principles, information disclosure, and decision-making processes related to IC.

2. What is Intellectual Capital?

Undoubtedly, IC can prove to be a source of competitive advantage for businesses, which may stimulate growth and lead to wealth generation in the long-term. "Unfortunately, the concept of IC measurement, management and disclosure is still relatively new. Accountants, business managers, and policy-makers have still to grapple with its concepts and detailed application methodologies," pointed out Bhasin (2008). Moreover, Dadashinasab et al. (2015) stated: "According to resource-based view, one of the important resource for driving organizations performance and creating value is IC." There is a wide range of definitions of IC in the literature, and as expected, definition of IC varies substantially. According to Stewart (2002), "It has become standard to say that a company's IC is the sum of its Human Capital (talent), Structural Capital (intellectual property, methodologies, software, documents, and other knowledge artifacts), and Customer Capital (client relationships)." However, most comprehensive definition of IC is offered by the Chartered Institute of Management Accountants (CIMA, 2001) as "the possession of knowledge and experience, professional knowledge and skill, good relationships, and technological capacities, which when applied will give organizations competitive advantage."

Unfortunately, there are number of IC classifications, as well as, measurement and disclosure methodologies. For instance, Sveiby (2004) first proposed a classification for IC into three broad areas of intangibles, viz., Human capital, Structural capital and Customer capital—a classification that was later modified and extended by replacing customer capital by relational capital. Some examples of IC are shown in <Table 1>. The diagram is only a broad guide to the components of IC, as the elements combine and interact with each other, and with traditional capital elements (physical things and monetary elements) in ways unique to individual companies to create value.

Table 1: Components of Intellectual Capital

Human Capital	Structural Capital	Customer Capital	Relational Capital
Knowledge	Business processes	Customer relations	Relations with vendors
Competence	Manuals/ policies	Customer Loyalty	Investor trust and feedback...
Skills	Information systems	Repeat business...	
Individual & Collective Experiences	Research findings		
Training	Trademarks		
Communities of practice...	Brands...		

3. Why to Measure and Disclose IC?

A common view on IC measurement, as well as, generally accepted IC measurement principles still do not exist. In fact, several IC methodologies are under development and refinement process, and many unanswered questions still exist. Besides, IC measurement practices adopted by different companies also varies and depends on different factors. According to Uziene and Stankute (2015), "IC measurement methods are usually intended to accomplish one of the missions: (1) measurement for 'internal' management and decision-making; and (2) measurement for 'external' information disclosure, as a supplement to financial statements (FS) as contained in AR. In the first case, manager act as receivers of information, while IC measurement methods perform the role of corporate 'performance' measurement. In the second case, information received is intended for 'external' stakeholders, while IC measurement methods perform the role of 'public' disclosure and corporate 'image' building." Thus, effective management of intangibles might also increase the firm's commitment with its IC. Bhasin (2015a) reported, "The IC Report (ICR) is the report wherein the company 'discloses' about its IC. It is the 'logical' conclusion of the IC management process. Regardless of who is responsible for the preparation of the ICR, top management should be committed to and engaged in the preparation of the ICR? Finally, the IC Statement may be published together with, or at the same time, as the annual financial report is disclosed."

After some initial research on intangible resources in the Indian corporations, we found that "three corporations had published their first IC reports in 1997, which were discontinued later on. These firms are: Balrampur Chini Mills Limited, Reliance Industries Limited, and Shree Cement Limited. However, there were vast differences in the disclosure mechanisms and methodologies followed by these Indian corporations," said Bhasin (2011a). In this

context, Kamath (2008) lucidly concludes, "Some firms have been considering IC as an inseparable part of their total assets and disclosed it in their annual reports as ICR using the 'standard' disclosure models. And, others published those reports as a 'supplement' to their annual reports, and some others give the details of growth in their IC over the previous period in a 'separate section' in their annual report." There is no doubt that in India, IC disclosure is still in its 'evolutionary' stages and all the three means of disclosure are equally accepted and practiced. Moreover, we appreciate the growing awareness and attempts made by some leading IT corporations to disclose IC in their annual reports. The Indian ICR does not focus on any specific business model, values, mission and vision, and/or knowledge management issues, as is the case with the European ICR. It presents information mostly in a 'narrative' style. It describes a firm's IC and analyses its components without focusing extensively on specific indicators that measure these components. This is a major distinctive feature of Indian ICR. In sharp contrast with the European Union ICR, Indian reports do not combine a "narrative" and "quantifying" style (Abeysekera, 2007). All Indian ICR analyzed in this study constitute an 'independent' document that 'complement' the Annual Reports. However, their length is much larger than the European reports. It is clear that corporations in the European are way ahead of their counterparts elsewhere when it comes to the measurement, disclosure and management of their IC (Andriessen, 2004). Finally, one of the firms in this study—Reliance Industries Limited—even created a specific term for investor relations (the investor capital) and provides an in-depth analysis of this capital.

The inability of firms to measure and quantify IC has posed fundamental problems overtime in the value measurement of firms. The pressure from investors and emerging global markets has led some groups to voluntarily disclose information explaining their IC investments (Depoers, 2000). As Charumathi and Ramesh (2015) stated, "In the current scenario of financial reporting regime, investors are increasingly looking at the disclosure practices of companies. The companies also face capital market pressures and need to disclose more than the regulatory norms. There could be several motivators for the companies to disclose more information voluntarily." As Bhasin (2011) stated, "Fortunately, the corporate world is now devoting a lot of time and effort to manage its 'intellectual' assets in order to improve its shareholder's wealth. "Hopefully, this information would complete the FS, provide evidence of the ability of firms to create value in the future, and give more credibility to the information summarized in the annual FS," (Dammak, 2015).

Companies may, therefore, want to measure IC for a variety of reasons. One study by Bernard (2003) identified the following five main reasons. First, measuring IC can help an organization to formulate business strategy. By identifying and developing its IC, an organization may gain a competitive advantage. Second, measuring IC may lead to the development of key performance indicators that will help evaluate the execution of strategy. IC, even if measured properly, has little value unless it can be linked to the firm's strategy. Third, IC may be measured to assist in evaluating mergers and acquisitions (M&A), particularly to determine the prices paid by the acquiring firms. Fourth, using non-financial measures of IC can be linked to an organization's incentive and compensation plan. However, the first four reasons are all internal to the organization. A fifth reason is 'external': to communicate to all stakeholders' what intellectual property the firm owns, how is it valued, and how much is its market worth, etc.? Undoubtedly, improving "external" disclosure of IC can (1) close the gap between book value and market value, (2) provide improved information about the real value of the organization, (3) reduce information asymmetry, (4) increase the ability to raise capital by providing a valuation on intangibles, and (5) enhance an organization's reputation. Disclosing IC information may produce both beneficial and dysfunctional effects. In fact, although a comprehensive theory of 'voluntary' disclosure does not exist so far, companies find different economic and managerial incentives in disclosing more than mandatory information, especially with reference to IC information. As Demartini and Trucco (2016), put forward, "these benefits should be balanced against some costs, such as the loss of competitive advantage for giving away company's secrets, the provision costs for collecting, organizing and disclosing information and the exposure to manipulation of disclosed information, which eventually could turn out into litigation costs."

