



## IMPACT OF INTELLECTUAL CAPITAL ON THE FINANCIAL PERFORMANCE OF LISTED COMPANIES IN TEHRAN STOCK EXCHANGE

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### **Abstract**

*Economical special conditions in to active companies has been caused competitive benefit in these companies don't be base on tangible asset of them. What that is the cause of competition in these companies economically nowadays are intangible assets and on the other hand, they are intellectual capital. Because of this type of intangible assets and capitals hasn't been written in the balance sheet and of course, they have significant effects in the performance, value and profitability, it needs to consideration, allocation of sources and emphasis of senior managers in the organization increasingly.*

*In this research we tried to examine the impact of intellectual capital on financial performance of companies. For this purpose, the CIV method (Calculated Intangible Value) and ICE (efficiency of intellectual capital) for measuring the extent of the intellectual capital and use efficiency of the intellectual capital in companies and it has been studied the effect of the intellectual capital on the ratios of ROE (Return On Equity) and ROA (Return On Assets) and ROS (Return On Sales). For this purpose, it has been chosen in the stock exchange in Tehran 170 Companies in the time space from 2003 to 2007, accidently and necessary data of the research has been collected from the financial statements of mentioned companies. The main and sub- Hypotheses of the research has been confirmed by use of statistical methods whit 95% confidence coefficient by SPSS Software.*

**Keywords:** *intellectual capital, knowledge management, intangible assets, financial performance of organizations*

### **Introduction**

Traditional methods of accounting that is based on tangible assets, isn't enough for measuring of intellectual capital that it is the biggest and the worthiest intangible asset of organization, The new major of intellectual asset is a new research area for researcher and investigator of organization that focus on create mechanism of new measurement for reporting of important intangible variable as human capital, customer satisfaction and innovation.

Absence of sufficient vision and possibility of compare between firms and also increase of distance between market value and accounting value of firms have caused appearance of systematic errors at share price of firm and fluctuations more than extent at stock market and have caused decision power of investors and managers be in dangerous , so , it is need today

that one method is used for measuring of this important section of firm capital (intellectual capitals) and study of its influence on firm value and determination of fair value of stock at market. In this research, we engage in study of intellectual capital and its compounded elements and also study of intellectual capital influence on financial performance (capacity of value creation) accepted firm at Tehran's securities exchange with use of Calculated intangible value model.

### **Review of literature**

The first experience study for measuring of intellectual capital was performance by Swedish association in middle of decade 1980 and after then, very research have done for determination state of firms intellectual capital in countries and between countries documented research indicate effort for placing intellectual capital into firm balance sheet, is a researchable concept and performance research indicate this subject is perfectly scientific. Abeysekera Indra (2005)<sup>[11]</sup>, Olsson, B (2001)<sup>[10]</sup>, Brennan N. (2001)<sup>[4]</sup>.

Francisco aguar and colleagues examined value added theory of intellectual capital by research in 2009 in making machinery and equipment firms in Brazil that have more than 100 Employer in duration 2000-2006. Overall results of research showed model VAIC is appropriate for description of value creation in Brazilian firms<sup>[2][3][5][7]</sup>.

Richeri and colleagues did a research among 1000 big firms of Brezile in the period of 2000-2005 in 2008. In this research, researchers have used accounted intangible assets value (CIV) and intellectual capital efficiency (ICE) for measuring market value of intellectual capital and their current. Result of research indicate a positive relation between two parameters CIV, ICE and depending variable mean, return rate of share holder's equity (ROE) and assets output rate (ROA) and sale output rate (ROS)<sup>[8][9][11][12]</sup>.

Tan, Pleman and Hankok (2007)<sup>[6]</sup> in their research- have investigated relation of intellectual capital with firms financial output result show that first there is a meaningful positive relation between intellectual capital and firm financial output of presence and future second influence of intellectual capital is different in firms Financial output in different industries.

### **Data and Research**

This research has performance in the library methods. Research data collected by reference to organization website of Tehran's securities exchange from financial statements, study firms. Statistical community of research include: 298 firms that with use of sampling in the random method and Cohran formol – 170 firms as sample studied in the period of 2003-2007.

**Research**

**Methodology**

This research is descriptive and in terms of purpose, is applied. This study was conducted using a library And theoretical study of various books and articles were obtained. Research data, financial statements of listed companies in Tehran Stock Exchange was collected. Realm of spatial research is all manufacturing and industrial companies listed in Tehran Stock Exchange and Realm of research time, is the period between 2003 and 2007.

