

# The Relationship between economic values added and stock return of social security investment companies Listed in by Tehran Stock Exchange (TSE)

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**Abstract:** This study aims to determine the relationship between economic values added and stock return of social security Investment Company accepted by Tehran Stock Exchange. The statistical community includes 9 social security investment companies. The interval of this research was 5 years since 2011 to 2015. F-Limer test was used to examine the hypotheses, among panel data methods. The pattern was panel data and the test was Housman. According to the results of these tests, regression approach was suitable and it analyzed the research hypotheses. The results indicated that there is a significant relationship between economic values added and stock return.

**Keywords:** economic value added, stock return, social security investment companies, Tehran Stock Exchange

## INTRODUCTION

Investors in the stock market always seeks high profits. They bought a stock that is the best and the most profit and efficiency to be awarded, as a result, the stocks are purchased and maintained. For this how much management activities is in line with the wishes of shareholders, In other words, how goals are aligned and aligned with the interests of shareholders And managers to what extent could be successful to create value and wealth for shareholders determined through performance measurement system. Basically, the criteria for evaluating the performance of companies in the capital market into two categories of criteria based on the value and criteria based on traditional norms are divided (Ahmadpour & Rasaeian, 2012).

Traditional evaluation criteria such as corporate income, earnings per share, return on equity, return on assets, cash flow and so on the capital market has been the conventional consecutive years until the criteria based on value for evaluating the performance of companies were raised. In evaluating the performance of traditional methods is given only to accounting profit that due to the ignoring the costs of financing capital of firms, are not desirable method ( Mahdavi & Goyandeh, 2009).

One of the newest value based criteria, is EVA. Based on these criteria, the value of the company depends on the efficiency and cost of employed capital. So the difference between EVA and traditional measures it is that in this method is tries to consider all financing costs (Ola et al, 2014).

## Literature and theoretical foundations

Performance evaluation according to capital market development is the most important issues to the attention of the shareholders, creditors, government and administrators. Investors tend to be aware of managers' success rate in the deployment of their capital. They were interested to know that how value is created by investors. Create value and increase shareholder wealth over the long term is the most important company goals (Anvari Rostami et al, 2011). Role of performance measures to reflect the performance of the company through their existing information content has become more prominent. It must be emphasized that maximizing the market value of shares of any companies can be considered the primary objective of any company. For this reason, analysts are looking criterion to act by considering the cost of capital and return on investment to maximize corporate value and increase shareholder wealth. Given the realities of the superior economic criteria based on economic profit such as EVA and the traditional criteria to evaluate the performance of companies, the question arises that the decision on the operation of companies how much is correspond with reality in performance (Ghanbari, 2009). Today EVA is an important tool for performance measurement and management in the farthest parts of the world was considered. There are different theories about the superiority of EVA compared to traditional performance measurement tool yet. Using the concept of economic value and its practical application as a management control system for measuring performance in organizations is emphasized. EVA is a measure

that fulfill these demand, because with this criteria we realize that we have been able to return against the amount of capital and of course, the return must be proportional to the rate of cost of capital. Whereas in the general criteria, such as profit and earnings per share, regardless of this fact, decision is making. In other words, many companies calculated incremental benefits without considering their cost of capital, but EVA is considered crucial points. When the company could acquire, good efficiency (rate of return greater than the cost of capital) by using appropriate capital investment and minimizes cost, this leads to a positive economic value (Noravesh & Mashayekhi, 2013).

Social Security investment companies (Shasta) can be a very important effect According to its mission, and that almost to have 10% of the volume of economic exchanges of Securities and Exchange Organization and their economic value can be analyzed and reported as a factor in determining the performance of companies (Yahyazadehfar et al, 2010).

Social Security Fund as the most pivotal state insurance fund and one of the largest institutions in West Asia, in line with the country's labor force and their families requires Economic careful planning and efficient investments in order to preserve the value of those insurance reserves and resources necessary to support its short-term and long-term commitments.

