Adequacy Degree between Supply and Demand for Intellectual Capital Information in the Annual Reports in an Emerging Country: The Tunisian Case

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Abstract

In the setting of this paper, we compare the usefulness perception of 42 items of voluntary information on intellectual capital of 22 Tunisian financial analysts and portfolios managers with the degree of their disclosure in the annual reports of 50 firms listed on the Stock Exchange Securities of Tunisia. The analysis is led on the primary data extracted from a survey and from secondary data extracted from annual reports. Given the purpose of our study, we developed a weighted disclosure index comparing the supply of information on intellectual capital in annual reports and user's demand.Results highlight the existence of an important gap between the supply and the demand of voluntary information on intellectual capital. More specifically, the offer of the majority of information diverges completely with their demand by the Tunisian financial market.

Index terms— intellectual capital, supply, demand, voluntary information, financial market, annual reports.

1 I. Introduction

Recent empirical studies have explored new facets of voluntary information and highlighted that information on intellectual capital is considered as a quality signals for investors. Several studies in the accounting literature (Eccles and Mavrinac, 1995; **??**olland, 1997; **??**ernandez, and al, 2000;Eccles and al. 2001;Lev, 2001; **??**eattie & Pratt, 2002a, 2002b;Chahine and Mathieu 2003; **??**arcia-Meca, 2005 ; and Béjar, 2006?) underlined that the value of a company is derived much of its intangibles, thus intellectual capital is an integral part of a firm's value-creating processes and it is fundamental for creating and maintaining competitive advantage (Wagiciengo and Belal, 2012).

The importance of information relating to intangibles in financial market was underlined. Litterature argue that firms desiring create value and attract investors must particulary talook after its disclosure on intellectual capital to satisfy investors' needs.

Meanwhile, disclosure based on on tangible assets, historical cost accounting and prudence, has difficulty in measuring and evaluating intellectual capital which is currently the most valuable asset for many companies.

Due to the lack of intangibles in the accounting and their increasing importance in the value creation process, the financial statements have lost a significant part of their value to shareholders and became irrelevant. If any other information will come fill this void, there could be a misallocation of resources in the financial markets **??**Casta and Ramond, 2005).

In order to compensate the loss of relevance of financial statements, several studies have proposed the voluntary disclosure on intellectual capital as the solution (Zeghal & Maaloul, 2011).

In this sens, firms are encouraged to go beyond the mandatory publications, choosing to adopt an active strategy that includes voluntary disclosure on intellectual capital (Kateb, Matoussi and Bounfour, 2009). This type of information enables a better assessment of the real firm value by reducing the asymmetry of information, and therefore, attracts investors on the financial market (Rylander and al, 2000).

However, I cannot affirm that all information on intellectual capital can be used as efficient signal in financial market. Only some of them can send signals to potential investors to help them make a better investment decision .

A logical deduction leads me to think that information on intellectual capital cannot be considered as efficient signal if it does not coincide with the users' expectations. At the opposite information which corresponds to it can play this role. he development of financial markets in recent years has significantly altered the company's disclosure policies (Leger, 2003). Initially, designed to satisfy the legal requirements, information has now become a veritable tools used voluntarily by the company to communicate their image in the financial markets.

T More explicitly, in order to keep information operates, the language used must always be that of the receiver **??**Décaudin, 1997). Based on this verdict, we can say that information cannot be perceived by financial markets as an efficient signal to create value if market participants understand it. In other words, to ensure that information on the intellectual capital to fulfill their signal role in the financial market, they must be understandable by investors, in line with their expectations and satisfactory compared to their information needs . Therefore, the voluntary publication on intellectual capital should be conducted in a bilateral perspective that takes into consideration both the corporate reporting supply and demand of the financial market.

However, while most companies live in the pleasant illusion that their publication meets both criteria of usefulness and adequacy, users always shows dissatisfaction with these publications. A mismatch between supply and demand on intellectual capital information appears to exist in the financial market.

In this context, jenkinson and Ljungquist (2001) underline the multiplication of organidsed meeting between investment banks and potential investors trying to account for investors'information needs before finalizing reporting.

Several studies have focused on the degree of informational user satisfaction (Ho and Wong, 2001;and Naser Nuseibeh, 2003;Nielsen, 2004;Prencipe, 2004;Schuster and **??**'Connell, 2006 Chakroun, 2012). These authors highlighted the existence of an information gap between the voluntary disclosure in annual reports and the needs of the financial market.

Concerning information on intellectual capital, only Bukh and al. (2005), Van Der Zahn and Singh (2005) and studied the extent of corporate publications on their intellectual capital in the context of the IPO. This work demonstrated that the extent of disclosure on intellectual capital remains relatively low compared to information needs of investors.

These findings lead us to set the following research question: to what extent does the supply of voluntary information on intellectual capital in the annual reports meet the information demand (or needs) of investors in the Tunisian financial market? We wonder, especially if companies manage to satisfy the financial market through voluntary publication on their intellectual capital.

