

## Effect of Intellectual Capital Efficiency on Financial Performance and Market Value of Companies

<sup>1</sup>Rasool Baradaran Hassanzadeh, <sup>2</sup>Mina lalepour, <sup>3</sup>Peyman Imanzadeh

<sup>1</sup>Ph.D. Department of Accounting, Tabriz Branch, Islamic Azad University, Tabriz, Iran.

<sup>2</sup>Department of Accounting, Talesh Branch, Islamic Azad University, Talesh Iran.

<sup>3</sup>Department of Accounting, Talesh Branch, Islamic Azad University, Talesh Iran.

---

**Abstract:** According to the company's resource-based view, intellectual capital is a strategic resource that enables companies to create competitive advantage and superior financial performance. The main purpose of this paper is to explore the effect of intellectual capital on company's financial performance. At the five indexes for evaluating performance of companies and intellectual capital using Palic method in the period of 2005-2009 years among 49 active companies are selected in the Tehran Stock Exchange. Research Hypothesis test results does not approve significant effect of intellectual capital on market value to book value and return on equity, In contrast was an approve to the significant relation and positive effect of the efficiency coefficient of intellectual capital, efficiency Coefficient of employed capital and efficiency coefficient of human capital on the efficiency of assets and also confirmed the significant correlation and positive effect of efficiency coefficient of structural capital on revenue growth. And Created shareholder, s value only from efficiency coefficient of employed capital accepted significant correlation and negative effect. Applicable results of this study suggest the importance of intellectual capital in financial performance of companies.

**Key words:** Intellectual capital, financial performance, created shareholder, s value, Market to book Value.

---

### INTRODUCTION

One of the main concerns of academic researchers in accounting procedures is in this regard that how intangible assets are reflected in company's performance and its effectiveness with which method or model can be measured and identified. In many cases the intellectual capital and intangible assets are treated as the same, while these two issues are different. Intangible assets are a comprehensive concept that involves intellectual capital and immaterial property and also goodwill, knowledge and management skills. But intellectual capital is a concept that is a subset of intangible assets and does not include listed items.

According to the company's resource-based point of view, intellectual capital is a strategic resource that enables companies to create competitive advantage and superior financial performance. With development and rapid growth of world economy during the past three decades, intellectual capital has been a vital driver in order to strengthen the companies. In our country (Iran), in accordance with article 44 of the Constitution, privatization organization and Stock Exchange Organization executed it through government divestiture and decentralization of governmental companies, and as a result the country's economy is in transition from governmental economy to private economy. A successful privatization process requires investor's trust on capital market. Therefore, necessity of strategies to foster a culture of accountability and promote transparency in financial reports of companies is inevitable, and the task of answering correctly depends on the measurement and reporting of all assets, including intellectual capital and all activities of companies.

With this in mind that assessing and considering the true value of intangible assets and knowledge in the financial forms of companies has increased more than ever, in the present study the effect of intellectual capital on financial performance and market value of companies is examined using five evaluation criteria.

### 2. Literature Review:

Edvinson (1996), a pioneer researcher in the field of intellectual capital, his research is concerned with how to evaluate the intellectual capital. Edvinson, has defined the difference between market value and book value as the value of intellectual capital. In this research, intellectual capital is formed from human capital and structural capital. Intellectual capital is a knowledge that can be converted to values. Chen chow and *et al.* (2005) assessed the relationship between intellectual capital and the stock market value and financial performance of companies in Taiwan Stock Exchange. By using Palic added value of intellectual capital model (2000), as a measuring of intellectual capital with the regression model show that the higher intellectual capital of companies improves financial performance and increase in stock market value of companies. Pew tan and *et al.* (2007) investigated the relationship between intellectual capital and financial performance in the Singapore Stock Exchange, based