Social Security investment companies (Shasta) is set to create added value and preservation of insured funds that began its activity in the country of 1989. In recent years the company faced with several problems. Some difficulties in stopping some construction projects and the slowdown in the production of steel, cement and medicine that hardened the field for portfolio economic activity of Shasta.

Since social security investment companies (Shasta) should be accountable to their shareholders and 6% of the profit used for the payment of social security obligations. Therefore, the investment must have features such as transparency, accountability, caution in investment, continuous assessment of portfolios, investment policies adopted and declared should be specified, so by act to the main function of investments in the organization, will help maintain and enhance the value of their reserves. One of the newest value-based criteria, is the criterion of economic value added.

### **Previous Research**

Caporale et al (2016), did a study titled "Market Value Added and Stock Return". Research methods is Survey. The study population included drug manufacturing companies in America that are active on the stock exchange. Market value have been used to assess their performance and the dividends paid to them by the adjusted stock returns is investigated. The results showed that there was a significant relationship between increased market and stock returns.

Rosdi and Ariffin (2016), did a study entitled "The relationship between economic value and earnings per share of agriculture industry". Financial statements for 2015 and 2014 have been used to collect data. After evaluating the financial statements results showed that EVA can have a major contribution with determining the EPS in market with combined inflation and show greater transparency of corporate performance.

Tamrinia et al (2015), did a study entitled "The relationship between economic value and Tobin's Q in the evaluation of companies listed on the Stock Exchange". This research express the economic value as a tool to determine the performance of the Company's. For data collection, the financial statements and cash and tangible assets of companies is regarded. The results show that the controller means of companies can determine economic value and the actual performance of the company's investment value, accurately.

Jabbarzadeh & Bashiri (2014), did a study entitled "Comparison explanatory power of EVA and intellectual capital in determining market prices". To this end, 70 companies listed on the Tehran Stock Exchange, were selected. Public questionnaire (2000) to measure intellectual capital and to evaluate the economic value of the Stewart (1991), have used. The results showed a high predictive power of economic value added. On the other hand the intellectual capital plays a decisive role in deposit economic value.

Tlebnia & Shoja (2011), did a study entitled "The relationship between the ratio of market value to accounting profit and EVA compared to accounting profit in the companies listed in the Tehran Stock Exchange. The results show that there is a poor and positive correlation between (MVA / Earning) as the dependent variable with ((EVA / Earning) as an independent variable, in all surveyed companies regardless of their industry

### **Research Hypothesis**

#### **The main hypothesis**

There is a significant relationship between EVA and stock returns in Social Security investment companies.

#### **Sub hypothesis**

Hypothesis 1: There is a significant relationship between the rate of return on capital and stock return.

Hypothesis 2: There is a significant relationship between the rate of cost of capital and stock return.

Hypothesis 3: There is a significant relationship between the capital and stock return.

## RESEARCH METHODOLOGY

The present research in terms of methods, is correlation and this research is an applied research.

Population and sample consisted of holding companies Shasta to 9 parent company, which includes investment companies of oil and gas and petrochemical supply, investment, machinery suppliers investment, Saba supply investment, in cement supply investment, general industry suppliers investment, top suppliers investment, construction and transportation security investment, energy supply, investment in new industries, which includes 120 company subset that allows suppliers and their 5-year financial statements ending in 1394 has been registered in the Stock Exchange.

### Statistical analysis and hypothesis testing

Information is consisted of panel data. The data needed to test the hypothesis, were extracted by RAHAVARD NOVIN and TADBIR PARDAZ software as well as corporate financial statements and after data preparation in Excel software, analysis and hypothesis testing is done by the Eviews statistical software. Hypotheses that can be considered as a model and decided to approve or reject hypotheses by the results of testing it.

### Descriptive analysis of research data

Descriptive statistics of variables are presented in the following table. By using this table, statistical indicators such as median, mean, maximum, minimum, standard deviation, kurtosis, skewness and the number of sections for each variable can be observed.