The main objective of this paper is to identify firstly the most useful information on intellectual capital in the financial market and secondly it is to underline the degree of adequacy of voluntary intellectual capital information disclosed in the annual reports with the perception of its usefulness by financial market. The present study presents a significant interest in the accounting literature and provides whether it would be appropriate for the Tunisian accounting standard setter to ask companies to disclose more intellectual capital information taking account the needs' users.

To do this, we developed a disclosure index to "quantify" the phenomenon of voluntary disclosure on intellectual capital in a double dimension (supply and demand). This two-dimensional approach tends to compare the information needs of the users of the annual reports concerning their disclosure in these reports.

The choice of the Tunisian context is motivated by regulatory initiatives disclosure undertaken by the Tunisian authorities, the most important one is the promulgation of Act n° 2005-96 on to the strengthening of the financial security. Among other initiatives, we note the publication of the Arab Institute of Business Leaders of a guide of good corporate governance practice in 2008, and the guide of the annual report of the Tunisian enterprises in 2009; as well as the establishment of the Tunisian Center of Corporate Governance in 2009. Likewise, it should be noted that the Tunisian financial market is small and characterized by the existence of minority shareholders, which need to be protected by developing the disclosure including that concerning intellectual capital.

The remainder of this paper is organized as follows. Section 2 reviews the previous theoretical and empirical research; the methodology and study design are discussed in the third section; the fourth section presents the test results; and the final section of the paper summarizes the conclusions, describes limitations, and discusses implications for future research.

2 II. Literature Review

a) The evolution of the informational needs of the financial market Several investigations were conducted to identify the information needs of investors. These surveys have underlined the growing importance of nonfinancial information, including intellectual capital information.

In the United States, the Standard Research Institute conducted a survey over the period 1986-1987. It aimed to identify the information needs of professionals and investors. This survey underlined the importance of some information concerning the intangible aspect, which includes human resources, innovation, reputation, research and development and firm strategy.

In the same context, the Canadian Institute of Chartered Accountants conducted a survey in 1990, which aims

to identify the most useful information to users of financial reports, including shareholders, creditors and financial analysts. The result has to make a list of the most relevant financial and non-financial information to users including: a) An overview of the company; this is information concerning the company profile, its organizational structure, assets, services and markets, its industries, its general outlook and human resources; b) Analysis of the operation; it relates to the overall company management, its performance, future directions, information on research and development, risk data, and on the competitive environment; c) Additional information; they concern the members of management, ownership and control of the company and the main committees and investor relations.

In 1994, the American Institute of Certified Accountants conducted a survey to determine the most relevant information for investment decision. This survey identified six types of financial and non-financial information needs: identification of firm risks and opportunities; identification of the nature of the company's business through the goods and services, production methods, the number and type of competitors and customers, the link between the events and activities of the business and their financial consequences; predictive perspective; leadership objectives; analysis of firm performance and understanding of the firm environmental characteristics.

In a similar study conducted in France, **??**avrinac and Siesfield (1997) showed that investors place significant attention to information on intellectual capital such as the implementation of the strategy, the credibility of the management, the quality of the strategy and innovation. These informations are part of the major concerns for users who wish to evaluate the firm performance.

The study of Hasannejad Neysi and al (2012) support these findings and showed that information for strategy implementation, market share, innovativeness and the company's ability to attract and retain talented employees are crucial. The results point towards a need for companies to adopt a more comprehensive approach to managing intellectual capital. Successful companies were also found to manage intellectual capital better than less successful firms.

These studies were largely confirmed by the Frotiee and Andrieu (1998) research in which it appears that a number of non-financial information is particularly important for users. Indeed, this researcher has shown that users have a strong interest in information measuring the quality of production processes, its ability to innovate and customer satisfaction. The authors have found that the forecast errors decrease proportionally with the increase of analyzes based on intellectual capital information. The latter can exceed a superficial analysis of the company including elements related to its strategy, organization, management and its customers.

According to what was mentioned above, we can underline the genesis of new informational needs, including firm intellectual capital. This information is seen as indicative of the company's growth opportunities. Companies, aware of this situation, disclose voluntary information related to their intellectual capital to report the firm value on financial market.

3 b) The challenges of matching voluntary information supply on intellectual capital in the annual reports upon the request on financial market

The annual reports preparers must provide the users of these reports the relevant information concerning the decision making (Chakroun, 2012). In this way, the annual reports must be prepared according to the needs of the external users (Ball and al., 2000). The accounting literature underlined that although the firms live in the illusion that their disclosures meet both criteria of usefulness and adequacy, users show dissatisfaction with managerial publication. A discrepancy between the usefulness perception of intellectual capital information and the degree of their disclosure in the annual reports seems to exist in the financial market.

We review, first, some studies about the comparison between supply and demand for voluntary information in the annual reports. Second, we review some other researches about the comparison between supply and demand for voluntary information on intellectual capital.

