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Stock Exchange: Intellectual Capital Disclosure and Profitability

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Abstract

Intellectual capital is a key element in improving a firm assets and employee in order to increase productivity as well as to sustain competitive advantage. Human capital is the combined capabilities, knowledge, skills, experience, innovativeness and problem – solving abilities of each individual's knowledge. The study of the relationship between profitability and disclosure of intellectual capital components in the Companies listed on the Tehran Stock Exchange is evaluated. For the operationalization of disclosure of intellectual capital and its components, the checklist Li et al (2012) and Return on Assets ratio were used for profit. Results of 44 firms (189 firm-years) during the period 2011- 2013 indicates that at 91 percent, positive and significant relationship between profitability and disclosure of intellectual capital there. So that the, by increasing and improving profitability, companies have an incentive to voluntarily disclose information on intellectual capital. The other variables were observed, significant and positive relationship between firm size and disclosure of intellectual capital, human capital, customer capital there, growth opportunities and disclosure intellectual capital. A positive relationship was seen between financial leverage and disclosure customer capital there.

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1. Introduction

The concept of intellectual capital seems to emerge from the discussion of goodwill and the difference between book value and purchase value (Lynn, 1998). The traditional accounting system seems both the tangible and intangible values of the organization in today information age (Wong & Gardner, 2005). Sveiby (2001) first proposed a classification for intellectual capital into three broad areas of intangibles, human capital, structural capital and customer capital a classification that was later modified and extended by replacing customer capital by relational capital (Bhasin, 2011).Schultz (1993) defines the term human capital as a key element in improving a firm assets and employee in order to increase productivity as well as to sustain competitive advantage. Human capital is the combined capabilities, knowledge, skills, experience, innovativeness and problem – solving abilities of each individual's knowledge (Davis & Harrison, 2001; Wong and Gardner, 2005). Human capital involves processes that relate to training, education and other interventions in order to increase the levels of knowledge, skills, abilities, values and social assets of an employee which will lead to the employee's satisfaction and performance and eventually on a firm performance (Rizvi, 2011).Behind intellectual capital reporting there is an idea that the traditional financial information concerning the past performance of the company and none of the enterprise future potential .Reporting of intellectual capital will create a transparency that allow the manager of the enterprise to manage its intangible resource better. By creating transparency it helps management to allocate resources, to monitor development and to create strategy, in summary: it facilitate decision making for companies (European Commission, 2006). The European commission (2006) emphasizes two main reasons for intellectual capital reporting: 1) reporting of ic provides additional information which can be used to improve the management of the company as a whole. 2) reporting of ic complements the financial statement of the company and therefore provides a broader, more truthful image of the company (Basta & Bertilsson, 2009). Profitability is considered as the most complicated feature for a company to be understood and evaluated. These ratios are applied for evaluating business capabilities and making the wages in comparison with all cost during a specific period of time. In a more accurate way, the ratios indicate the profitability of a company, having calculated the total costs and income tax, operational efficiency, company pricing policies, assets profitability and company's shareholders. Generally speaking, profitability ratios are considered as the main financial ratio of a company so that can evaluate the desirable performance of a company in profitable situations. For the most sections, if a profitability ratio is relatively higher than the required ratio for other competitors, is indicated as the better performance of the company (Saghafi & Aghaei, 1994).

On the other hand, in order to relate the taxes to the profitability indices, the costs and the debts of a corporation can be referred. Debt is one of the three main components of accounting equation and the capital structure of the majority of the companies. Considering tax saving, logical use of debt is expected to be caused in profitability growth for a company. Furthermore, the financial manager should always be careful that the methods of financing are compatible with the type of company's investment. Likewise, he should make use of leverage in a way that the company's value is maximized and a great bankruptcy costs are not imposed to the company – the company bears a logical financial risk by using debt(Mohammadi, 2009).The profit is considered as the important data for making economic decisions. The studies and the surveys have been done over the subject of profit are of the greatest research efforts during accounting history. The profit as the dividend payment guidelines, the means for management effectiveness assessment, and an instrument for evaluation and predicting the decision-making have been used by investors, managers and analysts (Saghafi & Aghaei, 1994). Consequently, many researchers tried to identify the factors that affect the profitability of companies. Parameters such as the type of the industry, size of the company, age, the capital ratio to assets, the debt ratio on assets, and the company advertising costs are known as the effective factors of

profitability. Now, the researches over every single factor are briefly studied.