---

**Corresponding Author:** Rasool Baradaran Hassanzadeh, Department of Accounting, Tabriz Branch, Islamic Azad University, Tabriz, Iran,

on three financial indicators (earnings per share, rate of return on equity and annual return rate). The results showed that there is a positive relationship between intellectual capital and financial performance indicators and there are significant differences between the coefficients of intellectual capital in different industries. Dominique and Talia (2009), the results of their research in Indonesia show that intellectual capital has effect on the financial performance of companies. Income increase rate is not much influenced by (IC), in this research results emphasized on influence of intellectual capital on profitability and growth of production in coming years. Dimiyris and *et al.* (2011), their research examines the relationship between intellectual capital, market value and financial performance of Greek Stock Exchange companies in four major industries. The method used in their research is similar to Palic method. The results of research confirmed the relation between performance of human capital (VAHU) and ROA. In the study by Anvari and Rostami Rostami (2003), different methods and models to measure intellectual capital investigated. Another study by Anvari Rostami showed that intellectual capital is highly correlated with stock market value. Rostami and Seraji (2004) assessed the relationship between intellectual capital and stock market value of Tehran Stock Exchange companies. Research data were from Tehran Stock Exchange data in the span of 7 years, the results of statistical tests indicate the importance of intellectual capital and understanding the importance of its value from investors and high correlation of intellectual capital with stock market values of Tehran Stock Exchange companies. Abbasi and Goldie Sedghi (2010) investigated the effect of parameters of intellectual capital (efficiency of human, physical and structural capital) on financial performance (earnings per share, rate of return on equity and rate of return per year) in 99 companies during 1999-2000 by using data Panel regression method. The results showed that companies having higher intellectual capital have better financial performance. In addition the average of coefficients of intellectual capital had significant difference between 7 industries. Shams and Khalili (2011) in a research examined the relationship between intellectual capital and performance of listed companies in the Stock Exchange. Results from this study show that intellectual capital has a direct relation with indicators of return rate of equity, efficiency of employee, ratio of market value to book value of each share, return on assets and earnings per share.

### **3. The Conceptual Framework:**

The present study introduces a conceptual framework that expands on previews methodologies (Bontis 1998; Bontis *et al.*, 2000; Chen *et al.*, 2005; Firer and Williams, 2003;

Mavridis, 2004; Pulic 2000a, b) and investigates the relationship between IC, market value and financial performance. The hypotheses of the study are presented below.

#### **1.3 IC and Market Value:**

According to the traditional accounting practices the book value of an organization is solely calculated from its financial statements. The simplistic method of such a calculation includes subtracting liabilities from the firm's total assets. As a result, conservative accounting practices failed to account one the most important intangible assets of every organization: IC (Sveiby, 2000, 2001). The gradual introduction of the International Accounting Standards (IAS) in nearly every developed and developing country (except from the USA which is expected to implement the IAS in the next five years) forced companies to calculate assets at their real market value, while giving full definition and credit to all intangibles (International Financial Reporting Standards, 2008). Despite that, the inability of most companies to comply with the IAS and the significant cost of such an implementation, still deteriorate the recognition of the intangible assets of every organization (Dimitrios *et al.*, 2011).

The result of such a short seeing is a growing divergence between the market and book value of organizations. In other words, the market estimates the value of companies with high intangible assets (IC) to be significant higher than the calculated book value (Chen *et al.*, 2005; Firer and Williams, 2003; Riahi-Belkaoui, 2003). Therefore, it is hypothesised that the greater the IC, the higher the ratio of market-to-book value:

H<sub>1</sub>: Intellectual capital affects on the ratio of market value to book value.

The above hypothesis uses VAIC as an aggregate measure for corporate intellectual ability (IC). As stated earlier in the paper, VAIC includes three component measures: capital employed efficiency (VACA), human capital efficiency (VAHU) and structural capital efficiency (STVA). Since different significance may be put on each of the three components of VAIC, it would be interesting to examine the separate effect of each on economic added value. Such an investigation would increase the explanatory power of the conceptual framework and give raise to interesting observations. Thus, it is hypothesised:

H<sub>1a</sub>: Capital employed efficiency affects on ratio of market value to book value.