Chakroun (2012), using a sample of 24 companies listed on the Stock Exchange Securities of Tunisia, showed that the voluntary information content of the annual reports does not meet the informational needs of the financial market. More specifically, supply of 29 items in the annual reports diverges completely with the financial market demand. Most of these items are items whose disclosure is voluntary and not closely linked to the mandatory one. However, the results reveal that the majority of the 9 items, for which the offer in the annual reports and the demand of financial market converge, are items whose disclosure is voluntary and closely linked to the mandatory one. The study of Prencipe (2004) underlined the existence of a big discrepancy between information supply and demand for the three following information: the operational results, the segment assets and the capital expenditure. This gap occurs because these information's are disclosed by a very small number of sample companies despite their relevance on the financial market. In South Africa, the study of Myburgh (2001) showed the existence of a discrepancy between the usefulness of voluntary information perceived by information's users and the degree of disclosure in the annual reports for 17 items out of the 49 items which disclosed voluntary by South African companies. Buzby (1974) developed a list of 38 financial and non-financial items. The results of this study showed that many items, which are considered significant by the financial market, are not sufficiently disclosed by the companies of the sample and there is no correlation between the importance attached by financial market to the information and the level of their disclosure in the annual reports.

On the other hand, Bukh and al. (2003), Van Der Zahn and Singh (2005) and studied the extent of intellectual capital disclosure in the context of the IPO. Bukh and al. (2003), using a sample of 68 IPOs carried out between 1999 and 2001 on the Copenhagen Stock Exchange, showed that the companies disclose on average 30 information about their intellectual capital in comparison to a set of 78 information previously selected in the literature (ie a disclosure score which equalizes « 0.384 »). On the other hand, Van Der Zahn and Singh (2005), using a sample of 334 companies listed on the Singapore market over the period 1997-2004, concludes that companies disclose on average 28.9 information on a set of 81 information previously selected (ie a disclosure score of « 0.356 »). The study of was conducted, using a sample of 107 IPOs with Euronext Paris, during the period 1996-2004. The result confirm the existence of a discrepancy between the perceptions of the users and those of the producers of the annual reports for 8 items out of the 19 items analyzed which are voluntarily disclosed in France. Sample firms obtain on average a disclosure score of « 0.378» compared on a maximum score of «1».

According to what was mentioned above, we propose to test the following hypothesis.

Hypothesis: There is a discrepancy between the usefulness perception of information on intellectual capital and the degree of their voluntary disclosure in the annual reports.

4 III. Investigation Method

First, we present the samples and the data. Next, we present the variables and their measures and finally we highlight the strategy of hypothesis testing.

5 a) Sample selection

Our research is based on a primary data collection from questionnaires conducted next to the population of financial analysts and portfolio managers, as well as on secondary data from the annual reports of companies listed on the Stock Exchange Securities of Tunisia.

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6 . Sample of financial analysts and portfolio managers

In order to succeed the Delphi method, we must select qualified experts. According to , the concept of expertise is presented through three characteristics namely market experiment, familiarity with study object and knowledge of the object characteristics. Thus, selected experts must be persons able to interpret information on financial market, able to predict information needs to be published. These experts must also have a minimum of experience in the analysis of disclosure and to participate in the investment decision.

The sample of our study consists of financial analysts and portfolio managers. Our choice to focus on this particular category of users of financial information was made for several reasons: the importance of these users' intermediary role in the chain of economic information, their ability to explain their specific needs for information and their capacity to guide the investors' behavior in the financial market (Healy and Palepu, 2001). In this sense, our survey was conducted among 22 financial professionals: 12 financial analysts and 10 portfolio managers. Table 1 presents a summary of the respondent's characteristics.

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Volume XVI Issue VII Version I Year ( ) Since the survey of the financial analysts and portfolio managers was conducted during the second half of 2013, the annual reports analyzed for the degree of the disclosed items are those of 2012. Our sample consists of 50 firms observed during 2012, represents all the companies listed on the Tunisian stock exchange. The annual reports were collected from the Financial Market Council (FMC). Table 2 shows a distribution of company sample by sector of activity. The data were collected from the annual reports of sample companies. The methodology consists in reading the annual reports and calculating a disclosure index for each company which compares the information presented in the annual reports with that on the grid of voluntary items.

8 b) Definitions and measures of variables i. The grid of voluntary items:

We constructed an index of voluntary disclosure based on a analysis grid auto-constructed. Indeed, we realized an interview with financial market participants to generate the most relevant information on intellectual capital as perceived by the financial market.

To identify the perception of the Tunisian financial market professionals of the importance of intellectual capital and reveal their expectations in regard to disclosure of information on these topics, we chose to Like many researchers , Belal and Roberts (2010)) following a qualitative approach: semi-structured interviews. The exploratory study conducted with financial analysts and portfolio

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A managers allowed to propose a conceptualization of intellectual capital to the Tunisian financial market consists of 42 information. We have grouped these components into 9 categories of information.