Ismail (2009) carried research into intellectual capital in Malaysia under performance. They sought to investigate the efficacy of intellectual capital and its effect on a company's performance .They used the data collected from 18 active companies the financial sector in2007.The analysis of the research the hypotheses showed that the banking sector relies more on intellectual capital compared to broking companies and insurance firms. They also found that there is a positive, significant relationship between the intellectual capital and the company's performance (measured by ROA and profitability). Kamath(2008)selected active firms in India Exchange For research ,and studied the relationship between the intellectual capital and company's performance He intended to determine the relationship between the intellectual capital components and the company's performance based on the traditional criteria including profitability market value ,and productivity of companies. Chen Goh(2005) carried research into intellectual capital and company's performance in Malaysia. They drew on correlation and regression. The results showed that companies continued to rely much on their physical capital, and that the efficacy of intellectual capital is still the main effective variable in the profitability of a firm whereas human resource is of great important in the improvement and increase in its productivity .Finally, the results showed that the value of intellectual capital could account for the profitability and productivity of a firm but it couldn't explain the market value. Salehi and Mohammadi(2014) investigated the effect of intellectual capital on the performance of the branches of Sepah Bank in Tehran. They intended to consider the effect of the intellectual capital components including human, structural and client capitals on an old state-run bank in. The results showed that the intellectual capital component have a positive effect on the performance of the bank, and the highest effect goes to the client capital, then stand structural and human capitals. Stewart (1997) presented their classification as human capital, structural capital, customer capital. In this classification, in fact the human capital is employees' knowledge of an organization that is the most important asset of the organization. Intention of the structural capital is the knowledge embedded information technology and all royalties, plans and brands. Intention of customer capital is market information that has been used to attract and retain customers; this classification is somewhat similar to Bontis'primary classification (Bontis,Chua Chong Keow, & Richardson, 2000). Madhoushi and NejadAmiri (2009) measured the intellectual capital,and considered its relationship with the financial yield of companies. They first calculated the intellectual capital of the companies under study in the six-year-long period from 2001 to 2006.They, then, evaluated the intellectual capital value and the financial yield. The findings suggest a positive, significant relationship between the intellectual capital and financial yield, and the future financial yield, and the growth rate of the oncoming financial yield of companies.

2. Method

The research method in the present study was descriptive and correlational method using parametric statistic. This study uses a sample of listed companies, as they are more likely to disclose intellectual capital information. In order to be included in the sample for this study, companies had to have its shares listed on the Tehran's Stock Exchange by the end of 2013. The initial sample included all companies listed on Tehran's Stock Exchange at 12 November 2012 until September of 2013. From the initial 21 listed companies, a final sample of 12 companies was identified. Five companies were excluded because they are not subject to Tehran's Stock Exchange (non-resident companies). Web page was used in order to obtain the 2013 annual intellectual capital disclosure for sample companies. The companies included in the sample meet the following conditions: companies that have been listed in the stock exchange before 2013; companies whose financial year end at the end of the Iranian calendar and have no financial year changes and also having data available for the period of interest. Content analysis was employed to imply classifying the information on IC disclosed by firms into various categories of items that capture the aspects one wants to analyses. In this study, the index used is based on the one proposed by Firer and

Mitchell Williams (2003).which has been used successfully (in its original format or in a derived format) by various empirical studies (see, for example, Abeysekera & Guthrie, 2005; Ho & Williams, 2003; Nikolaj Bukh, 2003;Bounfour & Edvinsson, 2005;Chen, Cheng& Hwang,2005; Berzkalne, 2013). The analysis of the ICD is made using an equal-weighted index, that is, a scoring system which assigns a point for each ICD theme pertaining to any of the categories considered. Disclosure scores for each company are added and not weighted because it is assumed that each item of disclosure is equally important the following disclosure score index was constructed: This index expresses the level of disclosure for a company j, where N is the maximum number of relevant items a company may disclose and di is equal to 1 if the indicator i is disclosed, and Zero otherwise. When the disclosure score index is equal to Zero, it indicates that company i does not disclose any item. Index values equal to i=1… mj mean that a level of disclosure is provided, and mj is the maximum number of indicators di disclosed by a company j.

3. Results

Results Descriptive statistics and correlational coefficients displayed in table 1.

Table1.Unity an of variance covariance and normality for profitability and IC Disclosure

Variable	Box's M	df	F	Sig.	Z Kolmogorov-Simonov	Sig.
IC Disclosure	22.11	18	1.02	0.31	1.33	0.54
Human Capital	11.10	18	1.11	0.66	1.45	0.52
Customer Capital	36.33	18	1.55	0.22	1.43	0.50
Structure Capital	44.12	18	1.11	0.42	1.67	0.26
Profitability	30.14	18	1.22	0.36	1.20	0.35
Size	27.43	18	1.34	0.41	1.44	0.47
Leverage	26.33	18	1.45	0.32	1.56	0.55
age	44.12	18	1.54	0.45	1.78	0.38
growth	30.14	18	1.13	0.35	1.11	0.71

The result of Unity of variance covariance hypothesis for profitability and IC Disclosure and the ratio of f shows that there is no significant difference between, IC Disclosure profitability and their sub variables. So variance between variables is not so high and there is a homogenous correlation between variables. In addition Kolmogorov –

Smirnov test was used to detect the data normality reflected in the table. In the test (k-s) as significance level is less than 5% testing the null hypothesis is rejected at theReliability of 95 %. So the variables distribution is normal. And the prerequisite for analyzing the data is available.