Table 1. Descriptive statistics of the research variables

Statistics	Capital	Cost of Capital	ROI	Stock returns
Mean	0.202361	0.519472	0.537597	1.701167
median	0.170000	0.480000	0.550000	1.275000
maximum	0.930000	0.570000	2.560000	19.130000
minimum	0.000000	0.000000	0.300000	0.020000
standard deviation	0.131680	0.368036	0.245955	1.699286
Skewness	1.450176	2.430231	0.663678	4.789396
Kurtosis	5.748065	14.50091	8.305396	34.48902
Jarque-Bera	478.9171	4676.851	897.2732	32499.36
possibility of the Acceptance of non- normal distribution	0.000000	0.000000	0.000000	0.000000
The total number of observations	720	720	720	720

### Inferential analysis of research data

In this study, according to the type of data and available statistical analysis methods, the combination and sectional data method have been used for estimating model parameters and test hypotheses.

Table 2. The results of the final estimate of research model -dependent variable (stock returns, R)

Name of independent variables	Symbol	The estimated coefficients	T-statistic	P-value
Return on capital	ROI	0.024537	20.54888	0.0000
Cost of Capital	RCC	0.093184	53.88009	0.0000
Capital	C	0.008002	28.07873	0.0000
----	AR(1)	0.826013	373.5692	0.0000
Prob F-Static =		R2-squared =		
0.0000		0.522017		
Durbin-Watson =		Adjusted R-squared =		
2.415477		0.532093		

As can be seen in Table 2, the results of such as t statistic and Durbin-Watson (DW), Represents fixes an issue Volatility and disruption of autocorrelation between the components of the original model. The results of such as t statistic and Durbin-Watson (DW), Represents fixes an issue Volatility and disruption of autocorrelation

between the components of the original model. So the coefficient of determination model, suggest that the variables have the power of explanatory to estimate the fair (53 percent), to explain the dependent variable.

The amount of Durbin Watson is against to 2.41 that represents fixes an issue the auto-correlation between the model disturbing elements. Consider the probability of variables in the model suggest that the estimated coefficient of variables, in the error level of 5 percent, is significant, because the probability is less than error of 5 percent.

The final research model is presented as follows:

$$R = 0.826013 + 0.024537 \cdot ROI + 0.093184 \cdot RCC + 0.008002 \cdot C$$

The purpose of the first hypothesis, is examine the relationship between return on capital and stock return of Social Security investment companies (Shasta) listed on the Tehran Stock Exchange and for its review:

H<sub>0</sub>: There is no significant relationship between the rate of return on capital and stock return.

H<sub>1</sub>: There is a significant relationship between the rate of return on capital and stock return.

According to the results in Table 2 and consider the t statistic and the probability of variables in the model and the estimated coefficient of variable of return on capital (0.024537) is significant at error level of 5 percent because the Amount of probability of error is lower than 5%, So the null hypothesis is rejected and the research hypothesis is accepted.

The purpose of the second hypothesis, is examine the relationship between the cost of capital and stock return of Social Security investment companies (Shasta) listed on the Tehran Stock Exchange and for its review:

H<sub>0</sub>: There is no significant relationship between the cost of capital and stock return.

H<sub>1</sub>: There is a significant relationship between the cost of capital and stock return.

According to the results in Table 2 and consider the t statistic and the probability of variables in the model and the estimated coefficient of variable of the cost of capital (0.093184) is significant at error level of 5 percent because the Amount of probability of error is lower than 5%, So the null hypothesis is rejected and the research hypothesis is accepted.

The purpose of the third hypothesis, is examine the relationship between the cost of capital and stock return of Social Security investment companies (Shasta) listed on the Tehran Stock Exchange and for its review:

H<sub>0</sub>: There is no significant relationship between the capital and stock return.

H<sub>1</sub>: There is a significant relationship between the capital and stock return.