H<sub>1b</sub>: Human capital efficiency affects on ratio of market value to book value.

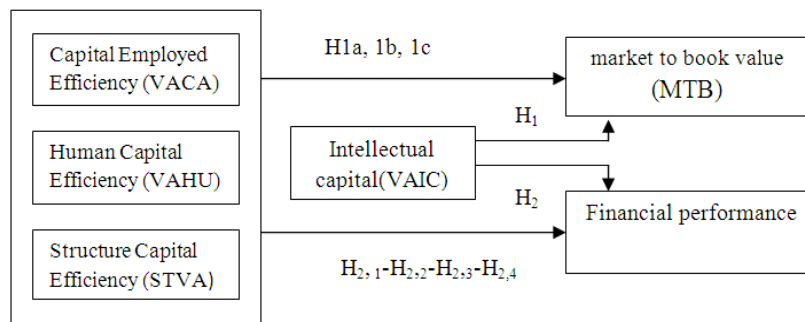
H<sub>1c</sub>: Structural capital efficiency affects on ratio of market value to book value.

**2.3 IC and Financial Performance:**

The impact of IC on financial performance has not been investigated thoroughly on an empirical level, either it has led researchers to solid and unanimous conclusions. On a theoretical level, distinguished authors argue that IC is the value driver of all companies (Stewart, 1997), that knowledge management is a core organizational issue (Nonaka and Takeuchi, 1995) and that organizational knowledge is at the crux of every sustainable competitive advantage (Bontis, 1999). On the other hand, empirical evidence are inconclusive and far from achieving a solid scientific consensus. The study of Riahi-Belkaoui (2003) found a positive relationship between IC and financial performance, while Bontis *et al.* (2000) concluded that, regardless of industry, the development of structural capital has a positive impact on business performance. On the other hand Firer and Williams (2003) examined the relationship between IC and traditional measures of firm performance (ROA, ROE) and failed to find any relationship, while Chen *et al.* (2005), using the same methodology, concluded that IC has a significant impact on profitability (Dimitrios *et al.*, 2011). The present paper makes an attempt to enrich the IC literature, thus, hypothesising:

- H<sub>2</sub>. Intellectual capital affects on financial performance .
- H<sub>2,1</sub>. Intellectual capital affects on return of equity.
- H<sub>2,1a</sub>: Capital employed efficiency affects on return of equity.
- H<sub>2,1b</sub>: Human capital efficiency affects on return of equity.
- H<sub>2,1c</sub>: Structural capital efficiency affects on return of equity.
- H<sub>2,2</sub>. Intellectual capital affects on return of assets.
- H<sub>2,2a</sub>: Capital employed efficiency affects on return of assets.
- H<sub>2,2b</sub>: Human capital efficiency affects on return of assets.
- H<sub>2,2c</sub>: Structural capital efficiency affects on return of assets .
- H<sub>2,3</sub>. Intellectual capital affects on the Growth revenues.
- H<sub>2,3a</sub>: Capital employed efficiency affects on the Growth revenues.
- H<sub>2,3b</sub>: Human capital efficiency affects on the Growth revenues.
- H<sub>2,3c</sub>: Structural capital efficiency affects on the Growth revenues.
- H<sub>2,4</sub>. Intellectual capital has affects on the Created shareholder, s value.
- H<sub>2,4a</sub>: Capital employed efficiency affects on the Created shareholder 's value.
- H<sub>2,4b</sub>: Human capital efficiency affects on the Created shareholder 's value.
- H<sub>2,4c</sub>: Structural capital efficiency affects on the Created shareholder 's value.

