



## The survey of relationship between efficiency of intellectual capital and investment opportunity set of companies listed in Tehran stock exchange

Rahim Bonabi Ghadim\* and Akbar Karimzade

Department of Accounting, Hashtroud Branch, Islamic Azad University, Hashtroud, Iran.

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### ABSTRACT

This study aims at analysing and determining the relationship between the effectiveness of Intellectual Capital and beneficial investment opportunity set in 81 Companies of listed in Tehran stock exchange during 85-90 years. In the analysis of the relationship between the variables and proving the hypothesis of the study, correlation method (simple regression and multiple regression) was used. The result show that there was significant relationship between the human capital, structural capital and employed capital efficiency with beneficial investment opportunity set, also there was not any relationship between the effectiveness of Capital Intellectual and ratios of EPS-to-P. so that there was significant relationship between effectiveness of Capital Intellectual and beneficial investment opportunity set. This means that the efficiency of human capital, structural capital and employed capital can be utilized as a valuable resource for profitable investment opportunities for companies to take account. It can be concluded that the effectiveness of intellectual capital, is a potentially benchmark for measuring and reporting of beneficial investment opportunity set.

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### Introduction

Today's accounting systems are not capable of measuring and evaluating knowledge considering its significant role in the evaluation of commercial units. Therefore, inability to measure and evaluate knowledge can lead to unrealistic and illogical decisions for investors. In the micro economic level, intellectual capital refers to non-physical sources of value for a company or an organization like human resources (skills, experiences, and education), relationship capital (relations between customers and investors, trademarks, agreements), and structural capital (organizational culture, work environment, systems) Roland & Goran, (2007). The measurement of intellectual capital is essential in comparing companies with each other, determining their actual value, and even improving their controls. In fact, traditional financial accounting is not able to measure the actual values of companies and only measures the tangible revenues. Intellectual capital provides a new way to observe the real value of organizations and the future value of organizations can be determined too. The use of traditional criteria for measurement such as company income, the profit for each share, return on equity, return on assets, cash flow, etc. had been common in markets for years until the value-based criteria were offered to evaluate the performance of companies (Zeghal & Anis, 2010). Investment opportunities are different within the stages of the cycle and the company that has more flexibility with regard to the use of these opportunities would have a better future perspective. Whenever appropriate strategies based on trade environment be determined for managers and users of financial information to create opportunities for profitable investment, certainly there would be fantastic results that can turn an industrial unit from the edge of bankruptcy to strength and power. However, until the actual values of a company and the factors included in those values and also the affective factors are not identified well, inefficient decisions will be made because of

lack of understanding on measurement and the true value of the company (Adam, et al, 2007).

### A review on theoretical basics and the review of literature

Nowadays, the invisible dimension of economy has been founded on intellectual capital and its first and major element is knowledge and information. The conceptual nature of intellectual capital allows an organization to have a better understanding of the management of dynamic and complex interactions between human and structural resources, and customers. In addition, it allows the management to establish an appropriate interaction and balance between these capital and the visible and financial resources in an organization. In fact, intellectual capital is being used in the provision of a "synchronous image" of the values of the annual invisible resources or an explanation for the status of the programs related with these issues (Rosalind & James, 2008). Researchers believe that intellectual capital means the attempts to make an effective use of knowledge (the final product) against information (raw material) (Roland & Goran, 2007). Based on the previous studies, the coefficient of intellectual value added (efficiency) measures the point that how a higher added value is produced in each source by each unit of money that is invested. A higher coefficient shows the higher rate of value creation by the use of a company's resources and intellectual; capital (Stahle et al, 2011). Pulic argues that the value added (efficiency) in a company is the difference between the income and expenditure (Pulic, 2004). While the use of traditional methods in accounting help a lot in understanding the actual value of a business, making use of added value method in the current state can be more helpful. In this way, managers can be informed well of the current status (weak and strong points) of their management of intellectual capital. However, still half of the managers in businesses do not have enough understanding of the advantages of such a knowledge. In other words, because of the lack of