Similarly, Bhasin (2012a) concluded, "Good measures of IC, of course, will complement financial measures, provide a feedback mechanism for actions, provides information to develop new strategies, assist in weighting different courses of action, and enhance the management of the business as a whole."

3.1. Accounting 'Conundrum' About IC Measurement & Disclosure

Business has always relied on its "intangible" resources (IA), along with "tangible" resources (TA), to create value and achieve the organization's goals. As very appropriately pointed out by Talukdar (2008) and Bhasin (2015), "The objective of a typical for-profit business firm is to use its assets for producing goods and/or render services, which it can sell for generating 'cash'. It is the 'readiness' of the IA that determines the 'efficiency' of this cycle. The cash so generated is 'used' in general in one of three different ways. It is either capitalized into more TA, or spent for the

development of more IA, or paid out as dividends. This is also the reason why TA appears on the balance sheet, whereas IA does not." In order to understand how IC fits into the scheme of things, let us look at <Figure 2>. The real differentiator between one firm and the next therefore, is the "readiness of the firm's IA for converting its TA into cash in the most efficient manner." This readiness is known as "core competency" and it is the chief source of "competitive" advantage for companies. If the primary objective of all for-profit companies is to effectively manage their future cash flows, then they need to manage the ultimate drivers of these cash flows—the "intangible" assets. In order to be able to manage "intellectual" assets we have to recognize where this value is coming from and how it is created in an organization.

Surprisingly, modern accounting systems are designed exclusively (with some exceptions) for measuring and reporting "tangible" assets. The Gartner Group, for example, estimates that "intellectual" assets are worth approximately three to four times an enterprise's book value. The dilemma remains that, even though IC can outweigh physical assets enormously, it is very difficult to find measures that will accurately reflect their value within an instrument, such as the "balance sheet." Moreover, physical and IC have different properties and should therefore, have different valuation methods. Recently, McCann (2016) stated, "It seems plain wacky that accounting rules still prohibit companies from including the value of internally created intangible assets in their FS, alongside tangible assets. After all, there is no debate that today a majority of most companies' market value derives from brands, patents, technologies, and other IC. That was not the case when the process of standardizing accounting practices began hundreds of years ago. It was not even the case, for the most part, 30 years ago."

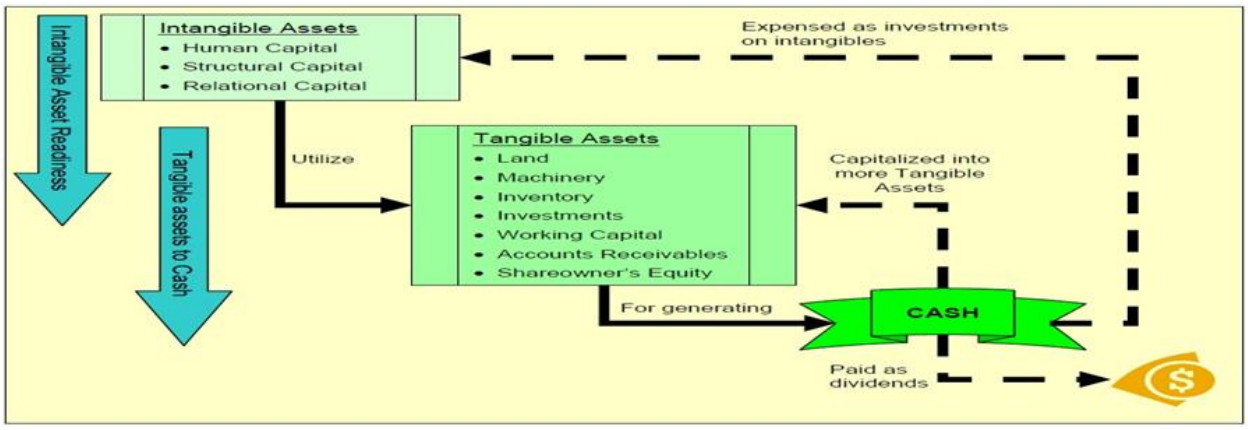


Figure 2: Asset to Cash Conversion Cycle

Traditionally, physical assets (TA) are considered as leading determinants of the economic performance of any activity. Now, in 'new' economic system, IA is recognized as prominent resource. Thus, in the 'modern' economy, IC is the most important asset for the firm. As Deep and Narwal (2014) described, "FS have failed to reflect the true value created by companies, because only TA are taken into account for measuring the performance of the firm. The legitimate justification is required for the increasing gap between the MV and BV of companies. The reason for this gap simply may perhaps be the absence of IA from the FS of the firm. When companies have a large proportion of their investment in IA and when traditional performance measurement techniques are used, then inappropriate decisions may be taken by investors and other stakeholders." However, modern accounting systems are designed exclusively, with some exceptions, for measuring and reporting TA. This creates the phenomena of the "invisible" balance sheet," described Bhasin (2015). <Figure 2> shows the balance sheet of a typical firm. As Talukdar (2008) pointed out, "Everything that appears below the 'solid' horizontal-line represents the 'invisible' assets of the firm. This is balanced on the right hand side by a corresponding 'invisible' equity. We already know that the MV of most public companies is considerably higher than their corresponding BV, which represents only the TA of the firm." The invisible equity of a firm can be considerably large depending on how effectively the firm is harnessing its IC.