Based on literature and history and theoretical framework presented in the following, conceptual model represented below is designed:



**Fig. 1:** Conceptual framework of the study.

**4. Research Method:**

Among the accounting researches this research is of capital market research and in terms of methodology as the study title causal and from purpose point of view is application research. These types of researches are done to gain information about the relationship between variables. In other word researcher wants to know whether there is correlation between the two groups of information or not, and if there is any starts to evaluate the independent variable effect and the way it affects (positive or negative) the dependent variable.

**4.1 Sample and Data Selection:**

Statistical society is selected from companies in the Tehran Stock Exchange in industries and various groups. Study period is the financial information relating to the companies' performance of the years 2005-2009 listed in Tehran Stock Exchange in 5 years.

The sample systematic method has been selected. The conditions are:

1. Companies that lead to their financial year at the end of March each year.

2. Companies that during years 2005-2009 have not changed their financial period.
3. Companies that there is access to their financial information and other required information.
4. Companies that are listed in Stoke Exchange before 2004.
5. Not to be among the Banks and credit and financial investment institutions.
6. Their equity should not be negative during studied period.
7. During the period companies should not be losses.
8. Companies that their stop symbol do not have more than six month abeyance in the research period.

With the application of above limitations, 49 companies listed in Tehran Stock Exchange from industries (pharmaceuticals, electrical machinery, automobiles and parts, machinery and equipment, basic metals, food except sugar, other non-metallic minerals, chemicals, wood products, metal products, computers , cement, ceramic Hg) has been chosen.

**4.2 Variable Definition:**

**4.2.1 Independent Variables:**

The present study includes four independent variables (Pulic 2003):

- (1) VACA, indicator of value added efficiency of capital employed.
- (2) VAHU, indicator of value added efficiency of human capital.
- (3) STVA, indicator of value added efficiency of structural capital.
- (4) VAIC, the composite sum of the three separate indicators to examine the

The first step towards the calculation of the above variables is to calculate value added(VA).

$$VA = I_i + DP_i + D_i + T_i + M_i + R_i$$

In calculating VA:  $I_i$  is profit expense for the year  $i$ ,  $DP_i$  is depreciation expense for the year  $i$ ,  $D_i$  is profit dividend for the year  $i$ ,  $T_i$  is company tax for the year  $i$ ,  $M_i$  is capital equity for year  $i$ ,  $R_i$  is retained earnings for the year  $i$ .

The second step is to calculate each of the independent variables using the proposed model by Palic:

In this model to provide a complete imagination of the performance of sources causing values, it is also necessary to consider the efficiency of physical capital and financial capital. This performance is derived from the following relationship:

$$CE = \text{Total Assets} - \text{Intangible assets} \qquad VACA = \frac{VA}{CE}$$

According to this model, all costs of staff are considered as human capital. So: Human capital (HU) = the total investment in personnel (salaries and wages of employees, payroll and benefits of staffs, festive and reward of employees, end of the serving benefits of staffs, consultants fee, personnel transportation costs, staff training costs and overtime employees (direct manufacturing, overhead, official, selling, general)).

$$VAHU = \frac{VA}{HU}$$

Coefficient of structural capital is obtained from the following relationship:

$$SC = VA - HU \qquad (STVA) = \frac{SC}{VA}$$

The final step, calculation of added value coefficient of intellectual capital that is calculated from the following relationship:

$$(VAIC) = VACA + VAHU + STVA$$

**4.2.2 Dependent Variables:**

The present study includes 5 dependent variables:

1. Market value to book value(MTB)

Book value of each share (BV) is obtained from dividing the average equity by number of shares (n) and market value of each share (MV) is obtained by dividing the market value of company by company's number of shares. In companies having raised the ratio of capital investment, coefficient of investment increase is considered in the stock market value calculation.

Market value (MV) = Number of shares × average annual price based on monthly prices average.

$$BV = \frac{\text{Equity}_{i} + \text{Equity}_{(t-1)i}}{2n_i}$$

The market value of company is also calculated by dividing the average annual price based on monthly prices average (which it is also calculated by dividing total volume of transactions by transacted number of shares) by number of shares of company ( with applying capital increase coefficient).