The grid of voluntary information is documented in Appendix1.

ii. Usefulness perception of the intellectual capital informations (User's needs) After fixing the grid of voluntary items, the survey respondents were asked to give their opinion about how useful the intellectual capital information in the analysis grid are by assigning a score on each a five-point Likert scale (from 1 = Very low importance, 2 = Fairly low importance, 3 = Moderate importance, 4 = Strong enough importance, to 5 = Very high importance). This approach is to assign each item a weight reflecting its utility according to the chosen group of the users on financial market.

According to Prencipe (2004) and Buzby (1974), the usefulness perception of the information is the average weight of each information (it is the sum of points assigned by respondents to information, divided by the number of respondents).

In order to get a consensus view on the usefulness perception of the information about intellectual capital, we realized our survey by applying the Delphi method. This is an iterative method, with feedback from the group information, which provides data reflecting a consensus on the expert panel. The final information is thus richer than the simple average (or median) of a panel, since from the second step of the method, the experts must take into account assessments of the rest of the panel. In order to get a compromise between satisfactory results and our constraints means and time, we have achieved three successive iterations.

iii. The Intellectual Capital Index Disclosure (Supply in annual reports VS user's needs) Given the purpose of our study, it is proposed to develop a disclosure index comparing the supply of information on intellectual capital in annual reports and user's demand. Thus, using a weighted index remains indispensable. This type of disclosure index is able to discriminate between more important items and less important one especially that all information on intellectual capital are not necessarily relevant for investment decision .

At the opposite, an unweighted disclosure index assumes that all information are considered equally important, however, it don't have the same importance which may bias the results. Therefore, the disclosure index remains an unreliable measure which does not reflect the level of disclosure **??**Firth, 1979).

To calculate our disclosure index, we based on the approach of Buzby (1974). Thus, we will apply both the scoring method that the weighting methodology.

The scoring is to assign a score to the sample firms by using content analysis of annual reports. We opted for the dichotomous approach that assigns 1 if information is disclosed and 0 otherwise.

To weight the different information, we used the results of our survey developed in the previous paragraph. From the responses of the survey, each information receives a score corresponding to the average valuation of respondents. The weighting corresponds the average of the scores given by respondents to each information.

Thus, the disclosure index (GDI) is calculated by dividing the average score (the supply of information on intellectual capital) by the expected score of the financial market (user demand). He will take the form of a ratio that relates the real score of a company to its theoretical score. The real score is the provision of information on intellectual capital in annual reports. The theoretical score is the informational needs of users. Note that the theoretical score is common to all firms of sample.GDI i = ? = 9 1 j P j x With :

-« GDI i » is the total score of the company "i" that measures the level of disclosure index of intellectual capital information; -« P j » is the weight given to the information category "j"; -« Pk j » is the weight assigned to information "k" of the information category "j"; -« Xk j » is the score assigns to the company "i". This is a dichotomous variable that = 1 if the information "k" of the information category "j" is disclosed and 0 otherwise; -n1 is the number of information belongs to the information category "j" disclosed by the company "i"; -n2 is the number of information belongs to the information category "j" requested by the financial market, with n1 ? n2 ;

IV. Analysis and Discussion of the Empirical Results

We first present the scope of information needs on intellectual capital of financial market (demand). Then, secondly we confront and compare this demand with the supply of voluntary information on intellectual capital in annual reports through the disclosure index. The Delphi method is a structured communication method, originally developed as a systematic, interactive forecasting method which relies on a panel of experts. The experts answer questionnaires in two or more rounds. After each round, we provides an anonymous summary of the experts' forecasts from the previous round as well as the reasons they provided for their judgments. Thus, experts are encouraged to revise their earlier answers in light of the replies of other members of their panel. It is believed that during this process the range of the answers will decrease and the group will converge towards the "correct" answer. Finally, the process is stopped after the achievement of consensus.

The consensus on the information needs on intellectual capital of users is the result of three successive iterations of the Delphi method. The level of consensus is reported in table 3.

We started our survey by asking experts to list the most relevant information about intellectual capital without any preference order. This preparatory step aims to generate most the relevant information on intellectual capital in investment decisions. In the first step (first iteration of the Delphy), and after finishing list (the grid of items), we address it to experts and we asked them to note information of the list on a likert scale from 1 = Very low importance to 5 = Very high importance according to their importance in investment decisions. During this step, we give the opportunity to experts to arrange the list by suppressing or by adding some other information or

by improving some terms if deemed necessary. Especially, we asked them to keep only relevant information in investment decisions.

The result of this step is to make some changes to the list. Indeed, the majority of respondents noted that some information is interconnected and that the list suffers from some repetition. Therefore, they proposed to group this information such as the information about « Ability of the company to satisfy customers » and « Consideration of new customer expectations in order to attract them » are grouped into « Ability of company to retain customers ». Informations related to « Ability manager to manage crises and fluctuations», « Managerial talent in publishing and conference » and « Managerial capacity of coordination, command and control » are 3 terms interconnected, so we grouped them in a unique one which is « Manager Competence ». Moreover, we eliminated informations about « Level of computerization » because it has the same sense as the information related to « existence of effective of information system », therefore, we must keep one of them.