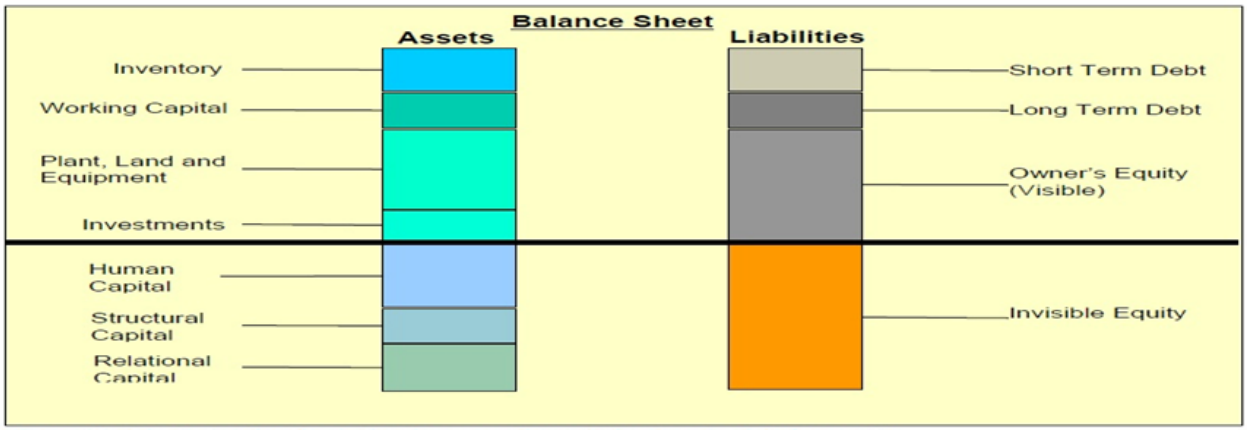


Figure 3: Market Valuation of a Firm Equals Visible plus Invisible Equity

In the business world, where most of the organizational value is based on IA, the ability to recognize and estimate the sources of this value has become vital for companies. However, Dammak (2015) stated, "One way to measure knowledge assumes that the stock market implicitly performs the valuation." In its simplest form, this method accepts the market to be invariably accurate in its valuations, and that any excess valuation of a company over its BV will be the correct valuation of the company's IA or IC (Andriessen, 2004). Thus, the market capitalization is made up of the value of the physical assets (BV) and an additional intangible value (IC) associated, which is recognized by the financial market but ignored by the balance sheet. Generally, the relationship between IC and MV, in equation form, can be stated as:

Market Value (MV) = Book Value (BV) + Intellectual Capital (IC)

When there is a large disparity between a firm's MV and BV, that difference is often attributed to "IC". MV is, of course, the company's total shares outstanding times the stock market price of each. However, Book Value (BV) is the excess of total assets over total liabilities. Thus, MV can be calculated as: Number of ordinary shares outstanding multiplied by the share price plus the number of outstanding preference shares multiplied by the share price minus the book value of invested capital (Anuonye, 2015). This equation shows that MV has a tangible portion BV, in addition to an intangible component IC. Hence, supposing MV minus BV is greater than zero (MV- BV > 0); it shows that the company needs to make provision for both measuring and disclosing its IC. It can be assumed that the more knowledge-intensive the company is, the greater the IC value will be. The invisible equity of a firm can be considerably large depending on how effectively the firm is harnessing its IC. For companies in the service sector, it is disproportionately large in comparison to physical assets. "Some of the prominent models/methods for measuring and estimating IC of a company are: Skandia Navigator, Organizational IC, IC-index, Technology Broker's IC Audit, Intangible Asset Monitor, MVA and EVA, Citation Weighted Patents, Tobin Q's Ratio, Human Resource Accounting, Balanced Scorecard etc.," added Bhasin (2014). Thus, a long and arduous road still needs to be negotiated before we have reliable measurements and disclosures of IC information.

The Financial Accounting Standards Board's (FASB), SFAS No. 142, "Goodwill and Other Intangible Assets," provides the accounting basis for measuring IA. An IA that is acquired from an external source is initially recognized at its fair value. If an IA is developed internally, it is recognized as an expense when it is incurred. This will limit the recognition of most IC to what is purchased from outside the organization, such as patents, licenses, and trademarks, because they are the only ones recognized as assets. Generally accepted accounting principles (GAAP) do not recognize a value of human capital nor much of the structural capital, such as internally developed software, patents, and brands. In developing the Statement, the FASB relied upon the four recognition criteria found in FASB Concept Statement No. 5, "Recognition and Measurement in Financial Statements of Business Enterprises." These criteria are: (1) The item meets the definition of an asset, (2) the item is measureable with sufficient reliability, (3) the information is capable of making a difference in decisions, and (4) the information indeed represents what it claims to represent, is verifiable, and is neutral.

As Bhasin (2011b) stated, "Since IC is a relatively new concept and there is no agreement on how to 'measure it, many IC items will fail on criterion two (reliability in measurement) and criterion four (verifiability). Until these two criteria can be met, it is doubtful whether many intellectual assets will be included in FS as disclosed in company Annual Reports. Additionally, there are no standards and/or generally accepted accounting policies for the

IC accounts; the reliability of IC accounts depends on quality data and accumulation methods." Thus, IC does not appear in the traditional FS. With the rise of the "knowledge economy" over the past 20 years, however, IC is becoming more important and should be disclosed. The various forms of IC disclosure provide valuable information for investors as they help reduce uncertainty about future prospects and facilitate a more precise valuation of the company. However, FS fail to reflect such a wide-range of value-creating IA, giving rise to increasing information asymmetry between firms and users, and creating inefficiencies in the resource allocation process within capital markets.

4. Literature Review

The main ICD studies were typically cross-sectional and country-specific, although some longitudinal studies have been reported too. Some of the leading ICD studies were conducted in Australia, UK & Ireland, Sweden, Canada, Malaysia, Sri Lanka, New Zealand, Bangladesh and India. While most studies employed "content analysis" as the research methodology, other studies have used questionnaire surveys. Despite the fact that the importance of IC has increased in recent times, there are inadequate disclosures of IC in the FS of companies.

The purpose of Kamath (2008) study is to examine the extent of voluntary ICD in India's emerging information, communication and technology sector and the relationship between the size of the firm and the extent of disclosures. Content analysis of the 30 technology, entertainment, communication and other knowledge (TecK) companies listed on the Bombay Stock Exchange is carried out. A list of intellectual capital (IC)- related terms is searched for its presence or absence within the annual reports of these forms for the financial year 2005- 2006. The results find significantly small extent of IC disclosures in Indian firms. However, Bhanawat's (2008) study measured the IC of companies by applying difference between market value and book value of firm. A comparative study by Bhasin (2011) provided an insight into the style of IC disclosures done by the IT-sector corporations, both from India and Australia. The author conducted a comparative study of 16 Indian and 20 Australian companies, in which the 'content analysis' was performed on their annual reports. The results of study confirmed that "IC disclosure done by these companies from India and Australia were found to be low, mostly reported in a narrative form, and IC disclosure had not received any preference from the mentors of these corporations." Singh and Kansal's (2011) paper aims to investigate inter-firm IC disclosures and its variations in top 20 listed pharmaceutical companies in India, study the category wise and element wise IC disclosures (ICD), find out the impact of ICD on the creation of IC in monetary terms, find out correlation between IC valuation and its disclosure, and test significance of correlation Although top 20 companies of knowledge- led industry, "ICD are low, narrative and varying significantly among companies. ICD score varies in range of 4 to 36 against expected score of 96."