2. Return of equity (ROE)

Return on equity = Net operating income / Average equity

3. Return of assets (ROA)

ROA = Net operating income / Average Assets

4. Growth revenues (GR)

GR = ((Revenue<sub>t</sub> / Revenue<sub>t-1</sub>)-1) x 100%

5. Created shareholder, s value (CSV)

Value created for shareholders (CSV) = shareholder added value - (price × usual stock market value of equity)

Added value of shareholder = Equity market increase - profits distributed in cash+ shareholders payment.

Equity market value (MV) = Number of shares × annual price average based on monthly average prices

Increase in market value of equity = equity market value at the end of period - the market value of equity at beginning of period

$$K_s = \frac{DPS}{P_0(1-F)} + g \quad \text{where } g = ROE \times \left[1 - \frac{DPS}{EPS}\right]$$

Where:  $K_s$  is cost of common stock, DPS is Dividend share benefit,  $P_0$  is stock prices in the beginning of years, F is costs of issuance and sale of shares (in this study it is considered 1%), g is the growth rate (to calculate growth rate, sustainable growth rate due to higher compliance and removing existing barriers is used), ROE rate of return on equity and EPS is earnings per share.

In this study, the value created for each company share is used:

$$\text{Value created for each share} = \frac{CSV}{N} \quad (\text{where } N \text{ is the number of company's shares})$$

5. Research Findings:

5.1. Descriptive Statistics and Correlation Coefficient:

Descriptive statistics and correlation coefficient tables of the variables are shown in Table 1.

Table 1: Descriptive Statistics Research Variables.

Variable	symbol	Number of observation	average	Standard deviation	maximum	minimum
Growth revenues	GR	245	14.07	24.1	138.23	-50.95
return of equity	ROE	245	0.4193	0.3043	1.83	-0.14
return of assets	ROA	245	0.1361	0.1253	0.81	0
market value to book value	MTB	245	1.5374	1.29	13.75	0.08
Created shareholder s value	CSV	245	-307184.77	2657528.01	12319.81	-31141559.48
efficiency of capital employed	VACA	245	0.712	1.2822	15	-0.5
efficiency of human capital	VAHU	245	6.3528	9.24	95.33	0
efficiency of structural capital	STVA	245	0.6266	0.79985	0.99	-9.82
efficiency of intellectual capital	VAIC	245	7.7312	9.62	96.62	-9.7

5.2 Hypotheses Test Results:

H<sub>1</sub>: intellectual capital has effect on the ratio of market value to book value.

According to the results of regression model about the first hypothesis presented in the table (3), the significant level of statistic F in all four regression models is more than excepted significance level (0.05%) and whole regression model is significant. Considering the coefficient of significance level of the (P-Value) of estimated variables in the models shows that the estimated variables don't have significance level lower than (0.05) and so have no effect on the company's market value to book value (MTB).

Effect of intellectual capital performance on the ratio of market value to book value was not confirmed. The inefficiency of capital markets can be the reason for rejecting the hypothesis. The results and findings of this study are in consistent with some similar studies, and are in conflict with some others. For example, although some researchers (Najib Ullah (2005) - Chen *et al.* (2005) - Palic (2000)) emphasize on the role of intellectual capital in explaining the difference between book value and market value of companies, this research is in line

with some other research (Hong Chen (2009) (1 & 2) - Bank Fyrr and Stein (2003)) did not find any reason on the relationship between intellectual capital and market value.  
 H<sub>2, 1</sub>. Intellectual capital affects return of equity.