According to the results in Table 2 and consider the t statistic and the probability of variables in the model and the estimated coefficient of variable of the capital (0.008002) is significant at error level of 5 percent because the Amount of probability of error is lower than 5%, So the null hypothesis is rejected and the research hypothesis is accepted.

## CONCLUSIONS AND FINDINGS

Research findings related to the first sub-hypothesis test indicates that Capital returns are correlated with and stock return. As a result of the relationship between Capital returns and stock returns is explained as Capital returns in the level of 5 percent showed significant positive relationship between this variable and stock return. For every one unit increase in return on capital, stock return amounts increased by 0.024. The result is that investors are optimistic towards companies that have performed well in the past, whatever returns Capital of a company is higher, and it means that the increase of capital return is more attractive for Investors and thereby increase demand for its shares and by increase ROI, returns of stock is higher. These relationship is correspond with the research findings of Rosdi & Ariffin (2016), Matei et al (2015), Yahyazadehfar et al (2010), Talebnia & Shoja (2011) and Ahmadpour & Rasaeian (2012).

Research findings related to the second sub-hypothesis test indicates that Capital cost are correlated with and stock return. As a result of the relationship between Capital cost and stock returns is explained as Capital cost in the level of 5 percent showed significant positive relationship between this variable and stock return. For every one unit increase in capital cost, stock return amounts increased by 0.093. When the company could utilize appropriate resources and minimize the cost of capital, achieved good returns (returns higher than the cost of capital), this leads to a positive economic value added. These relationship is correspond with the research findings of Rosdi & Ariffin (2016), Matei et al (2015), Yahyazadehfar et al (2010), Talebnia & Shoja (2011) and Ahmadpour & Rasaeian (2012).

Research findings related to the third sub-hypothesis test indicates that Capital are correlated with and stock return. As a result of the relationship between Capital and stock returns is explained as Capital in the level of 5 percent showed significant positive relationship between this variable and stock return. For every one unit increase in capital, stock return amounts increased by 0.08. This means, Whatever Economic scale of Corporation be larger, stock return increases. This result means that larger firms in Tehran Stock Exchange from the perspective of investors is far more reliable than smaller. These relationship is correspond with the research findings of Rosdi & Ariffin (2016), Matei et al (2015), Yahyazadehfar et al (2010), Talebnia & Shoja (2011) and Ahmadpour & Rasaeian (2012).

### **Recommendations Based on research findings**

Maximizing the market value of companies' stocks is the primary goal of any company. For this reason, analysts are looking for a measure to act by considering the cost of capital and return on investment to maximize corporate value and increase shareholder wealth. Therefore by considering the positive relationship between cost of capital and stock return in the second hypothesis, can help investors make more informed decisions to invest in the stock exchange.

Using the concept of economic value and its practical application as a management control system for measuring performance in organizations is emphasized. EVA is a measure that fulfills these demands, because in these criteria, we can know that we are able to achieve returns against what amount of capital and of course, the returns must be proportional to the rate of cost of capital. Because by considering the positive relationship between Capital and stock return in the third hypothesis, corporate finance managers allow the use of capital as a key element.

Banks and credit institutions suggest that while lending to the company, to consider returns capital. This is because the funds and credits are given to companies that really have the capacity and priority over other companies.

### **Suggestions for future research**

Doing research using other criteria for economic value, which for this purpose can be pointed to market value.

Carry out similar studies with a longer period of time could cause results safer and more reliable. It is recommended that research be done with 10 or 15 years old.

Recommended surveyed firms into three groups: micro, medium and large divided and variables relationships in the three groups examined separately.

### **Restrictions**

One of the biggest limitations for researcher in the field of economic and financial management in the country, lack of necessary data for previous years. In recent years, detailed information of the companies listed in exchange collected by its. But it is available for the past 8 or 9 years formally and regularly, ultimately. With the addition of complete data from previous years certainly relied research than today's research will be achieved.

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