However, in another research work, Bhasin (2012) conducted a longitudinal study to analyze how Indian firms—Reliance Industries Limited, Balrampur Chini Mills, and Shree Cement Limited—measure and report their IC reports. The author also conducted a study of 16 Indian IT corporations by applying content analysis on the 2007 to 2009 annual reports. The results of this study confirmed that "IC disclosure in these IT corporations is almost negligible and its disclosure had not received any preference from the mentors of these corporations." Similarly, Deep and Narwal (2014) analyzed the relationship of IC with financial performance measures of Indian textile sector for a period of 10 years using Value added intellectual coefficient method. Recently, Dammak (2015) performed an empirical investigation to clarify the relationship between voluntary disclosure on the IC and firm valuation through content and factor analysis. Moreover, Bhatia and Agarwal (2015) conducted the study based on companies that went through IPO on BSE/NSE in the period 2011-12 using content analysis and by constructing an IC-related disclosure index. The purpose of Ghosh and Maji (2015) study was to investigate empirically the validity of the basic propositions of value added intellectual coefficient (VAIC) and extend VAIC models in Indian knowledge-based sector. Using panel data relating to 62 firms from two Indian knowledge-based sectors, for a period of 10 years the study indicates that the VAIC model cannot be rejected as a technique of measuring intellectual capital. According to a study by Charumathi and Ramesh (2015), the authors' constructed a voluntary disclosure index with 81 financial and non-financial items. With the VDI, this study measures the voluntary disclosure levels for four financial years from 2009–2010 to 2012–2013 using the content analysis methodology.

Recently, Joshi et al., (2016) in their study examined the extent of IC disclosures and the determinants of such disclosures by the Malaysian companies by constructing disclosure index consisting of 20 items. The results revealed that the ICD level had increased as compared to the prior studies in Malaysia that suggests increased corporate awareness regarding ICD, though the disclosure level was lower as compared to the other advanced countries." The purpose of Maji and Goswami (2016), study is to examine the impact of intellectual capital (IC) on Indian traditional sector and compare the relative importance of IC on corporate performance of Indian knowledge-

based sector (engineering sector) and traditional sector (steel sector). The results indicate that IC efficiency and physical capital efficiency are positively and significantly associated with the firm performance for both the sectors.
The foregoing discussion suggests that the literature on the determinants of ICD in the Indian-context is very limited and inconclusive. Thus, our study builds on the previous literature of ICD practice and overall ICD scenario in the Indian corporate sector, especially pharmaceutical firms. The scope of the study has been confined to 8 companies and market value added (MVA) approach was used on their annual reports for five years, namely, 2005 and 2009, respectively.

5. Material and Methods

This study is an exploratory one and aims at two issues: (a) first, mapping the current state of IC disclosure scenario, and (b) second, attempt to measure the value of IC by the selected 8 companies in the Indian pharmaceutical industry during the 5 financial years 2005 to 2009. Accordingly, the sample-size of this study consists of the following companies: Aurobindo Pharma Limited, Aventis Pharma Limited, Cadila Limited, Cipla Limited, Dr. Reddy's Laboratories Limited, Novartis Limited, Sun Pharma Limited, and Torrent Limited. The two limitations of this study are: sample size is small and time period of study is also short. But we feel it will provide us a glimpse of the scenario, and help us to analyze and establish the trend of IC disclosure and measurement for the selected pharmaceutical companies from India.
The annual reports for the sample companies are collected from their respective corporate Web sites. The use of FS has been validated by several earlier research studies on ground of accessibility, consistency, timeliness and finally, it is an audited and comprehensive document, which is perceived to be more reliable than other documents. "Modified Intangible Assets Monitor" is used to capture the disclosure of elements of IC framework, as done by researchers in the past. The technique used for calculation of disclosure index is content analysis (Joshi et al., 2009). We are also going to use the five-point scale.
In order to attain the second objective, market value added approach (MVA), as a research methodology, is adopted for measuring the value of IC for the selected pharmaceutical companies in India. Moreover, under the present study, various statistical techniques are used to analyze the data. More specifically, the objectives of this part of the study are: first, to measure IC in monetary terms for the sample companies, second, to examine the relationship of IC and tangible assets with net operating profits, and third, to examine effectiveness of IC over tangible assets.

6. Results and Discussion

As mentioned earlier, this study aims at portraying the current state of the IC disclosure and measurement in the Indian scenario. Accordingly, "Modified Intangible Assets Monitor" is used to capture the disclosure of elements of IC framework, as done by researchers in the past. The technique used for calculation of disclosure index is content analysis (Bhasin, 2011, 2012; Joshi et al., 2010; Singh and Kansal, 2011). The five-point scale (0-4 score) has been applied in the following manner: No disclosures (0), Narrative disclosures (1), Quantitative disclosures (2), Monetary disclosures (3), Formula-based/comparative disclosures in statement form (4).

Table 2: Disclosure of IC by the Select Companies in 2008-09

S. No	Name of the Company	IC Disclosure Score	Ranking
1	Aurbindo Pharma Ltd.	19	3
2	Aventis Pharma Ltd.	22	2
3	Cadila Ltd.	07	7
4	Cipla Ltd.	04	8
5	Dr. Reddy's Laboratories Ltd.	28	1
6	Novartis Ltd.	08	6
7	Sun Pharma Ltd.	14	5
8	Torrent Ltd.	18	4
	Overall Average **Maximum Overall Score**	15 96	

Source: Compiled by the author based on annual reports of companies

<Table 2> provides a broad glimpse of the ICD scores of the 8 selected companies in 2008-09. A careful look at the data reveals that "first three top ICD scorers are: Dr. Reddy's (28), Aventis Pharma (22), and Aurbindo (19) and Torrent (18), respectively; thus, they get first, second and third ranks. However, the ICD score of three companies (viz., Novartis, Cadila and Cipla) is very poor and even below score of 10. Although, 8 listed companies of pharmaceutical sector in India have been taken in the study, IC disclosures vary among companies significantly. The highest and lowest ICD score values are 28 and 04, respectively with a substantial variation. Finally, the overall mean ICD score is 15 out of the total expected score of 96 (24 elements of IAM@4 points), which is drastically low and poor. In most of the cases, ICD are low, narrative and vary significantly among companies. External capital is the most disclosed category. Brands and business collaborations is most disclosed element of IC, followed by employee competence and internal organizational capital respectively. ICD leads to creation of IC in some companies. Overall, correlation between IC valuation and disclosure is negative, weak and insignificant. The ICD made by some of the sample companies does not adequately fulfill the information needs of stakeholders, and hence companies need to disclose more meaningful information in their annual reports or in separate IC Reports.