After the changes, the list contains only 44 information (previously it contains 59 information).

We calculate the convergence degree between the views of respondents across the Kendall concordance test. The level of agreement gives K = 0.512 at the first iteration. We notice that there is no consensus among respondents, which is quite normal at this stage of the investigation, since most convergence among respondents expected during the following steps.

In the second step (second iteration of the Delphy), we addressed the new list to the experts and we informed them with precedent results. We asked them to give new scoring for information of the list from 1 = Very low importance to 5 = Very high importance according to their importance in investment decisions and we asked them to justify their response if it deviate compared with the precedent group responses. During this step, despite a few changes proposed in list (the list contains only 42 information on intellectual capital), there was a certain convergence and answers become increasingly homogeneous. In fact, during the second iteration, we found a greater convergence of responses because we obtained a Kendall W = 0.721 at a level of significance of 1%.

In the third iteration of the Delphy, we adressed again the new list to experts and we asked them to note information selected in the new list (wich contains 42 inforrmation on intellectual capital) according to their importance in investment decision. This last step is only a confirmatory phase which was obtained in the previous step, since the level of consensus has substantially improved and reached a Kendall W = 0.732 at a level of significance of 1 %.

The survey with financial analysts and portfolio managers, conducted as part of the Delphi method, has reached a consensus on the informational needs on intellectual capital (Demand). This information need consists of 42 information grouped into 9 categories (reported in Appendex 1).

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Volume XVI Issue VII Version I Year ( ) Asymptotic Signification 0.000 (<1%) 0.000 (<1%) 0.000 (<1%)A

The information needs on intellectual capital (obtained by consensus) are classified according to their importance in investment decision and are reported in Table **??**.

11 Table 4 : Usefulness perception of the intellectual capital informations (User's needs)

The results of our survey show that information on intellectual capital are considered useful by the users, but they are not considered in an identical usefulness. It appears that the most information are perceived to be very useful, while very few of them are perceived to be little useful.

Information on corporate management, innovation, governance and on external relation and risks are the major concerns of users in the financial market because they give an average score of 4.9 (out of a maximum 5) reflecting their use in decision making. While, information on customer capital and organizational one are considered less relevant by users because they have on average a respective usefulness perception of 4.2 and 3.9.

Moreover, the financial market seems to attach the least usefulness to information on environmental ethics. This could be explained by the fact that the concept of « corporate citizenship » is not yet well developed on Tunisian culture.

It is noteworthy that institutional factors such as investor protection laws, corporate governance caracteristics, and the quality of law enforcement jointly influence the information needs (Kothari, 2001).

12 b) Confrontation between information needs of financial market with the supply of voluntary information on intellectual capital in annual reports

The interpretation of weighted disclosure index wich confront demand and supply of intellectual capital information help us to determine the divergences and convergences degree between demand and supply in annual reports. Results showed that the Global Disclosure Index (GDI) variable average is equal to 0.371; its maximum is 0.72 ; its minimum is 0.04 and its standard deviation 0.17. By interpreting the mean of global disclosure

index variable wich confront demand and supply of intellectual capital information, we notice that informations disclosed on intellectual capital are weak compared to the user's need. On average companies have a score of 0.371 on a maximum score of 1. Indeed, the sample firms disclose on average 15.7 informations on their intellectual capital in relation to a set of 42 informations considered relevant by the financial market. There seems to be some discrepancy between the corporate disclosure practices and the user's needs on the financial market. Besides, we find that there is a great variability in the disclosure on intellectual capital by comparing the maximum and the minimum of the variable reflecting disparity of corporate disclosure policy. The standard deviation of this variable is equal to 0.211 and when we compare it with its average (0.371), we find that there is a variability in the disclosure between sample companies.

By interpreting the sub index of each category of information, it appears that some categories of informations are better disclosed than others irrespective of their usefulness perception by users. When looking at the SI of each category of information, we notice that the extent of voluntary information supply compared to its demand is weak for most of the categories of information. Indeed, the SID are below 50% for 5 categories of information (which corresponds to 24 informations). These results help us conclude that a significant proportion of the categories of information (56 %) is not adequately disclosed.

Therefore, this discrepancy between supply and demand of voluntary information is due to the fact that several informations are not properly disclosed although they are useful for the users.

The sample companies did not attach a great importance to the information category « Corporate Management Capital » in their disclosure strategy, his sub index (SID 1) is equal to 0.037 (below 50%), while this category of information is considered the most useful to the financial market, it has on average a perception usefulness equal to 4.95.

