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The effects of relational capital (customer) on the market value and financial performance

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Abstract

The increasing difference between market value and book value in many companies caused us to pay attention to the investigation of the missing values in financial statements. According to the activities of various researchers, intellectual capital is expected to be among the hidden values that lead organizations to achieve competitive advantage. Therefore, it can be concluded that the resources of economic value is the product of intellectual capital not material goods. In this case, the present study examines the effect of relational capital (customer) as one of the components of intellectual capital on the market value and financial performance. In this study, the financial data of 96 companies listed in Tehran Stock Exchange during the period 2007 to 2012 were studied. To test the hypotheses, univariate linear regression models were used using panel data and to analyze the data Eviews and SPSS software were used. Hypothesis test results indicate that relational capital has a significant positive effect on financial performance and firm value.

Keywords: Intellectual Capital, Relational Capital, Rate of Return of Assets, the Ratio of Market Value to Book Value

Introduction

Traditional accounting methods that are based on tangible assets as well as information relating to the past operations of the organization are inadequate to value intellectual capital, which is the largest and most valuable asset for them. In this regard, the gap between the market value of the organization and the net value of tangible assets that are deemed to be the stock of intangible assets attract more investors everyday (Zéghal, Anis Maaloul, 2010). Therefore, there is a great need for a tool to measure this important part of the capital of the company and specify the rate of its quality to help study the effects of creating value and calculate their fair value.

In summary, it can be stated that, intellectual capital is divided into three categories of human capital, organizational capital (structural) and relational capital (customer). Human capital includes factors such as, staffs' knowledge, their skills and attitudes. Organizational capital is the knowledge available at organization. This capital belongs to the whole company, and it can be recreated and exchanged with others. Relational capital (customer) represents the value of present and continuos communications of the company with people or organizations that it offers it services to. The features of customer capital include market share, customer retention and profits resulting from any customer. The capital of customer is probably managed in the worst way among the whole intangible assets. Many businesses do not even know who their customers are. Without the capital of customer, the market value or company's business performance cannot be achieved. Compared with human capital and structural capital, customer capital more directly affect on getting the value for the company and its growing importance increases every day and gradually becomes a vital factor. In this regard, the aim of this study is to examine the effects of relational capital (customer) on the market value and financial performance of the company (Maditinos et al., 2011).

Theoretical Framework and Literature Review

The concept of intellectual capital has historically been attributed to John K. Galbraith. He was the one who used the term in 1969. Although the concept of

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intellectual capital hes been discussed for only a few decades, the definition that is acceptable to all does not exist. According to Malone and Advinson, intellectual capital is an area of knowledge and practical experience and organizational technology that the company uses to find its competitive advantage. According to Moritson, Bach, and Johansen, intellectual capital is neither an accounting contract nor a financial term. Perhaps it is an effect, a strategy or a mathematical formula. Tun Veploman believes that intellectual capital is a company's competence that is relevant to people's experience and expertise and can create value. Kaufmann and Schneider define intellectual capital as a term including intangibles, intangible assets, intangible resources, and intellectual assets (spritual) (Chen, & Zhao, 2009).

Ross (1997) divides intellectual capital into two parts, one part as an intellectual that is human capital, and one part an unintellectual that is structural capital (organizational). In another study, Chen et al. (2004) examined the intellectual capital in four areas: human capital, customer capital, innovation capital, and structural capital. Based on the components of intellectual capitals, and in short it can be stated that intellectual capital is ddivided into three categories of human capital, organizational capital (structural), and relational capital (customer) (Maditinos et al., 2011).

Chang and Heseh (2011) examined the relationship between the components of the intellectual capital and three performances of operational, financial, and markets in the electronics industry of Taiwan srock. To measure the intellectual capital, the idea of adjusted intellectual value-added coefficient model was used. The results of the research show that the relationship of the operational performance applied capital is positive, but it does not have relationship with structural and human capital. In addition, intellectual capital components have negative relationship with the market and financial performance. The expenses of research and development have positive relationships with the three performances, but intellectual properties have positive relationships only with operational performance (Baum Joel A.C, Silverman, Brian S.2004).