**Table 2:** The first main hypothesis test results.

Variable	Coefficient	statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.003	0.105	0.011	0.916	1.846	R <sup>2</sup> =0.000 AdjR <sup>2</sup> =-0.004
VACA	0.003	0.063	0.004	0.95	1.844	R <sup>2</sup> =0.000 AdjR <sup>2</sup> =-0.004
VAHU	-0.008	-0.212	0.045	0.832	1.843	R <sup>2</sup> =0.000 AdjR <sup>2</sup> =-0.004
STVA	-0.059	-0.639	0.408	0.523	1.837	R <sup>2</sup> =0.002 AdjR <sup>2</sup> =-0.002

**Table 3:** The Second main hypothesis test results.

variable	Coefficient	statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.015	0.206	0.042	0.837	1.563	R <sup>2</sup> =0.000 AdjR <sup>2</sup> =-0.004
VACA	-0.027	-0.501	0.251	0.617	1.563	R <sup>2</sup> =0.001 AdjR <sup>2</sup> =-0.003
VAHU	0.059	1.214	1.473	0.226	1.551	R <sup>2</sup> =0.006 AdjR <sup>2</sup> =0.002
STVA	-0.011	-0.094	0.009	0.926	1.559	R <sup>2</sup> =0.000 AdjR <sup>2</sup> =-0.004

According to the results of regression model relating to the second main hypothesis represented in table (4), the significance level of statistic F in all four regression models is more than accepted significance level (0.05%) and therefore total regression model is significant for them. Considering the level of the coefficient (P-Value) of estimated variables in the models shows that the estimated variables don't have significance level lower than (0.05%) so have no effect on equity efficiency (ROE).

The second hypothesis test results show that among four estimated variables, none of them have a significant effect on equity returns of company. These results are not in consistent with results by ((Chen chow (2005), pew tan and colleagues (2007), Bentis (1998)).  
 H<sub>2, 2</sub>. Intellectual capital affects return of assets.

**Table 4:** The Second Third hypothesis test results.

variable	Coefficient	statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.163	1.802	3.248	0.043	1.812	R <sup>2</sup> =0.013 AdjR <sup>2</sup> =0.009
VACA	0.497	8.277	68.506	0.000	1.707	R <sup>2</sup> =0.220 AdjR <sup>2</sup> =0.217
VAHU	0.129	2.13	4.535	0.034	1.804	R <sup>2</sup> =0.018 AdjR <sup>2</sup> =0.014
STVA	-0.009	-0.06	0.004	0.952	1.818	R <sup>2</sup> =0.000 AdjR <sup>2</sup> =-0.004

According to the regression model results relating to third main hypothesis that is presented in table(5), the significance level of statistic F in the three regression models related to (VAIC,VACA,VAHU) is less than accepted significance level (0.05%) and total regression model is meaningful for them. Significance level of regression model of (STVA) is more than accepted significance level (0.05%) and its regression model is significant. Considering the significance level (P-Value) of estimated variables in the models shows that from four estimated variables, three variables (VAIC, VACA, VAHU) with significance level lower than (0.05) have effect on assets return.

The third main hypothesis results show that from four estimated variables in the model, there is a positive and significant effect between the company assets return with intellectual property, coefficient of added value of employed capital and coefficient of added value of human capital.

The significant note here is that among the components of intellectual capital, the efficiency of employed capital relative to human capital has a greater effect on the performance index. In fact, companies with high efficiency from employed capital point of view (from added value point of view) are expected to have increase in efficiency of company assets. Also change of structural assets to physical assets (employed) (i.e. use of resources in the design and creation of processes and business systems) and human assets also becoming an added value, will lead to improved efficiency of assets. These results are in consistence with the results of (China Chow (2005), Apuhamy (2007), Pew tan and *et al.* (2007), and KvsK Yalama , Bvntys (1998)).

H<sub>2,3</sub>. Intellectual capital affects on the Growth revenues.