In addition, the category of information attached on « Innovation capital » is disclosed only by 5 companies on a sample of 50. It has on average a sub index (SID 5) equal to 0.35 (below 50%), indicating that these companies do not give him a great interest in their disclosure policy. While this type of information is considered among the most usefulness information. It has on average, by consensus, a perception usefulness equal to 4.95.

The same comments are reproduced for categories of information related to « Environmental Ethics Capital », the « Customers Capital » and « Reputation Capital ». Most of the sample firms don't adequately disclose these types of information. They have a very low sub index disclosure (below 50%) and is equal respectively to 0.33, 0.35 and 0.20. However, users have shown great interest in this information and suggested that they are very useful for investment decision.

Based on these results, we notice that the extent of the voluntary information on intellectual capital supply compared to its demand is weak for most of the informations. This discrepancy is due to the fact that several companies don't interest to certain informations that may be usefull for users. In other words, the « laissez-faire » could not reach an optimal level of disclosure (Chakroun, 2012).

Several explanations could be mobilized for the mismaching noticed between supply and demand for voluntary information on intellectual capital (Khlifi and Bouri, 2010):

First, this discrepancy is due to the specific nature of certain information connecting essentially to technological dimensions, managerial and relational one. The disclosure of this type of information generates direct and indirect costs. Indeed, the risk that these information is beneficial to competitors influences the decision to disclose such information (Rylander et al, 2000Prencipe, 2004). Thus, it is likely that some information deemed relevant by the financial market and absent in annual reports, could be exploited by competitors against the firm that discloses and make them losing their competitive advantage. Therefore, firms are often reluctant to disclose informations on their specific resources.

Second, we can argue that companies can not disclose some informations because the information is not available even for its internal management purposes. Indeed, the majority of Tunisian companies don't have an adequate information system.

Finally, the gap between supply and demand on intellectual capital information could be justified by the fact that the majority of Tunisian companies are not regarded as citizens and their culture on environmental ethics is still in emerging phase.

However, we have not noticed a significant gap between supply and demand for 3 categories of information (representing approximately 30% of the total information categories) as information relating to corporate governance, its human capital and its organization capital. This type of information is disclosed by companies in a satisfactory way compared to their usefulness perception for financial analysts and portfolio managers. They have relatively a good disclosure extent as their sub index disclosure (SID) on average respectively equal to 0.57, 0.5 and 0.56. Moreover, these sub index disclosure (SID) are very close to their utility for financial analysts and portfolio managers because they give its an average utility score respectively equal to of 4.9, 4.2 and 3.9.

We find that the informations subject to a certain convergence between supply and demand are not highly confidential information for companies and regarded as informations with voluntary disclosure closely linked to the mandatory one. Likewise this convergence may be due to the promulgation of law 2005-96 of 18 October 2005 which aims to improve the corporate disclosure policy and their good governance practices.

Several explanations may be given about the observed convergence between supply and demand for voluntary information on intellectual capital (Khlifi and Bouri, 2010): the theories of legitimacy and of signals.

First, according to the legitimacy theory, companies disclose information in response to political pressures and

thus legitimize their actions (Guthrie and Parker, 1990). This theory postulate that companies need to publish enough information to be considered as good citizens in society (Woodward, Edwards and Birkin, 1996). In this context, the voluntary disclosure on intellectual capital is considered as a key instrument of legitimation.

Second, the signal theory postulates that information is not shared by all at the same time and that the information asymmetry is the rule (Spence, 1973). Therefore, the manager is motivated to disclose its performance to distinguish themselves from other companies and attract new investors.

13 c) Summary of the empirical results

Like Buzby (1974), Chakroun (2012), Bukh and al. (2003), Van Der Zahn and Singh (2005) and Béjar (2006), we notice that many items, which are considered significant by the financial market, are not sufficiently disclosed by the companies of the sample and there is no adequacy between the importance attached by financial market to the information and the level of their disclosure in the annual reports. Moreover, there are some informations that don't figure in the annual reports despite their great usefulness to financial analysts and portfolio managers. Besides, we found that the overall degree of voluntary disclosure is 37% indicating a mismatch between supply and demand for voluntary information on intellectual capital.

Moreover, to improve the results of our study, we calculated the Spearman correlation coefficient between supply and demand of information on intellectual capital. The Spearman correlation result is reported in Table 6.

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Volume XVI Issue VII Version I Year ( ) The results show a very low correlation between supply of information on intellectual capital in annual reports (numerator of index disclosure) and user's demand (denominator of index disclosure). Correlation is equal to 0.12 and statistically significant at level 10% (Sig = 0.098). This value indicates that the corporate disclosure practices are not very correlated with the demand of financial analysts and portfolio managers. Similarly, Chakroun (2012) showed that the number of firms disclosing the items is not significantly correlated with the importance attached by the financial analysts. She found that the Spearman correlation between these two variables is very low and equal to 0.202.

Our findings enable us to reinforce previous results and to confirm our hypothesis which postulates that the voluntary disclosure on intellectual capital in the annual reports does not correspond with the information needs of financial analysts and portfolio managers.