Not surprisingly, this finding is in alignment/tune with some of the previous studies. For example, Sen and Sharma (2013) and Bhanawat (2008) attempted to measure and evaluate voluntary Intellectual Capital (IC) disclosures made by Indian pharmaceutical companies in their annual report. The content analysis has been used to measure the extent and nature of disclosure in sample companies with the help of 18 IC indicators across three broad categories, viz., structural capital elements, relational capital elements and human capital elements. From the study, it can be inferred that most of the reported IC attributes are expressed in discursive rather than numerical or monetary terms. The IC disclosure made by the sample companies does not adequately fulfil the informational needs of stakeholders, and hence companies need to disclose more meaningful information in their annual reports or in separate IC reports." Similarly, Guthrie and Petty's (2004) analysis of IC disclosure practices suggests that disclosure has been expressed in discursive rather than numerical terms and that little attempt has been made to translate the rhetoric into measures that enable performance of various forms of IC to be evaluated. The low level of disclosure in both developed and developing countries is testament to the fact that "IC as a concept has not been widely adopted practically."

Let us examine the second objective of the study, namely, estimated value of measurement of IC in monetary terms. Therefore, market value added approach (MVA) as a research methodology is adopted for measuring IC of the eight Indian pharmaceutical companies during the study period. For the purpose of present research, IC is valued as the difference of market value (MV) and book value (BV). This method has already been used by several existing research studies in the past. The average of monthly highs and lows of market prices for the last 12 months is used to calculate the MV of the company. As described earlier, the estimated value of IC of all the 8 selected companies has been calculated by applying MVA approach. Thereafter, the relationship of the IC and tangible assets with the net operating profits (NOP) has been discussed in terms of coefficient of correlation. Last, but not the least, the effectiveness of IC over tangible assets has been examined through t-tests.

<Table 3> shows the measurement of estimated value of IC of eight selected companies during the five years from 2005 to 2009. The following observations can be made: Keeping in view the computed value of IC, there has been widely fluctuating trend in the amount of IC during the entire period of study among all the pharmaceutical companies. The highest absolute 'average' amount of IC has been reported by the Sun Pharma Limited (rank 1), followed by Cipla Limited (rank 2), Aventis Pharma (rank 3), Torrent (rank 4), Novartis (rank 5), Cadila (rank 6), and Aurbindo Pharma (7).

Table 3: Estimated Value of Intellectual Capital for Selected Companies

(Rs. in Crores)

Name of company	**2005**	**2006**	**2007**	**2008**	**2009**	**Average**	**C.V.**	**Rank**
Aurbindo Pharma Ltd.	305	-125	1163	369	-1464	**50**	1943	**7**
Aventis Pharma Ltd.	2564	3230	2408	1811	1267	**2256**	33	**3**
Cadila Ltd.	868	460	-68	-420	-101	**148**	346	**6**
Cipla Ltd.	1823	16361	4327	12618	11500	**9326**	65	**2**
Dr. Reddy's Laboratories Ltd.	1021	1038	152	-1031	-1853	**-134**	-952	**8**
Novartis Ltd.	707	564	153	186	-53	**311**	101	**5**
Sun Pharma Ltd.	4751	5871	12203	15356	21809	**11998**	58	**1**
Torrent Ltd.	340	335	1159	861	138	**567**	75	**4**
Overall Average	**1547**	**3467**	**2687**	**3719**	**3905**	**3065**	**209**	
Coefficient	97.13	161.02	153.07	173.02	214.90	**159.83**		

of Variance (C.V.)								
High Value	**4751**	**16361**	**12203**	**15356**	**21809**	**11998**		
Low Value	**305**	**-125**	**-68**	**-420**	**-53**	**-134**		

Source: Compiled from company annual reports by using MVA Method: IC= Market Value–Book Value, and by using average of market prices for the last 12 months.

Surprisingly, Dr. Reddy's Laboratories Limited was the only company from the sample, which created the least amount of IC (rank 8) as compared to other companies. It reported not only least amount of average IC but negative value (Rs. -134 croes). The Indian pharmaceutical sector reported "an overall average amount of IC of Rs. 3065 crores during 2004-05 to 2008-09." There is considerable variation, both ups and downs, observed among the average amount of IC of selected companies during five years. Keeping in view the data shown in above Table, 2009 may be considered as very good year for the shareholders of Indian pharmaceutical sector because this year reported highest average amount of IC (Rs. 3,905 crores). By and large, an increasing trend in the average amount of IC, from 2005 to 2009, has been observed, except in 2007 with a marginal fall. The dispersion among the selected companies has been measured in terms of range, which comes to Rs. 12,132 crores. The biggest inconsistency has been noticed in the case of Aurbindo Pharma Limited, as it is evident by its highest coefficient of variation (1943). On the other extreme, least amount of fluctuation has been observed in Aventis Pharma Limited with lowest amount of coefficient of variation (C.V. 33). In other words, the performance of IC shown by Aventis Ltd. is more consistent during the entire period of study, with minor changes. Brennam and Connell (2000) noticed substantial difference between company book value and market value, which indicates the presence of intellectual assets, not recognized and measured in company balance sheets.

<Table 4> depicts the Karl Pearson's correlation analysis of IC and tangible assets (TA) with net operating profit, and then examines the relationship of IC and TA with net operating profit (NOP). It is amply clear from the results that "there is a 'positive' correlation between tangible assets of companies and net operating profit, while in majority of companies 'negative' correlation is found between IC and net operating profit." One strong observation can be made here. Out of 8 companies selected, only two companies viz., Sun Pharma Limited (0.98, 0.98) and Cipla Limited (0.33, 0.92), have net operating profit positively correlated with both IC and tangible assets. In sharp contrast to this, all other companies are negatively correlated with IC and net operating profit. However, the overall average coefficient of correlation of IC and NOP is (-0.26), while the average coefficient of correlation of Tangible assets and NOP is (0.85) during the study period. Furthermore, Probable Error (PE) based test of significance has also been applied. It clearly reveals that significant correlation exists between tangible assets and net operating profit, while no significant correlation exists between IC and NOP.