measurement for intellectual capital, only 20 percent of the knowledge present in a company is being used (Alemtabiriz et al, 2010). By considering the importance of intellectual capital in improving the performance of companies and their success, it seems that it can be used as an indicator in the evaluation of performance of companies (Nasif Al-Shubiri, 2011). Nowadays, intellectual capital form a significant part of market value in organizations its identification, measurement, and management has been one of the major duties for organizations (Clarke & Seng, 2011). Asadi et al, investigated the relationship between intellectual capital and the market value for organizations and concluded that there is a direct and significant relationship between intellectual capital and some of the indicators used in the evaluation of performance (Asadi et al, 2010). The results of a study done by Etemadi et al (2010) reveal that scientific assets can be considered as the motivation for the performance of a company and claim that the presence of them in an organization causes an increase in the added value. Hemmati et al (2011) found that there is a significant relationship between intellectual, market value, and the performance of non-financial companies. In addition, the results revealed that there is a meaningful relationship between intellectual capital and its components and the ration of market value to the value of the organizations under study. Ahmadi et al (2012) found that there is a meaningful relationship between intellectual capital and profit making, the efficiency of work force, the efficiency of revenues, and personnel costs in companies under study and there is no meaningful relationship between intellectual capital and the risks of making use of invisible assets. The study done by Chen et al (2005) revealed that the intellectual capital in a company has positive impacts on market value and financial performance and is considered as an indicator for the future financial performance. The findings by Ling et al (2010) show that the coefficient of intellectual added value is a powerful tool in evaluating the effective use of intellectual capital and can be used by managers in the evaluation of their company's performance without the need for industrial standards. Maditinoz et al (2011) investigated the effects of intellectual capital on market value and financial performance of companies and found that there is a significant statistical relationship between the efficiency of human resources and financial performance. Abdulsalam et al (2011) investigated the efficiency of intellectual capital in Kuwaiti banks and the coefficient of intellectual value added. They found that non-commercial banks have had a rather better performance than all commercial banks during 2004-2006. The findings of the study by Bakar and Yoso (2012) reveal that the banking sector in Malaysia has had quite a high rate of intellectual capital and the status of banks there is not fixed and is changed year by year. In another study by Sang Ong and Yen Yeoh (2012), it was found that food companies have had a higher efficiency in the use of their intellectual resources and capital for the creation of value. Despite the important role of investment opportunities in the financial affairs of companies, there is no consensus on the manner of evaluation for the evaluation of the value of investment opportunities there. The point is that generally the investment opportunities are invisible for those people who are outside a company. The cost effective investment opportunities play a major role in the financial affairs of companies and the combination of assets and investment opportunities affect the structure of capital in companies, the structure of maturing liabilities and contractual obligations, the policy of profit division, pension contracts, and the accounting procedures of companies (Adam et al, 2007). It is not surprising that the

measurement of profitable investment opportunities for companies is significantly present in the experimental studies done on the financial affairs of companies. If investment opportunities were visible for people outside a company, a common procedure had to be presented that was based on the indicator variables. Therefore, profitable investment opportunities can be presented by the use of indicators that are visible for people outside a company. The results of studies show that the ratio of market value to the book value of assets is the best indicator. The three indicators based on market value including the ratio of market value to the book value of assets and capital and also the ratio of share profit to the profit cost. These indicators are correlated highly with the investment opportunities of companies (Adam et al, 2007). The findings of a study by Ferdinand and Burch (1999) show that there is a negative relationship between investment opportunities (IOS) and debts and the policy of profit division. The findings indicated that in companies with high investment opportunities, there is a low rate of debt and profit division and vice versa. Based on the findings of Kenneth Lehn and Stanko Racic (2001) and considering the reverse relationship that has been predicted between investment opportunities and debts, it was found that whenever investment opportunities are high the debts are low and vice versa. Goyal (2007) made use of the method of true authorities in order to evaluate the performance of various indicator variables with respect to the profit making investment opportunities in companies. The results reveal that in a relative scale, the ratio of market value to the book value of assets contains more information with regard to investment opportunities. Song (2009) studied the relationship of financial leverage and investment opportunities in Chinese firms and showed that those companies that have a higher rate of development do have a lower ratios of financial leverage. In addition, bigger companies have to undergo more debts in investment compared with smaller ones.