Maditines et al. (2011) examined the relationship between the components of the intellectual capital and the market and financial performance in the Greek Stock Market. To calculate the intellectual capital, the method of intellectual value-added coefficient was used. The results are show that there is no significant relationship between the intellectual capital and financial performance and stock market, and the relationship between human capital and the right return of shareholders is approved (Cid Garcia Nogueira, Herbert Kimura, Lucas de Barros Junior, and Leonardo Fernando Cruz Basso, 2010)

Boum and Silverman (2004), in a study, examined and tested the effects of the components of human intellectual capital on the financial risk decisions of companies and their performance in biotechnology industry in Finland, and the effects of the components on the future performance of the companies. The results show a significant effect of intellectual capital components on the performance and financial risk of the companies present in biotechnology industry (Abbasi Ibrahim, Sedqi, 2010)

Riahi Belkaoui (2003) examines the effects of intellectual capital on the performance of 81 multinational American manufacturing and service companies in the period 1996 to 1992. He considered the number of requests protecting the commercial signs by every company (in a period of Ten year leading to 1991) as a criterion to measure the intellectual capital and additional value ratio to total assets to evaluate the performance of the company. Results showed that there is a significant and positive relationship between the performance of the multinational American companies and intellectual capital of the company (Madhoushi et al., 2009)

Zygal and Malol (2010) examined the effects of the intellectual capital on the economic performance (operational profit to total sales), financial performance (assets efficiency) and shares market performance (market value to book value) of 300 companies in 2005. Their hypotheses emperical test results by using univariate linear regression model and coefficient showed that intellectual capital has a positive effect on the financial and economic performance. However, the relationship between the intellectual capital and stock market performance is significant only for high technology industries. The results show that although the used capital is still the main reason for financial and stock market performance, it has negative effect on the economic performance (PIKE, Steve; ROOS, Göran, 2000).

Rezai et al. (2010) investigated the impact of intellectual capital on economic value-added and market in Tehran Stock Exchange during the years 2003 to 2007. For testing hypotheses, Pierson's correlation coefficient was computed and Regression analysis was performed. Some of the companies, out of 388 companies, were systematically removed, and finally 166 companis remained, then by applying the level sampling of Cochran, a final sample of 63 companies was chosen. The results of testing hypotheses show a significant and positive relationship between intellectual capital and economic added value of companys; on the other hand, increasing the intel-

lectual capital of companies, their economic added value and added value of market will increase, too. The explanation power of intellectual capital in the added value of market is higher than their economic added(value Baum Joel A.C, Silverman,2004)

Abbasi and Sedghi (2010) examined the impact of intellectual capital on the financial performance of Tehran Stock Exchange (2000-2003). Intellectual capital is calculated using Palik model. The results showed that the coefficient of performance of each intellectual capital component has positive and significant effect on the return rate of the rights of the stockholders. The effect of physical and human capital efficiency coefficient on earnings of per share is positive, but the structural capital efficiency coefficient is negative and significant. The effect of human capital efficiency coefficient on annual return rate is negative and significant whereas the effet of physical and structural capital coefficient on it is positive and significant. Also, companies with higher intellectual capital have better financial performance and the average coefficient of intellectual capital significantly differ between 7 industries (Chang, W, Hsieh, J.2011)

Pourzamani and et al. (2012) examined the relationship between intellectual capital and market value and financial performance of companies. To study intellectual capital, the intellectual capital added-value coefficient method, which was suggested by Palik in 2000, was used. The present study analytically tests, by regression method, the separate effects of capital efficiency, including the efficiency and effectiveness of human capital and structural capital efficiency and the efficiency of capital employed (physically) on the market value and the financial performance for 90 companies from 2006 to 2010. Results show that the relationship between intellectual capital and market value of the performance coefficient (the ratio of market value to book value) is not significant. The findings of the research confirm the increasing gap between market value and book value of the companies approved. In addition, the results obtained from the test indicate that intellectual capital performance coefficient has significant and positive effect on financial performance (return of assets) of the company (Abbasi Ibrahim, Sedqi A. ,2010)

Hypothesis of the Research

In order to achieve the research objectives, two main hypotheses are considered as follows.

The main hypothesis 1) the relational capital is effective on the market value of the company.

The main hypothesis 2) the relational capital is effective on the financial performance of the company.

Materials and Methods

Independent variables in this study are relational capital (customer) which is gained from the sales growth rate is (Chen, & Zhao, 2009)

Dependent variables in this study are the market value and the financial performance of the company. Firm market value is calculated from the devision of market value (MV) to book value (BV) of ordinary shares.

MV= Stock price at the end of the year × number of shares

BV = The rights of Stockholders

Financial performance is calculated using return of assets (ROA).