Table 4: Correlation Analysis for the Selected Companies

Name of Company	**Correlation value of Intellectual Capital and Net Operating Profit**	**Correlation value of Tangible Assets and Net Operating Profit**
Aurbindo Pharma Ltd.	-0.67	0.74
Aventis Pharma Ltd.	-0.26	0.72
Cadila Ltd.	-0.72	0.93
Cipla Ltd.	0.33	0.92 (close correlation)
Dr. Reddy's Laboratories Ltd.	-0.66	0.84
Novartis Ltd.	-0.96	0.92
Sun Pharma Ltd.	0.98	0.98 (perfect correlation)
Torrent Ltd.	-0.12	0.80
Overall Average	**-0.26**	**0.85**

Source: Compiled by author from annual reports of companies

The effectiveness of IC over tangible assets of selected companies is shown in above <Table 5>. It shows IC and tangible assets to market value expressed in terms of percentage. The inner brackets () in the above table represents tangible assets to market value in percentage. A careful perusal of the data reveals that the highest average percentage of IC to market value during the 5 years period of study is noticed in the following four companies: Sun Pharma Limited (78%), followed by Aventis Pharma Limited (74%), Novartis Pharma Limited (71%), and Cipla Limited (71%), respectively. Thus, Sun Pharma Limited, Aventis Pharma Limited get first and second rank, while two companies viz., Novartis Pharma Limited and Cipla Limited jointly share the third rank. However, the

negative IC to market value is reported by both Dr. Reddy's Laboratories Limited (-4%) and Aurbindo Pharma Limited (-7%). Overall, correlation between IC valuation and disclosure is negative, weak and insignificant.
After a careful look at Table 4, the following additional broad generalizations can be made. On an average basis, the overall pharmaceutical industry reported 41% of IC to market value, and 59% of tangible assets to market value. So, it very clearly indicates that tangible assets (TA) are more powerful as compared to IC. Moreover, on making a year-wise analysis, it is observed that there is a continuous declining trend in IC to market value ratio throughout the study period. For example, it declined from 52.00 in 2006, 47.37 in 2007, 36.00 in 2008 and finally, stands at 19.00 in 2009. However, a lone exception was in the year 2006 when the overall ratio slightly increased from 51.78 in 2005 to 52.00 in 2006. The highest IC to market value ratio is noticed in the year 2006 with 52%, while least ratio is noticed in the year 2009 with 19%. Further, the highest tangible asset to market value ratio is observed in the year 2009 with (81%) and the least in the year 2006 with (48%). Further, in order to examine the hypothesis that there is no significant difference between mean values of IC & T.A. to M.V. (in percentage); a t-test has also been administered. The calculated value of t-test is derived at (0.53) where table value at 5% level of significance at 14 d.f. is (2.15). So, our null hypothesis is accepted because calculated value is less than table value, which clearly indicates that there is no significant difference between % of IC and tangible assets to market value (MV). The small visible difference is only due to sampling fluctuations and not due to any major reason.

Table 5: Percentage of Intellectual Capital, Tangible Assets to Market Value

Name of Company	**2005**	**2006**	**2007**	**2008**	**2009**	**Average**	**Rank**
Aurbindo Pharma Ltd.	17(83%)	-8(108%)	35(65%)	11(89%)	-92(192%)	**-7(107%)**	**7**
Aventis Pharma Ltd.	84(16)	85(15)	77(23)	68(32)	58(32)	**74(25)**	**2**
Cadila Ltd.	47(53)	30(70)	-6(106)	-43(143)	-6(106)	**4(95)**	
Cipla Ltd.	54(46)	89(11)	63(37)	78(22)	72(28)	**71(29)**	**3**
Dr. Reddy's Laboratories Ltd.	31(69)	28(72)	5(95)	-37(137)	-47(147)	**-4(104)**	**4**
Novartis Ltd.	54(46)	90(10)	63(37)	78(22)	72(28)	**71(107)**	**3**
Sun Pharma Ltd.	79(21)	66(34)	79(21)	81(19)	83(17)	**78(22)**	**1**
Torrent Ltd.	49(51)	36(64)	63(37)	52(48)	12(88)	**42(57)**	**5**
Overall	**51.87(48)**	**52.00(48)**	**47.37(53)**	**36.00(64)**	**19.00(81)**	**41(59)**	**6**
High	84(16)	90(10)	79(21)	81(19)	83(17)		
Low	17(83)	-8(108)	-6(106)	-37(137)	-6(106)		

7. Conclusion

In today's knowledge-based economies, IC (in addition to financial and physical capital) plays a significant role in the value creation process of organizations. In a knowledge-intensive economy, a company's IC, whether it is derived from its employees, customer databases, or brands, undoubtedly contribute to a company's success and its ultimate value. Since knowledge is a source of competitive advantage, firms must develop their ability to measure, manage and disclose IC. It is argued that the success of many 21st century organizations lies in their ability to unlock and exploit their IC to obtain maximum 'organizational' advantage. Therefore, a common 'international' framework is needed for measuring, reporting and monitoring intangibles. As of now, most of these intangible assets cannot be included within a company's balance sheet. Thus, IC disclosures in the FS have been largely purely 'voluntary' in nature. In the current scenario of financial reporting regime, investors are increasingly looking at the disclosure practices of companies. The companies also face capital market pressures and need to disclose more than the regulatory norm (Charumathi and Ramesh, 2015). "There could be several motivations for the companies to disclose IC information voluntarily. It is widely accepted that IC measurement and disclosure discussions have entered the corporate world, but review of the extant literature and previous studies reveals that IC, as a concept, has not been widely adopted practically by the corporate sector," says Bhasin (2016). In view of the increasing strategic

importance of IC information, more and more organizations are shifting their focus to measurement and disclosure of IC, their most valuable assets. Unfortunately, IC is very difficult to measure and disclose both accurately and consistently, but its returns can be nearly infinite. Research till-date has yet to conclude how best to measure and disclose the IC. Current debates about IC are part of the search for a methodology to measure the knowledge base of a firm.

After some initial research on business and intangible resources in the Indian corporations, we found that three corporations had published their first IC reports in 1997, which were discontinued later on. However, there were vast differences in the disclosure mechanisms and methodologies followed by these Indian corporations. But as expected, IC disclosures are low and vary across these companies significantly. In most of the cases, ICD are low, narrative and vary significantly among companies. Furthermore, the above analysis reveals that the ICD among Indian pharmaceutical companies is very low. Not surprisingly, this finding is in alignment/tune with some of the previous studies. Recently, Joshi et al., (2016) concluded, "The results revealed that the IC disclosure level had increased as compared to the prior studies in Malaysia that suggests increased corporate awareness regarding IC disclosures, though the disclosure level was lower as compared to the other advanced countries." For example, Guthrie and Petty's (2004) analysis of IC disclosure practices suggests that disclosure has been expressed in discursive rather than numerical terms and that little attempt has been made to translate the rhetoric into measures that enable performance of various forms of IC to be evaluated. Similarly, Sen and Sharma (2013) in their study concluded as: "It can be inferred that most of the reported IC attributes are expressed in discursive rather than numerical or monetary terms." The IC disclosure made by the sample companies does not adequately fulfil the informational needs of stakeholders, and hence companies need to disclose more meaningful information in their annual reports or in separate IC reports. No doubt, IC discussions and experimentation process has entered the corporate world but evidence published reveals that "IC as a concept has not been widely adopted practically. The low level of disclosure in developed as well as developing countries (like India), is testament to this fact.