#### **Research hypotheses**

The main hypothesis in the study: There is a meaningful relationship between intellectual capital and beneficial investment opportunities.

Alternating hypothesis 1: There is a relationship between the efficiency of human capital and beneficial investment opportunities.

Supporting hypothesis 1: The efficiency of human capital has a relationship with the ratio of the book value of long-term assets to the market value of assets.

Supporting value 2: The efficiency of human capital has a relationship with the ratio of market value to the book value of shares.

Supporting value 3: The efficiency of human capital is related to the ratio of the profit of each share to the cost of each share.

Alternating hypothesis 2: There is a relationship between the efficiency of structural capital and beneficial investment opportunities.

Supporting hypothesis 1: The efficiency of structural capital is related with the ratio of the book value of long-term assets to their market value.

Supporting hypothesis 2: The efficiency of structural capital is related with the ratio of the value of stock market to the book value of shares.

Supporting hypothesis3: The efficiency of structural capital is related with the ratio of the profit of each share to the cost of each share.

Alternating hypothesis 3: There is a relationship between the efficiency of the capital used and beneficial investment opportunities

Supporting hypothesis 1: The efficiency of the capital used is related with the ratio of the book value of long-term assets to the value of assets market.

Supporting hypothesis 2: The efficiency of the capital used is related with ratio of the value of stock market to the book value of shares.

Supporting hypothesis 3: The efficiency of the capital used is related with the ratio of the profit of each share to the cost of each share.

**Methodology**

The current study is descriptive, ex-post-facto research according to the nature and method of data collection. In addition, it is practical with respect to the objectives of study. In this study, the model of value added intellectual coefficient has been used and library research and financial information and ratios of companies have been applied in answering the main question of this research. The variables have been used in the model in such a way that criteria from several economic and accounting theories related to the indicator of intellectual capital be present for the efficiency and the measurement of financial ratios.

**Research population and sample**

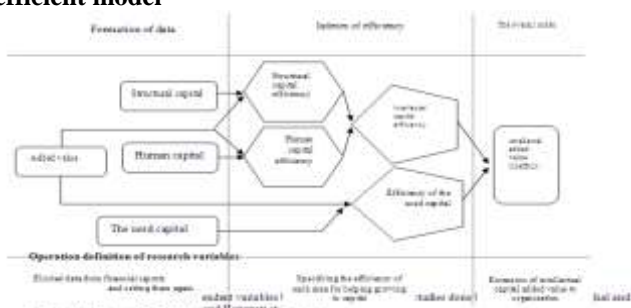
The population for the current study consists of all companies approved by Tehran stock exchange. The time span for the studies is from 2006 up to 2011. The method by which the companies have been chosen and the manner of data collection have been presented in the following:

1. The end of financial year for the chosen companies is the end Esfand (March).
2. At least a year before 2012 have been active in stock exchange.
3. The type of activity would not be financial investment or reselling.

Therefore, by the application of the above criteria, 81 companies were selected as the population and since the number of companies that fulfilled the criteria was low, all the 81 companies were studied as the sample. In addition, information is extracted by the use of software in Tehran stock exchange such as Tadbir Pardaz, Rah Avarad Novin, and the website of stock exchange organization.

**Research model**

**Figure 1. The general view of value added intellectual coefficient model**



1. VAHA: The indicator for the efficiency of human capital
2. STVA: The indicator for the efficiency of structural capital.
3. VACA: The indicator for the efficiency of the capital used.