ROA= net income / Total assets

The method of the research, regarding performing, is correlation-descriptive. Regarding purpose, it is practical. In addition, since in this study, through collecting the data by previous data, the variables have been examined, it is a descriptive- post event study. In this study, univariate linear regression models were used to test the hypotheses using panel data method; and to analyze data Eviews and SPSS softwares are used. In this study, the financial statements and attached notes relating to listed companies in Tehran Stock Exchange from 2007 to 2012 ware studied.

In this study, population without sampling of companies having the following qualifications have been selected as sample, which was on the basis of the 96 companies for each financial year

1 – Financial year ends in March and in the course of the study, no changes occur.

2 – The company, in the course of the survey, has not been removed from the list of companies in the Stock Exchange.

3 – Information required to complete the study during the period is completely presented.

4 – It does not belong to the banks, monetary institutions, and investment and credit firms.

5 – Firms, which do not have negative stock stockholders' rights and do not sustain loss.

6 – They must have been accepted in Tehran Stock Exchange before the year 2007.

Results

Presenting sample in this research, to estimate test normality of the dependent variables, Bra-Jarkio t was used. Null hypothesis and first hypothesis in this test is as follows:

$$\begin{cases} H_0 : Z = N(1,0) \\ H_1 : Z \neq N(1,0) \end{cases}$$

If the significance level of t is greater than 0/05 (Prob> 0.05) the H0 hypothesis based on the normal distribution of the variable will be accepted. Bra-Jarkio test results for market value and financial performance variables are provided in Table 1.

Table 1. Bra-Jarkio test results for the market value and financial performance variables

Variable	Bra-Jarkio t	Significance level
The market value of the company	0.4542	0.8831
Financial performance of the company	0.5102	0.6822

According to the results in Table 1, since the significance level of Bra-Jarkio t is more than 0/05 is. Therefore, H0 hypothesized at the confidence level of 95 percent is approved and suggests that the dependent variables of the study are normally distributed.

The aim of the first and the second hypothesis tests is to examine the effect of relational capital on the market value and the performance of the company. According to the results of Chow test, since the probability of regression model is less than 0/05, the width heteroskedasticity are accepted and at the confidence level of 95 percent, panel data methods can be used. Also, according to the results of the Hausman test, since the probability of each hypothesis in both hypotheses is less then 0/05, it is necessary that the model is estimated using fixed effects. In Table 2, the results from the model are presented.

Table 2. The results of the study for the first and second hypothesis test

Variable	The first hypothesis	The second hypothesis
Constant factor (Pearson t) (P-Value)	0.4121 (1.324) (0.0186)	0.4524 (3.209) (0.0245)
The relationsal Capital (Pearson t) (P-Value)	0.0336 (0.218) (0.0401)	0.1126 (0.651) (0.0089)

The results relating to the meaningfulness of the overall model and assumptions of classical regression are presented in Table 3.

Table 3: Results of tests relating to the assumptions of the linear regression model

Model	The coefficient of determination	F Statistics		Breusch-Pagan Statistics		Durbin-watson Statistics
	R^2	F	P-Value	F	P-Value	
The first hypothesis	0.420	4.55	0.00	4.60	0.00	1.901
The second hypothesis	0.431	4.25	0.000	6.28	0.000	1.795

In examining the overall significance of model, as the probability amount of F statistics in both models is less than 0/05 (0.000), the overall significance of the model is confirmed with the confidence level of 95 percent. Determining factor models also indicate that more than 42 percent of the changes of dependent variables is explained by the independent variables. Also, since Durbin-Watson Statistics for both hypothesis is between 1/5 and 2/5, therefore, the independency of the remaining of both hypotheses are confirmed.

Conclusions

One of the fundamental problems of traditional accounting systems is their inadequacy and incapablity in measuring and reporting of related information with intangible assets (including knowledge) and the hidden values of the company. This phenomenon leads to a huge gap between the book value and the market value of the company. The difference between market value and book value, in many companies, causes to pay attention to the lost values (missing) of the financial statements. Among the factprs which affect on the value of the companies but is not presented in the financial statements are brand value, intellectual capital value, etc. In this regard, the current study examines the impact of relational capital (customer) on the market value and financial performance of companies. Based on the results of testing hypotheses, relational capital has significant and positive effect on financial performance and firm value. So, it can be concluded that customer capital, which is considered as bridge or catalyst in intellec-

tual capital activities, is the dominant and determining factor to change intellectual capital to the market value, accordingly, the company's business performance. The researches conducted at the University of Michigan indicate that customers satisfaction can maintain business relationships and reduce price volatility and enhance the prestige of the company (Maditinos, D, Chatzoudes, D, Tsairidis, Ch, Theriou, T,2011)

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