**Data analysis**

According to the study, the relationship between independent variables and dependent variables in the following three cases are investigated:

$$1) RoE = \beta + \beta_1 CIV_{it} + \beta_2 ICE_{it} + \beta_3 CE_{it} + \beta_4 END - GERAL_{it} + \beta_5 CRESC - VENDAS_{it} + \epsilon t$$

$$2) RoA = \beta + \beta_1 CIV_{it} + \beta_2 ICE_{it} + \beta_3 CE_{it} + \beta_4 END - GERAL_{it} + \beta_5 CRESC - VENDAS_{it} + \epsilon t$$

$$3) RoS = \beta + \beta_1 CIV_{it} + \beta_2 ICE_{it} + \beta_3 CE_{it} + \beta_4 END - GERAL_{it} + \beta_5 CRESC - VENDAS_{it} + \epsilon t$$

**Simple relationship between independent variables and dependent variables**

Study findings related to simple variables with the dependent variable is presented in the table (1).

Table1: Simple correlation coefficients of independent variables and dependent variables

ROS		ROA		ROE		dependent variables / independent variables
P	R	P	R	P	R	
P<0.308 472	0.047	P<0.151 472	0.066	P<0.025 472	0.103	CIV
P<0.005 472	0.102	P<0.187 472	0.018	P<0.045 472	0.012	ICE
P<0.014 472	0.00	P<0.268 472	0.007	P<0.101 472	0.00	CE
P<0.022 472	0.006	P<0.249 472	0.016	P<0.182 472	0.00	END
P<0.042 472	0.001	P<0.273 472	0.011	P<0.001 472	0.279	CRESC- VENDAS

As the table (1) is observed, the findings revealed that the variable CIV (calculated intangible value) with variable ROE (Return on Equity) at P <0.025 significant relationship exists. Thus the first Hypothesis H0 is rejected and otherwise Assume to be confirmed. There is a positive relationship between independent variable (ICE) and the dependent variable (ROE) in the P

<0.05 significant. There is a positive relationship between independent variable (ICE) and the dependent variable (ROS) in the  $P < 0.01$  significant. There is a positive relationship between variable (CRESC-VENDAS) and the dependent variable (ROE) in the  $P < 0.01$  significant. There is a positive relationship between variable (CRESC-VENDAS) and the dependent variable (ROS) in the  $P < 0.042$  significant.

### **Discussion**

Present findings in Tables 2 to 7 is given, shows that the only variables CIV, ICE and CRESC-VENDAS have positive effect on the ROE and there is a significant relationship with the ROE. The variable CRESC-VENDAS coefficient of 0.155 can explain ROE better than the other variables. Also ICE variable, and CIV, respectively 1.3 and 1.1% of the variance Explanation the ROE variable indicating that the efficiency of intellectual capital and intellectual capital to increase returns on equity have a positive impact but this variable effect is not so high.

The results of this study indicate that the multiple regression equation with dependent variable ROA, the sample studied, no correlation has been found between independent variables and the dependent variable (ROA).

The results of this study indicate that the multiple regression equation (the dependent variable ROS), ICE has positive impact at the level of  $P < 0.01$  significant relationship with the dependent variable ROS.

### **Conclusion**

as we mentioned, in study case sample. Variable CIV have positive influence on variable ROE (it is one of index and criterion of value create capacity in firms) and on variables ROS, ROA don't have any influence. So assumption zero of hypothesis (1) is rejected and its value creative capacity in firms, that this result is accord with theory evidence and approve study finding and theory also present research results indicate independent variable ICE (intellectual capital efficiency) has positive influence on depend variables ROE and ROS and has a meaning full relation with this variables- so can say that intellectual capital efficiency have influence on value create capacity in firms. Therefore assumption zero of hypothesis (2) also is rejected and opposite assumption is approved, that this finding accorded with study evidence and subject theory and approve them. However obtained result of this research, don't indicate significant influence in increase of value creative capacity of study case firms, by the way general results indicate that variables CIV and ICE have influence on some financial ratio (beneficial ratios) of study case firms.

Researchers believe that measuring of intellectual capital with use of method CIV in practical condition when sample volume of study case is very big don't seem appropriate for this work and efficiency of this method must distinguished in more experience researches because this method is used led by the researchers, also results of present research indicate that in this sample volume this method don't have appropriate efficiency for measuring of intellectual capital therefore seems it is necessary that more research is done for distinguishing efficiency of model CIV for measuring of intellectual capital in firms surface until restraints and defects of this method is distinguished more.

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