**The measurement of value added**

Value added = output – input

What is meant by input is the income resulting from the selling of goods and services and output means all the costs made in the production of goods and services except the salary of staff and

costs of depreciation. Payment is a type of investment in human resources and consequently leads to the establishment of intellectual and structural value added as a result of improvement in procedures and regulations. The cost of depreciation is included in the non-cash costs of a company:

$$STVA + VACA + VAHU + VAIC$$

Human capital – Staff costs – costs of research and development (in fact, the costs of staff who are involved in research and development)

$$VAHU = VA/HC$$

The efficiency of human capital= value added/human capital

$$SC = VA-HC$$

Structural capital= value added – human capital

$$STVA = SC/VA$$

The efficiency of structural capital= structural capital/value added

CA – The book value of net assets

$$VACA = VA/CA$$

The efficiency of the capital used = Value added/The book value of net assets

**Dependent variables**

Based on the studies by Ferdinand and Burch (1999), Vidhan et al (2001), Adam et al (2007), Goyal (2007), Song (2009), the investment opportunities is introduced by a ratio of company value and this ratio is measured by assets. In the present study, three ratios have been used in order to measure investment opportunities (IOS). The number that is obtained as the common factor out of these three ratios is considered as the representative for investment opportunities.

1. The book value of properties, machinery, and equipment based on the value determined by property market.
2. The value of common stock market based on the book value of common stock.
3. Share profits in the end of the period based on the costs of shares in the end of each period.

In order to calculate the sum of book values for long-term properties, the documented value of long-term properties determined in the balance sheet.

In order to calculate the sum of book values for common shares, the documented value of shareholders' rights determined in the balance sheet is used. The sum of value for the common stock market is determined by multiplying the last price of stock market for each company in the end of each financial year in the number of its shares.

The value of assets market equals:

The sum of common stock market value+ the sum of book values for common stock – the sum of book values for assets

**Control variables**

In the current study, two control variables have been used in order to control for their impact on the relationship between the variables within a company. These control variables are presented below:

1. Company size: This variable is measured by the use of the total book value of assets .
2. Leverage: It is measured by the ratio of total assets book value to the total book value of the common shareholders' rights.

The paid capital of shares – total book value of the rights of shareholders – total book value of the rights of common shareholders

Therefore, the final model of research can be illustrated as follows:

$$IOS = \beta_0 + \beta_1 VAHV + \beta_2 STVA + \beta_3 VACA + \beta_4 LEV + \beta_5 Size + \mu$$

### Statistical procedures

In order to determine the meaningfulness of regression, the test for meaningful of regression is applied. The statistic used in this method is that of Fisher's. The statistic should not be lower than the Fisher's statistic calculated through the table in order to approve the meaningfulness of regression. In order to get to such a conclusion, Sig. statistic can be applied but it must be lower than the error level ( $\alpha = 5\%$ ). Another test that is used is the test of Multicollinearity. If there is a high degree of multicollinearity in a regression equation, it means that the model seems good but do not have meaningful independent variables and these variables affect each other. Because of this, the indicators of tolerance and variance inflation factor have been used. One of the other assumptions in the use of regression is the independence of errors (the difference between actual values and the ones predicted by regression). In order to measure this, Durbin-Test test has been applied. The optimal range for this statistic would be 1.5 to 2.5.

### Hypotheses testing

#### A. descriptive statistics

#### B. Test of hypotheses

Alternative hypothesis 1. There is a relationship between the efficiency of human capital and beneficial investment opportunities.

As it was shown in figure2, the regression model of the relationship between human capital's efficiency and the ratio of book value of properties, machinery, and equipment to the value of assets market is meaningful with a %95 degree of certainty. The t statistic for the efficiency of human capital equals 10.913, which is bigger than 1.96 and confirms the meaningfulness of coefficients in this variable. Therefore, the first supporting hypothesis of the first alternating hypothesis is confirmed.