15 V. Conclusion

The capital market theory has expanded the objective of accounting that was mainly to better evaluate the result to an accounting with informational role **??**Loukil and Triki, 2010). Indeed, the voluntary disclosure has taken a growing interest because it can help a better understanding of the business value and maintain confidence in the financial market. This disclosure has mainly focused on the publication of financial information (Clarkson and **??**l. 1992, Labégorre andBoubaker 2005). Recent studies, exploring new facets of voluntary information focused on intellectual capital.

An important field of empirical research has demonstrated the relevance of intellectual capital. Thus, there was an increased need among users of this type of information (demand). Face to this need, listed companies are encouraged to adopt active disclosure strategies that go beyond their legal obligations (supply). Therefore, disclosure of information on intellectual capital should be studied in a bilateral perspective that considers both supply and demand. This research focuses on the analysis of the adequacy degree between supply and demand on intellectual capital information. More specifically, this research aims to determine the satisfaction degree of the external users' needs of the annual reports for voluntary information on intellectual capital in Tunisia. Given the purpose of our study, it is proposed to develop a disclosure index comparing the supply of information on intellectual capital in annual reports and user's demand.

Accordind to some studies, our findings enable us to confirm our hypothesis which postulates that the voluntary disclosure on intellectual capital in the annual reports does not correspond with the information needs of financial analysts and portfolio managers. Results showed that most informations disclosed on intellectual capital are weak compared to the user's need. This discrepancy is due to the fact that several companies don't interest to certain informations on intellectual capital that may be very usefull for users. However, very few information is disclosed by companies in a satisfactory way compared to their usefulness perception for financial analysts and portfolio managers. We find that the informations subject to a certain convergence between supply and demand are not highly confidential information for companies and regarded as informations with voluntary disclosure closely linked to the mandatory one This study has both methodological and practical implications. From a methodological one, we developed a weighted disclosure index on the intellectual capital based on user's needs that can be exploited in future research. Regarding our practical contribution, this study could serve the accounting standard setters to develop disclosure rules on intellectual capital oriented to the user's needs.

However, our study has certain limits. The most important is the small size of the sample (50 firms) that can cause a problem for the generalization of results and the manual content analysis of the annual reports. In addition the use of weighted disclosure indices may cause a subjective problem for the scoring of the

463 Volume XVI Issue VII Version I Year ( )
464 A perceived usefulness of information on intellectual capital: the ratings assigned to the information, although
465 they are obtained by consensus, are only personal opinions that do not represent the perception of financial
466 market.
467 This research provides some lines of thought that should be explored further. Based on the weighted disclosure
468 index, qualitative studies could be conducted to examine the relevance of intellectual capital in investment
469 decisions.

470 17 VI. Acknowledgement

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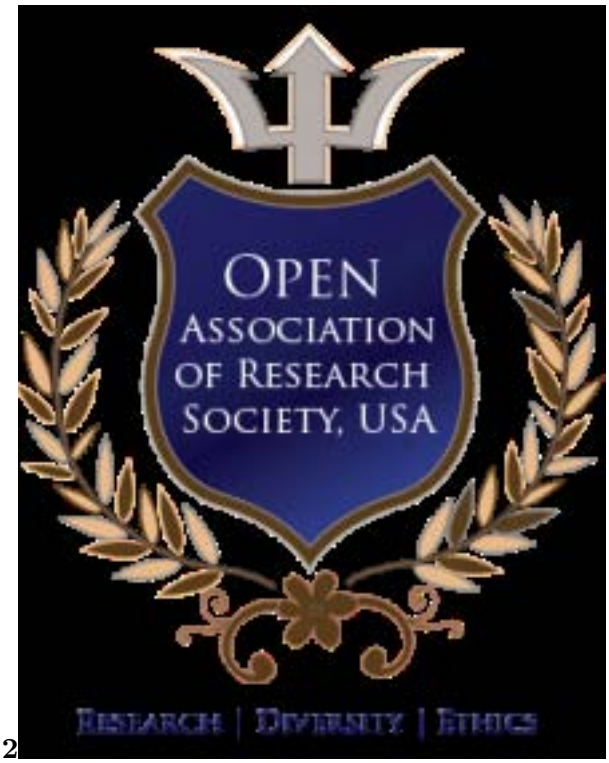
comments. [1] [2]



12

Figure 1: 12 Global

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[2] © 2016 Global Journals Inc. (US) 1