Table2. Correlation matrixes between profitability and IC Disclosure and sub variables

variable	1	2	3	4	5	6	7	8	9
1-IC Disclosure	-								
2-Human Capital	0.56**	-							
3-Customer Capital	0.17**	0.37**	-						
4-Structure Capital	0.31**	0.21**	0.44**	-					
5-Profitability	0.63**	0.58**	0.55**	0.33**	-				
6-Size	0.21**	0.15*	0.65**	0.36**	0.77**	-			
7-Leverage	0.54**	0.54**	0.32**	0.32**	0.55**	0.23**	-		
8-age	0.34**	0.44**	0.43**	0.33**	0.41**	0.18**	0.34**	-	
9-growth	0.57**	0.25*	0.53**	0.56**	0.26**	0.15*	0.61**	0.46**	-
Mean	*44.18*	*16.01*	*17.23*	*18.31*	*17.25*	*15.19*	*21.45*	*19.11*	*18.41*

Standard deviation	*2.01*	*1.01*	*1.04*	*1.12*	*0.89*	*0.44*	*2.18*	*2.40*	*2.86*

** P≤ 0.01 *P ≤ 0.05

Table 2 multiple correlation between variables and sub-variables show that there is a significant relationship between all aspects of IC Disclosure. Also the table results shows that the correlation between IC Disclosure and Human Capital (0.56) and the correlation between IC Disclosure and Customer Capital (0.17) and correlation between IC Disclosure and Structure Capital (0.31) are positive and significant. Also the table results shows that the correlation between IC Disclosure and Profitability (0.63) and the correlation between IC Disclosure and Size (0.21) and correlation between IC Disclosure and Leverage (0.54) and Also the table results shows that the correlation between IC Disclosure and age (0.34) and the correlation between IC Disclosure and growth (0.57).

4. Conclusion

The companies listed in Stock Exchange it is recommended companies disclose their Intellectual Capital voluntarily and does not limit Intellectual Capital to specific period and it could be to their benefit if they could expend them (Marr, Bukh & Mouritsen, 2003). It is also recommended to interpreter of economic issue to analysis the issues and gathers necessary information concerning Stock Exchange at the next step I would be better to analyze them correctly and earnestly at the third step process of decision making would be helpful (Chen, Zhu & Yuan Xie, 2004).

For reasons mentioned companies don't tend assets lose, their cash want their money instead of paying dividends to buy assets as they, spent so little impact on firm performance inflationary safety value must be entered. Inflation as a result of macro-economic policies can affect company profits and some performance evaluation criteria are effective (Bounfour & Edvinsson, 2005).

In addition according to the result it is proposed that companies valuate their intangible assets, which includes intellectual capital (human, structural and customer) and send its report to the capital market. This announcement of intangible balance sheet and clarification of so called "not-in-balance sheet" assets can help market analysts valuate the real share value of the company more properly (Shiu, 2006).

It is likely that using less or more inconsistent elements for evaluating company performance in this research has been the reason why each of those elements has counteracted others and this, consequently, has caused not to find a meaningful relation between intellectual capital effectiveness and its elements on the one hand, and the outcome on the other (Mavridis, 2004). Hence, it is suggested to future researchers to utilize consistent and compatible variables in their researches for assessing performance efficiency in order for them to be able to specify how intellectual capital effectiveness can affect performance efficiency (Mageza, 2008).

On the other hand Intellectual capital plays an essential role in improving corporate performance and achieving sustainable profitability (Mouritsen, Larsen & Bukh, 2001). However, economic value added is another important factor that can help investors in their decision-making and can create competitive advantage for organizations (Riahi-Belkaoui, 2003). Economic value added is the value created in excess of the required return of the firm's investors and can be used for evaluating the performance of firms and developing incentive schemes.

It is recommended to combine the traditional company valuation methods with the value added intellectual coefficient or its components in order to achieve better company valuation (Ordóñez de Pablos, 2003). In addition, for further valuation Improvement, it is necessary to review and modify how the value of intellectual capital is calculated. The results of this research show that human capital efficiency and capital employed efficiency can be still used in order to calculate the intellectual capital (Roos, Roos, Pike & Fernstrom, 2007).

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