As it is shown In the above three figures, it can be claimed with a %95 degree of certainty that the regression model of the relation between the efficiency of human capital and the ratio of common stock market to the book value of common stock is meaningful. The t statistic for human capital equals 3.98, which is higher than 1.96 and points to the meaningfulness of the coefficients of this variable. Thus, the second supporting hypothesis in the first alternative hypothesis is confirmed. As it is shown in the above four figures, it can be said with a %95 degree of certainty that the regression model for the relation between the efficiency of human capital and the ratio of profit shares in the end of period divided by share prices in the end is not meaningful. The t statistic for the efficiency of human capital equals 0.41, which is lower than 1.96 and shows the lack of meaningfulness for the coefficients in this variable. Thus, the third supporting hypothesis in the first alternating hypothesis is rejected.

Alternating hypothesis 2: There is a meaningfulness relation between the efficiency of structural capital and beneficial investment opportunities.

As it is shown in figure 5, it can be said with a %95 degree of certainty that the regression model of the relation between the efficiency of structural capital and the ratio of the book value of machinery, properties, and equipment to the value of assets market is meaningful. The t statistic for the efficiency of structural capital equals 4.22, which is higher than 1.96 and shows the meaningfulness of the coefficients in this variable. Thus, the first supporting hypothesis of the second alternating hypothesis is confirmed.

As it is shown in the above six figures, it can be claimed with %95 degree of certainty that the regression model of the relation between the efficiency of structural capital and the ratio of

common stock value to the book value of common stock is meaningful. The t statistic for the efficiency of structural capital equals 2.427, which is higher than 1.96 and points to the meaningfulness of coefficients in this variable. Thus, the second supporting hypothesis in the second alternating hypothesis is confirmed. As it is evident from the above seven figures, it can be claimed with %95 degree of certainty that the regression model of the relation between the efficiency of structural capital and the ratio of share profits in the end of each time periods to the share prices in the end of each time period is not meaningful and indicates the lack of meaningfulness for the coefficients in this variable. Thus, the third supporting hypothesis within the second alternating hypothesis is rejected. Alternative hypothesis 3: There is a meaningful relation between the efficiency of the capital used and beneficial investment opportunities.

As it can be inferred from the above figures, it can be claimed with %95 degree of certainty that there is a meaningful relation between the efficiency of the capital used and the ratio of the book value of properties, machinery, and equipment to the value of assets market. The t statistic for the efficiency of the used capital is 4.92, which is higher than 1.96 and shows the meaningfulness of coefficients in this variable. Thus, the first supporting hypothesis of the third alternating hypothesis is confirmed. As it can be seen from the above nine figures, it can be claimed with %95 degree of certainty that the regression model for the relation between the efficiency of the capital used and the ratio of common stock market to the book value of common stock is meaningful. The t statistic for the efficiency of the capital used is 3.435, which is higher than 1.96 and indicates the meaningfulness of coefficients in this variable. Thus, the second supporting hypothesis within the third alternating hypothesis is confirmed.

As it can be seen from the above ten figures, it can be claimed with a %95 degree of certainty that the regression model used for the relation between the efficiency of the capital used and the ratio of share profit in the end of time periods to the price of shares in the end of time periods is not meaningful. The t statistic for the efficiency of the capital used is 0.386, which is below 1.96 and indicates the lack of meaningfulness for the coefficients of this variable. Thus, the third supporting hypothesis of the third hypothesis is rejected.