1

Characteristics of respondents		Financial analysts			Portfolio manage		
	Number	12			10		
distribution by sex	Man	Women		Man		Wome	
	91.66%	8.33%		100%	0%		
	Age	Between 25 and 35	Between 36 and50	More than 50	Between 25 and 35	Between 36 and50	More than 50
		16.66%	41.66%	41.66%	10%	60%	30%
Level of study		Bachelor	Master	Phd	Bachelor	Master	Phd
		9,09%	90,9%	0%	28,57%	57,14%	14,28%
Speciality		Accounting	Finance	Management	Accounting	Finance	Manag
		16%	75%	9%	30%	60%	10%
Professional experience		Between 1 and 3 years	Between 4 and 10 years	More than 10 years	Between 1 and 3 years	Between 4 and 10 years	More than 10 years
		18,18%	36,36%	45,45%	0%	57,14%	42,85%
	Other	No	Yes		No	Yes	
professional experience		81,9%	18,1%		42,85%	57,14%	
Number of annual reports read		Between 1 and 10	Between 11 and 20	More than 20	Between 1 and 10	Between 11 and 20	More than 20
		27,27%	45,45%	27,27%	71,42%	28,57%	0%

ii. Company Sample

Our study sample consists of 50 firms listed on the Tunisian stock exchange. Selected firms belong to various sectors:financial services, energy, communication, etc. Select multiple industries allowed to have different categories of intellectual capital (E. García-Meca, I. Martínez, 2007) and to avoid specific correlation effects to a particular sector.

Figure 2: Table 1 :

2

Industry	Number of firms	% of firms
Financial services	16	32%
Communications	4	8%
Consumer Services	5	10%
Health	3	6%
Consumer Goods	8	16%
Industry	7	14%
Basic materials	4	8%
Energy	3	6%
Total	50	100%

Figure 3: Table 2 :

3

Delphi steps	First iteration	Second iteration	Third iteration
N	22	22	22
Kendall W (a)	0.512	0.721	O.732
Chi-Square	633.933	893.236	905.946
N° of information	59	44	42

Figure 4: Table 3 :

5

present the global disclosure index
(GDI) variable and the sub index (SID) for each category
of intellectual capital information which constitute this
variable.

Figure 5: Table 5

5

V Va ar ri ia ab bl le es s	N Nu um mb br re e	M Mi in ni im mu um m	M Ma ax xi im mu um m	M Me ea an n	M Me ed di ia an n	S St ta an nd da ar rd d d de ev vi ia at ti io on n
SID 1	50	0	0.33	0.0337	0	0.8292
SID 2	50	0	0.83	0.5701	0.69	0.2749
SID 3	50	0	1	0.5024	0.59	0.355
SID 4	50	0	1	0.5631	0.49	0.381
SID 5	50	0	1	0.3553	0.4	0.221
SID 6	50	0	0.76	0.3327	0.49	0.237
SID 7	50	0	1	0.4971	0.5	0.291
SID 8	50	0	1	0.3562	0	0.415
SID 9	50	0	1	0.2033	0	0.184
GDI	50	0.04	0.72	0.371	0.4	0.211

[Note: 9 : sub index disclosure of Reputation Capital ; GDI : Global Disclosure Index.]

Figure 6: Table 5 :

6

Supply of information on intellectual capital in annual reports (Numerator of disclosure index)	User's demand on intellectual capital (denominator of disclosure index)

Figure 7: Table 6 :

.1 Appendix Appendix 1. The grid of voluntary informations

.2 Categories of information on intellectual capital

.3 Informations on intellectual capital

Capital Corporate Management 1-Manager Competence 2-Capacity of the manager to keep employees in the company 3-Capacity of manager to attract people of talent 4-Manager Experience 5-Manager Credibility and franchise 6-Level of remuneration and benefits awarded to management bodies 7-Ownership structure 8-Independence of the main shareholder 9-Board Composition

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[Capital Corporate Governance 10-Operation of the Board 11-Auditor's reputation 12-Existence of a joint audit 13-Quality of the *Capital Corporate Governance 10-Operation of the Board 11-Auditor's reputation 12-Existence of a joint audit 13-Quality of the auditor report 14-Existence of an internal audit department 15-Existence of an audit committee 16-Quality of financial disclosure Human Resources Productivity and competence of staff Staff commitment to society and degree of membership Human Resources stability Motivation and Employee profit Accompanying terms of employees Organisational Capital Performance of organizational structures 23-Existence of effective information systems 24-Establishment of administrative and accounting procedures manuals 25-Existence of quality control processes Innovation Capital 26-The activities*, (in R & D 27-Design of new products 28-Design software adapted to technological innovation 29-Intellectual property 30-Trade licenses)

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[Customer Capital 31-Ability to retain customers 32-Customer dependence on Product 33-Company's dependence on customers 3 *Customer Capital 31-Ability to retain customers 32-Customer dependence on Product 33-Company's dependence on customers 34-Company's Market share in the sector External Relations and Risk Management 35-Management and control risks related to national and international economic conditions 36-Competitive positioning in the local market 37-Benefits arising from contracts of partnerships, alliances and synergies 38-Quality of the company's relationship with its environment Environmental Ethics Capital 39-The investments committed to environmental protection and to conservation of natural resources 40-Corporate to governmental and environmental standards compliance Reputation Capital 41-Corporate reputation 42*, (Accredited certification to a quality standard ensuring the quality of company products and services)

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