Second, attempt is made to measure the estimated values of IC using MVA approach. There have been widely fluctuating trend in the amount of IC during the study period, across all eight companies. Brennan and Connell (2000) also noticed substantial differences between company book value and market value, which indicates the presence of intellectual assets, which are not recognized and measured in company balance sheets and also provides guidelines to companies for reporting on IC. Similarly, Tandon et al., (2016) have stated, "During the recent years, value of financial assets has grown exponentially when compared to physical assets indicating that intangibles are growing in importance in their contribution to economic growth. The evidence in support of this phenomenon can be found in the increasing gap between market and book valuation of firms." As concluded by Singh and Kansal (2011), "The computed values of IC reveal that huge value of IC remains unreported in the balance sheet." Because of lack of standardized accounting guidelines on this vital asset, resources worth thousands of millions go unreported in the annual reports thwarting the basic motive of true and fair view of FS." Thus, IC measurement, reporting and disclosures in the emerging economy are still at a very nascent stage, especially in India. Though the awareness of the significance of IC disclosure is steadily improving over a period of time, the extent of disclosures is far behind the standards set by companies in developed economies. "If the measurement and disclosure is made mandatory, then the stakeholders would get a clear picture about the true performance of the firms and would enable them towards better decision-making," (Rodrigues et al., 2016).

Recently, the FTI Consulting (2015) has announced the launch of its Disclosure Index, a report that tracks mandatory and voluntary disclosure practices amongst India's leading publicly-listed corporations. When scored on a composite scale of 1 to 10, the "Indian Disclosure Index" revealed that only 41% of constituent companies of the BSE 100 index were fully compliant on 'mandatory' disclosure parameters. The report also revealed low levels of voluntary disclosure by Indian companies, with a median score of 3.5 (out of a maximum of six) with most providing inadequate information relating to business strategy and debt. It is surprising that a large majority of BSE 100 index constituents did not articulate corporate strategy in sufficiently clear terms. This is also an indication of the currently-prevalent focus on financial metrics over non-financial ones. This is an area that needs to be revisited by Indian companies and their boards when finalizing their disclosure policy. Thus, on voluntary disclosure, Indian companies have a lot of work ahead of them to improve the manner in which management quality is perceived externally.

"It is utmost necessary to develop a new framework to identify, classify and calculate the value of IC. The International Accounting Standards Committee and its national counterparts face a challenge in setting standards for IC disclosure," suggested Bhasin (2015). The measurement examples thus far have been too firm-specific and no set of indicators could hope to be general enough to encompass the needs of a variety of international and industry settings. Finally, we recommend that "a standard on IC accounting be issued by International Financial Reporting Committee (IFRC) to enable firm's measure and record their IC values, as they relate to earnings per share in their

income statement." Auditing all of the different ICD frameworks at this point would be pointless. The adoption of ICD should be given due weightage in rating the companies. The disclosure of IC influences market price, therefore it may lead to improvement of rating of the companies as well, through enhancement of market capitalization. If companies realize the favorable relationship of ICD and market price, they shall be tempted to build more IC and disclose it. Voluntary disclosure is the only solution in the short-term. In the long-term, it will be up to the demands of the capital markets. If shareholders and analysts agree that IC disclosure is beneficial in explaining business performance, than companies will have no choice but to appease their audience. In the meantime, academic researchers must continue to push the envelope on empirically-based studies so as to support the growing number of early adopters.

References

Abeysekera, I. (2007). Intellectual capital disclosing between a developing and developed nation. *Journal of Intellectual Capital*, 8(2), 329-345.

Andriessen, D. (2004). Intellectual capital valuation and measurement: classifying the state of the art. *Journal of Intellectual Capital*, 5(2), 230-242.

Anuonye, N. B. (2015). IC Measurement: Using the earnings per share model of quoted insurance companies in Nigeria. *International Business and Management*, 10(1), 88-98.

Bernard, M., Dina, G., & Andy, N. (2003). Why do firms measure their intellectual capital? *Journal of Intellectual Capital*, 4(4), 441–464.

Berzkalne, I., & Zelgalve, E. (2014). Intellectual Capital and Company Value. *ScienceDirect, Procedia Social and Behavioral Sciences 110*, 887-896.

Bhasin, M. L. (2007). Intellectual Capital Reporting: The Challenge of Standardization and Harmonization. *Chartered Accountant*, June, 50(12), 1842-1858.

Bhasin, M. L. (2008), Intellectual Capital Reporting at the Crossroads. *Paradigm.* 12(1), Jan.-June, 64-76.

Bhasin, M. L. (2011). Disclosure of Intellectual Capital in Annual Reports: An Empirical Study of the Indian IT Corporations. *Modern Economy*, 2(4), 455-467.

Bhasin, M., & Shaikh, J. M. (2011a). Disclosure of Intellectual Capital in the Annual Reports by the IT Companies: An Exploratory Study of India. *International Journal of Managerial & Financial Accounting*, 3(2), 255-278.

Bhasin, M. L. (2011b). Intellectual Capital Reporting Study of IT Sector Corporations in India, Australian *Journal of Business and Management Research*, 1(1), 16-28.

Bhasin, M. L. (2011c). Disclosure of Intellectual Capital in Annual Reports: An Exploratory Study of Indian IT Corporations. *Review of Economics & Finance*, 4(8), Aug., 63-73.

Bhasin, M. L. (2012). Measurement and Disclosure of Intellectual Capital: Evidence from a Developing Country. *International Journal of Finance and Accounting*, Sept., 1(5), 82-93.

Bhasin, M. L. (2012a). Intellectual Capital Disclosure Scenario: Evidence from a Developing Country, *European Journal of Business and Social Sciences*, 1(9), Dec., 26-45.

Bhasin, M. L. (2014). Disclosure of Intellectual Capital in Annual Reports: Comparing Evidence from India and Australia. *International Journal of Management and Innovation*, 6(2), 103-125.

Bhasin, M. L. (2015). Voluntary Reporting of Intellectual Capital: Scenario of a Developing Economy. *British Journal of Research*, 2(6), 180-195.

Bhasin, M. L. (2015a). Intellectual Capital Disclosure: Scenario of a Developing Economy. *Ciencia e Tecnica Vitivinicola Journa*l, 30(12), Dec., 28-47.

Bhasin, M. L. (2016). Voluntary Reporting of Corporate Governance Information in Annual Reports: An Empirical Study of an Asian Country. *International Journal of Management Sciences and Business Research*, July, 5(7), 71-95.

Bhasin, M. L. (2016a). Fraudulent Financial Reporting Practices: Case Study of Satyam Computer Limited. *The Journal of Economics, Marketing and Management*, 4(3), 12-24.