### Discussion and conclusion

The main objective of doing the current study has been to investigate the relation between the efficiency of intellectual capital and profitable investment opportunities within companies registered in Tehran stock exchange. The findings show that the efficiency of intellectual capital affects profitable investment opportunities in companies registered in Tehran stock exchange. However, there is no relationship between the efficiency of intellectual capital and the ratio of share profits to share profits, there is significant positive relation between the efficiency of human capital, the efficiency of structural capital, and the efficiency of the capital used on the one hand and profitable investment opportunities on the other. This finding is in line with the findings of the study by (Zeghal & Anis, 2010). In that study, the positive relation between the value added coefficient of intellectual capital and the performance of stock market was true only for a limited number of companies. This means that the efficiency in human capital, structural capital, and the capital used are affective value sources for profitable investment opportunities of companies. Therefore, it can be argued that companies should attempt to improve intellectual capital in order to improve their decision making for profitable

investments. By comparing the results of the current study and others done in Iran and outside, it is seen that there is a rough match between them. The results of the study are in line with studies by Hemmati et al (2010), Abbasi and Sedgi (2010), Chen et al (2005), Clarke and Seng (2011), and Zeghal and Anis (2010). Nevertheless, the findings in the present study do not confirm the results of the study done by Pourzamani et al (2011). It can be concluded that the efficiency of intellectual capital is a potential criteria for evaluating and reporting profitable investment opportunities. In addition, governments can make use of intellectual capital as a method to evaluate various companies and economic sectors in the form of their value added intellectual capital. This would lead to the improvement of economic policies of governments and investors and improvement in modern economic management.

#### Practical suggestions

1. The development of standards to evaluate and report on intellectual capital and validation of that in the current era is one of the most urgent tasks for the reduction of the wide gap that exists in traditional reporting with respect to book values and actual values. Consequently, appropriate and timely efforts to achieve a uniform reporting system would be helpful.
2. Voluntary reporting of intellectual capital by companies in their websites together with other invisible assets in the form of

invisible balance sheets and off-balance-sheet assets is helpful for market analysts to determine the actual value of shares. It can also help investors and shareholders to make appropriate decisions in benefiting from profitable investment decisions.

3. Investors are suggested to study and analyze the investment opportunities of companies for previous years before the adoption of any decision for investment and choose the ones that have better records. In addition to considering performance indicators, they are suggested to take into account the efficiency indicators of intellectual capital and involve that in their decisions.

#### Suggestions for future studies

1. It is suggested that the relation between the efficiency of intellectual capital and criteria for the creation of value in companies be investigated.
2. In the future studies, it is essential to investigate the process of accounting for intellectual capital and its impacts on stock market, too.
3. Because of the security measures for company information and its impacts on markets, it is essential to perform studies on the relation between intellectual capital and informational asymmetries.

**Figure 1. Descriptive statistics**

Minimum	Maximum	Standard deviation	Median	Mean	variable
-1/54	62/4	6/75	2/97	4/26	Efficiency of human capital
-9/78	4/57	/73	/67	/51	Efficiency of structural capital
-10/65	11/54	1/34	/66	/62	Efficiency of the capital used
2/51	/001	/0001	4/44	1/44	Book value of properties, machinery, and equipment based on the value of assets market
/302	57/392	6/62	2/88	5/03	The value of common stock market to the book value of common stock
-86/49	384/99	34/76	/17	5/47	Profits of shares in the end of division period to the price of shares in the end of time period

**Figure 2. Dependent variable: The ratio of book values of properties, machinery, and equipment to the value of assets market**

VIF	Tolerance	Level of significance	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/014	2/475	/000	1/766	Fixed coefficient
1/213	/824	/000	10/913	/498	/124	Human capital efficiency
1/132	/884	/003	-2/988	-/132	-/372	size
1/082	/924	/009	2/628	/113	/704	leverage
R <sup>2</sup> modified :/2	Durbin - Watson 1/957		Sig. :/000		statistic F :39/95	

**Figure 3. Dependent variable: The value of common stock market to the book value of common stock**

VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-		/145	1/459	-	4/063	Fixed coefficient
1/212	/825	/000	3/98	/198	/157	Efficiency of human capital
1/131	/884	/99	/012	/001	/006	Size
1/081	/925	/022	-2/297	-/108	-2/401	Leverage
R <sup>2</sup> modified :/056	Durbin-Watson1/69		Sig. :/000		Statistic F :10/113	