According to test results of the regression model for third hypothesis that is represented in table (6), significance level of statistic F in the regression model related to (STVA) is lower than accepted significance level (0.05%) and general regression model is meaningful for it. Significance level of regression model for (VAIC, VACA, and VAHU) is more than accepted significance level (0.05%) and regression model is significant for them. Considering the coefficient of significance level (P-Value) of variables in the models shows that from four estimated variables, the variable (STVA) with significance level lower than (0.05%) has an effect on earnings growth rate.

**Table 5:** The Second Fourth hypothesis test results.

variable	Coefficient	statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.103	1.164	1.355	0.246	1.937	R <sup>2</sup> =0.006 AdjR <sup>2</sup> =0.001
VACA	-0.054	-0.818	0.669	0.414	1.961	R <sup>2</sup> =0.003 AdjR <sup>2</sup> =-0.001
VAHU	0.054	0.913	0.833	0.362	1.938	R <sup>2</sup> =0.003 AdjR <sup>2</sup> =0.000
STVA	0.286	1.913	3.741	0.047	1.929	R <sup>2</sup> =0.015 AdjR <sup>2</sup> =-0.011

The fourth hypothesis test results show that from four estimated variables in the model, the coefficient of added value of structural capital has a positive and significant effect on assets growth, but other components of intellectual capital coefficient of added value indicates no significant effect on income growth. The results show that whatever the structural capital of company is higher, it will have positive effect on assets growth rate. With concerning Operational definition of variables structural capital or in other worlds, customer capital the created added value is different from added value created by intellectual capital of company. So any reduction or increase in human capital will result in a change in coefficient of added value of structural capital. Low human capital caused to increase in added value coefficient of structural capital, therefore leads to company's revenue growth which reflects the positive effect of structural capital on company's revenue growth.

H<sub>2,4</sub>. Intellectual capital has affects on the Created shareholder, s value.

**Table 6:** The Second Fifth hypothesis test results.

variable	Coefficient	statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	-0.060	-0.262	0.071	0.790	1.497	R <sup>2</sup> =0.000 AdjR <sup>2</sup> =-0.004
VACA	-0.333	-1.987	3.948	0.048	1.538	R <sup>2</sup> =0.016 AdjR <sup>2</sup> =-0.012
VAHU	-0.086	-0.562	0.316	0.575	1.499	R <sup>2</sup> =0.001 AdjR <sup>2</sup> =-0.003
STVA	-0.236	-0.621	0.385	0.535	1.492	R <sup>2</sup> =0.002 AdjR <sup>2</sup> =-0.003

According to test results of the regression model for fifth hypothesis that is represented in table (7), significance level of statistic F in the regression model (VACA) is lower than accepted significance level (0.05%) and regression model for it is meaningful. significance Level of regression model (STVA, VAIC, and VAHU) is more than accepted significance level (0.05%) and regression model is significant for it. Considering the coefficient of significance level (P-Value) of variables in the models shows that from four estimated variables, the variable (VACA) with significance level lower than (0.05%) has an effect on created value for each share.

The fifth hypothesis test results show that from four estimated variables in the model, the coefficient of added value of employed capital has a negative and significant effect on created value for shareholders, but other components of intellectual capital coefficient of added value do not have effect on created value for

shareholder. The results show that by increase of coefficient of added value of employed capital (low Operating assets of company or increasing the added value distributed to interest groups) the created value for shareholders decreases.