Bhatia, M., & Agarwal, B. (2015). IC disclosures in IPO prospectuses of Indian companies. *International Journal of Social Sciences and Management*, 2(1), 40-51.

Bhanawat, S. S. (2008). Indian Pharmaceutical Industry: Accounting and Disclosure Practices of Intellectual Property. *The Accounting World*, 29-35.

Brennan, N., & Connell, B. (2000), IC: Current Issues and Policy Implications. *Journal of Intellectual Capital*, 1(3), 206-240.

Bukh, P. N., Nielsen, C., Gormsen, P., & Mouritsen, J. (2005). Disclosure of information on intellectual capital in Danish IPO prospectuses. *Accounting, Auditing and Accountability Journal*, 18(6), 713-732.
Charumathi, B., & Ramesh, L. (2015). On the determinants of voluntary disclosure by Indian companies. *Asia-Pacific Journal of Management Research and Innovation*, June, 11(2), 108-116.
Chiucchi, M. S. (2008). Exploring the benefits of measuring intellectual capital. The Aimag case study. *Human Systems Management*, 27(3), 217-230.
CIMA (2004). *Understanding corporate value: managing and disclosing intellectual capital*. Retrieved May 22, 2014, from http:// www.cima.org.
Dadashinasab, M., Mousavi, S.A., Ghorbani, B., & Khatiri, M. (2015). IC Performance of financial institutions in Iran. *Walia Journal*, 31(S3), 56-60.
Dammak, S. (2015). An analysis of the relationship between the voluntary disclosure of the IC and the firm value. *Management Science Letters*, 5(3), 271-288.
Depoers, F. (2000). A Cost-benefit Study of Voluntary Disclosure: Some Empirical Evidence from French Listed Companies. *European Accounting Review*, 9(2), 245-63.
Deep U., & Narwal, K. P. (2014). Intellectual Capital and its association with financial performance: a study of Indian Textile Sector. *International Journal of Management and Business Research*, 4(1), Winter, 43-54.
Demartini, C., & Trucco, S. (2016). Does Intellectual Capital Disclosure Matter for Audit Risk?. *Sustainability Journal*, 8(3), 867-866.
FASB Statement (2001). *Statement of Financial Accounting Standards No.142: Goodwill and Other Intangible Assets*. Retrieved May 22, 2014, from http://www.fasb.org.
FTI Consulting (2015). *India Disclosure Index*. Retrieved May 22, 2014, from http://www.fticonsulting.com.
Gamayuni, R. R. (2015). The effect of Intangible asset, financial performance and financial policies on the firm value. *International Journal of Scientific & Technology Research*, 4(1), Jan., 202-212.
Ghosh, S. K., & Maji, S. G. (2015). Empirical Validity of Value Added Intellectual Coefficient Model in Indian Knowledge-based Sector. *Global Business Review*, Dec. 16(6), 947-962.
Guthrie J., Petty, R., Yongvanich, K., & Ricceri, F. (2004). Using content analysis as a research method to inquire into intellectual capital reporting, *Journal of Intellectual Capital*, 5(2), 282–293.
Joshi, M., & Ubha, D. S. (2010). Intellectual Capital Disclosures: The Search for a new Paradigm in Financial Disclosure by the Knowledge Sector of Indian Economy. *Electronic Journal of KM*, 7(5), 575-582.
Joshi, P. L., Min, T. H., Deshmukh, A., & Jaffar, N. B. (2016). Extent and Determinants of Intellectual Capital Disclosures by Top Listed Companies in Malaysia. *Indian Journal of Finance*, 10(4), April, 7-28.
Kamath, B. (2008). Intellectual Capital Reporting in India: Content Analysis of Teck Firms. *Journal of Human Resource Costing and Accounting*, 12(3), 213-224.
Maji, S.G., & Goswami, M. (2016). Intellectual capital and firm performance in emerging economies: the case of India. *Review of International Business and Strategy*, 26(3), 410 – 430.
McCann, D. (2016). *Intellectual Capital: The Hidden Talent Metric*, *Sept*. Retrieved May 22, 2014, from http://www CFO.com.
Oksana, L., & Inga, L. (2016). The transformation of the organization's intellectual capital: from resource to capital. *Journal of Intellectual Capital*, 17(4), 610 - 631
Razak, R. A., Mohammad, J., & Tobiagi. S.M. (2016). Intellectual Capital Disclosures Practices and Intellectual Capital Performance in Saudi Arabia Financial Institution. *Journal of Business Studies Quarterly*, 7(4), 1-14.
Rodrigues, H. S., Gupta, P., & Carlson, R. (2015). Exploiting Intellectual Capital for Economic Renewal. *International Journal of Innovation Science*, 7(1), March, 13-26.
Rodrigues, L., Tejedo-Romero, F., & Craig, R. (2016). Corporate governance and intellectual capital reporting in a period of financial crisis: Evidence from Portugal. *International Journal of Disclosure and Governance*, May, 15-60.
Singh, S., & Kansal, M. (2011). Voluntary disclosures of intellectual capital: an empirical analysis. *Journal of Intellectual Capital*, 12(2), 301-318.
Stewart, T. A. (2002), The Wealth of Knowledge: Intellectual Capital and the Twenty-first Century Organization. New York :Currency Book published by Doubleday.
Sen, M., & Sharma, D. (2013). ICD of select pharmaceutical and software companies in India. *IUP Journal of Accounting Research and Audit Practices*, 12(1), Jan. 47-62.
Stathis, K. L. (2015). *Ocean Tomo Releases 2015 Annual Study of Intangible Asset Market Value*. Retrieved May 22, 2014, from http://www.oceantomo.com.
Survilaite, S., Tamosiuniene, R., & Shatrevich, V. (2015). Intellectual Capital Approach to modern management through the perspective of a company's value added. *Business Theory and Practice*, 16(1), 31-44.
Sveiby, K.E. (2004). *Methods for Measuring Intangibles.* Retrieved May 22, 2014, from http://www.sveiby.com.

Tandon, K., Purohit, H., & Tandon, D., (2016). Measuring Intellectual Capital and Its Impact on Financial Performance: Empirical Evidence from CNX Nifty Companies, *Global Business Review*, 17(4), August, 980-997.
Talukdar, A. (2008). *What is Intellectual Capital?*. Retrieved May 22, 2014, from http://www.attainix.com.
Uziene, L., & Stankute, E. (2015). Factors Influencing Intellectual Capital Measurement Practices, 20th International Scientific Conference Economics and Management-2015. Available at Procedia- Social and Behavioral Sciences 213 (2015), 351–357.
Zambon, S., & Monciardini, D. (2015). Intellectual Capital and Innovation: A Guide for Future Research. *Journal of Innovation Economics & Management*, 2(17), 13-26