**Figure 4. Dependent variable: Profits shares in the end of each period divided by share profits in the end of each period**

VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/073	1/797	-	31/571	Fixed coefficient
1/213	/824	/682	/41	/021	/114	Efficiency of human capital
1/132	/884	/188	-1/32	-/065	-4/048	Size
1/082	/924	/53	-/629	-/03	-4/152	Leverage
R <sup>2</sup> modified :/001	Durbin - Watson :1/54		Sig. :/504		Statistic F :/782	

<b>Figure 5. Dependent variable: The book value of properties, machinery, and equipment to the value of assets market</b>						
VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/746	/324	-	/25	Fixed coefficient
1/037	/964	/000	4/22	/196	/447	The efficiency of structural capital
1/016	/984	/858	/179	/008	/023	Size
1/021	/979	/799	/255	/012	/073	Leverage
R <sup>2</sup> modified /032	Durbin – Watson: 1/943		Sig /0000		Statistic F :6/147	

<b>Figure 6. Dependent variable: The value of common stock to the book value of common stock</b>						
VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/496	/681	-	1/881	Fixed coefficient
1/034	/967	/016	2/427	/113	/932	Efficiency of structural capital
1/014	/986	/256	1/137	/052	/529	Size
1/02	/98	/002	-3/111	-/144	-3/192	Leverage
R <sup>2</sup> modified /036	Durbin-Watson :1/671		Sig. /0000		statistic F :6/695	

<b>Figure 7. Dependent variable: Share profits in the end of time periods divided by share prices in the end of time periods</b>						
VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/08	1/752	-	30/177	Fixed coefficient
1/027	/964	/756	/299	/014	/709	Efficiency of structural capital
1/016	/984	/2	-1/283	-/06	-3/728	Size
1/021	/979	/471	-/721	-/034	-4/62	Leverage
R <sup>2</sup> modified :/002	Durbin – Watso:1/502		Sig. :/52		Statistic F :/756	

<b>Figure 8. Dependent variable: The book value of properties, machinery, and equipment to the value of assets market</b>						
VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/965	-/044	-	-/034	Fixed coefficient
1/002	/998	/000	4/91	/223	/277	The efficiency of the used capital
1	1	/448	/759	/034	/097	Size
1/002	/998	/867	-/167	-/008	-/047	Leverage
R <sup>2</sup> modified /045	Durbin - Watson 1/663		Sig. :/000		Statistic F :8/249	

<b>Figure 8. Dependent variable: The book value of properties, machinery, and equipment to the value of assets market</b>						
VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/965	-/044	-	-/034	Fixed coefficient
1/002	/998	/000	4/91	/223	/277	The efficiency of the used capital
1	1	/448	/759	/034	/097	Size
1/002	/998	/867	-/167	-/008	-/047	Leverage
R <sup>2</sup> modified /045	Durbin - Watson 1/663		Sig. :/000		Statistic F :8/249	

<b>Figure 9. Dependent variable: The value of common stock market to the book value of common stock</b>						
VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/532	-/626	-	-1/743	Fixed coefficient
1/002	/998	/001	3/435	/158	3/511	The efficiency of the used capital
1	1	/456	-/747	-/034	-/152	Size
1/002	/998	/152	-1/436	-/066	-/667	Leverage
R modified /024	Durbin-Watson :1/668		Sig. :/002		Statistic F :4/863	

<b>Figure 10. Dependent variable: Profit shares in the end of each time period divided by share profits in the end of time periods</b>						
VIF	Tolerance	Sig.	T statistic	Standardized coefficient	Coefficient	Variable
-	-	/086	1/718	-	29/677	Fixed coefficient
1/002	/998	/699	/386	/018	/49	Efficiency of the used capital
1	1	/211	-1/251	-/058	-3/609	Size
1/002	/998	/45	-/756	-/035	-4/801	Leverage
R <sup>2</sup> modified /0001	Durbin- Watson 1/54		Sig.:/508		Statistic F :/776	

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