#### **6. Conclusion:**

The present study attempted to examine the relationship between intellectual capital (IC), market value and Iranian Stock Market companies' performance. Despite the fact that the IC is recognized as an increasingly important strategic asset for sustainable competitive advantage, the results of this study is not able to support some claims. Experimental results obtained are not able to support all the proposed hypotheses and only emphasize on the effect of intellectual capital efficiency (VAIC), employed human capital (VAHU), (VACA) on return of assets (ROA), the effect of efficiency of employed capital (VACA) on created value for shareholders (CSV) and the effect of structural capital efficiency (STVA) on revenue growth of companies (GR) among the five assessing indicators of the financial performance used in this study. The results emphasize that intellectual capital is important in raising the revenue growth, performance, efficiency and value of institution. Although accepted standards of accounting restrict more recognition of intellectual capital in Financial Statements, the investors have understand the importance of intellectual capital in their decisions and consider it as an essential matter for better performance and increase in the efficiency of companies. Nowadays in spite of increase in intangible assets importance and especially intellectual and immaterial capital in companies, most of accounting systems are not able to perform a clear a suitable account of company's performance in accordance to intellectual capital. For evaluating the performance of companies by considering intellectual capital pint of view, five assessing criteria have been used (market value to book value, equity, return of assets, revenue growth and created value for shareholders) that results show the significant effect of intellectual capital on gauges based on performance in some cases.

Policy makers should intensify their initiatives to encourage greater acceptance and understanding of intellectual capital and its related assets development. Only with such measures the country will be able to achieve improvement in vital indices.

In addition, at the microeconomic level, organizations must realize that only by raising their intellectual assets, they will be able to survive for remaining competitive against intense competition (internal and external) and creation of sustainable competitive advantages.

#### **REFERENCES**

- Abbasi, A., A. Galdi Sedghi, 2010. Survey the effect of intellectual capital elements efficiency on financial performance of companies in Tehran Stock Exchange. *Accounting and Auditing Studies*, 6(17): 74-57.
- Anvari Rostami, A., M. Rostami, 2004. Evaluation of models and methods for intellectual capital measurement and Valuation of companies. *Accounting and Auditing Studies*, 34(10): 51-75.
- Bontis, N., 1998. "Intellectual capital: an exploratory study that develops measures and models", *Management Decision*, 36(2): 63-76.
- Bontis, N., W. Chua and S. Richardson, 2000. "Intellectual capital and business performance in Malaysian industries", *Journal of Intellectual Capital*, 1(1): 85-100.
- Chen, M.C., S.J. Cheng, Y. Hwang, 2005. An empirical investigation of the relationship between intellectual capital and firm's market value and financial performance", *Journal of Intellectual Capital*, 6(2).
- Dimitrios, M., C. Dimitrios, T. Charalampos, 2011. The impact of intellectual capital on firm's market value and financial performance. *Journal of intellectual capital*, 12(1).
- Dominique, A. Talia, 2009. An Empirical Research on the Relationship between Intellectual Capital and Corporate Financial Performance on Indonesian Listed Companies". Jl. Hang Liker 1 No. 6 Jakarta 12120, Indonesia.
- Edvinsson, L., P.H. Sullivan, 1996. Developing a Model for Managing Intellectual Capital", *European Management Journal*, 14(4).
- Firer, S. and S.M. Williams, 2003. "Intellectual capital and traditional measures of corporate performance", *Journal of Intellectual Capital*, 4(3): 348-60.
- Mavridis, D.G., 2004. "The intellectual capital performance of the Japanese banking sector", *Journal of Intellectual Capital*, 5(1): 92-115.
- Pew Tan, H., D. Plowman, P. Hancock, 2007. Intellectual capital and financial returns of companies. *Journal of Intellectual Capital*, 8(1): 76-95. ([www.emeraldinsight.com/1469-1930.htm](http://www.emeraldinsight.com/1469-1930.htm)).
- Seragi, H., A. Anvari Rostami, 2005. Survey the effect of intellectual capital on the market value of companies listed in Tehran Stock Exchange. *Accounting and Auditing Studies*, 39(7): 49-62.
- Sveiby, K., 2000. "Intellectual capital and knowledge management", available at: [www.sveiby.com.au/BookContents.html](http://www.sveiby.com.au/BookContents.html) (accessed 2 June 2009).

Sveiby, K., 2001. "Methods for measuring intangible assets", available at: [www.sveiby.com.au/BookContents.html](http://www.sveiby.com.au/BookContents.html) (accessed 2 June 2009).