

Studying how dividends policy affects the relationship between institutional ownership and stock return fluctuations

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Abstract: In the present research we will study the effect of the dividends policy as a balancing variable on the relationship between institutional ownership as the independent variable and stock return fluctuations as the dependent variable among the firms accepted in Tehran Stock Exchange during the time period between 2006 and 2010. In this research the companies were categorized into two groups of "high dividends policy firms" and "low dividends policy firms" and after that the hypotheses were tested by using the linear regression model and the pooled data approach. The results showed that in low dividends policy firms, the institutional stockholders have had a positive effect and in high dividends policy firms the institutional stockholders have not had any effects. [Rasool Baradaran Hassanzadeh, Younes Badavare Nahandi, Soghra Sadeghi Behbahanizadeh, Mina lalepour, **Studying how dividends policy affects the relationship between institutional ownership and stock return fluctuations**. *Life Sci J* 2013;10(1s):342-348] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 55

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1. Introduction

The fluctuations in stock returns is one of the controversial issues in financing which has been noticed by capital market researchers in newly emerged markets in recent years. The reason for this tendency is the relationship between price fluctuations and as a result the fluctuations in return and its effect on financial part's performance and also the economy as a whole (Leledakis.G.N, 2004). The institutional investors are conscious investors who adjust stock price by new and in time information and reduce stock return fluctuations. Thus, the existence of these investors will result in more efficient stock markets. The changes in dividends present a lot of information about the company especially in countries where the informing the stockholders' system has some defects and weak points and the stockholders do not have enough knowledge about the present and future positions due to some reasons. The information content of stock profit is highly important for them and probably the announcement of the changes in dividends will have a lot of effects on the price of stock market (Shahmoradi, M, 2001).

The existence of institutional investors supplies a valid mechanism in order to transfer information towards financial markets or other stockholders. Therefore, Bohl & et al (2002) stated that institutional investors are among the main actors in capital markets and using their capabilities is a function of their investment amount. Thus, the

amount of institutional ownership of these investors is related with the fluctuations in stock return (Bohl,M., et. al, 2009). Therefore, these researchers stated that institutional investors increase information transparency by using corporate governance mechanisms and reduce information asymmetry and this will result in reinforcing the efficiency of capital market; thus it is expected that stock return fluctuations will decrease and this will create an attractive and a secured market for new investors. Also they claimed that the existence of institutional investors will create some suitable opportunities for profitability for the present investors and this will enhance liquidation and market depth and the transparency of prices and finally the optimization will be improved and the social welfare level will be increased. Also the dividends policy is one of the items which are affected by controversies in agency. Harada & Nequin (2006) stated that there are two different perspectives about the relationship between the dividends and agency controversies. Due to the first perspective, the dividends is a resolution for the reduction of agency controversies among managers and stockholders and according to the second perspective, the dividends is an alternative for agency issues (Kouki M, and Guizani M, 2009).

On the other hand, the theoretical foundations and the experimental researches' findings show that there is a meaningful relationship between ownership structure (especially institutional ownership) and agency costs. Regarding these issues based on the relationship between dividends policy

and agency costs, it is expected that the ownership structure and especially the institutional ownership should have a relationship with the dividends policy. Now regarding the issues mentioned, the following questions can be raised: is there a relationship between the institutional ownership and stock return fluctuations? Is the dividends policy effective on the relationship between institutional ownership and stock return fluctuations?

2. Review of the related literature

Gumperz & Metric (2001) remarked in their studies that the institutional investors direct stock prices towards their intrinsic values and this is a step towards making the capital market more effective.

Helen & et al (2002) studied the relationship between the dividends policies of the companies and the institutional stockholders. The results of their researches showed that there is a positive and meaningful relationship between institutional stockholders and the dividends policies of the companies. Michael Fledder (2005) believed that stock return fluctuations in stock exchanges of the newly emerged markets are more in comparison with the complete markets. The reason for this issue is that in developed markets there are efficient information networks and it never happens that the information is gathered so much that there is a considerable effect on the market. The research carried out by Osaji & et al (2005) also showed that companies in which there is more participation by institutional owners have had a higher stock price compared to those companies with less ownership. Thus, the high level of institutional ownership is considered as a value for the companies. Bohl & et al (2009) studied about the relationship between institutional investors and stock return fluctuations. Their findings showed that increasing the ownership of institutional investors will have a fixed effect on stock return fluctuations because they will balance stock's price rapidly regarding the new information and will change stock markets to be more efficient. Rubin (2009) used the data gathered in the United States between the years 1999 and 2003 and found out that the dividends play a key role in the type of the relationship between institutional ownership and stocks return fluctuations. In other words, the sign of such a relationship depends on the firm's dividends policy. They found out that this relationship is meaningfully positive among companies which have cash dividends and this relationship is meaningfully negative among those companies which do not have cash dividends.

Lee & et al (2010) stated in their studies that usual investors believe that the behavior of the institutional investors is more conscious and especially their investment in big stocks entails more information and

the speed of adjustment of stock price will increase in the presence of institutional investors. Azzam (2010) carried out a research in Egypt and concluded that institutional ownership has increased return fluctuations positively in companies which have had cash dividends; but this was not the case in companies where there were non-cash dividends. Mehrani (1994) tried to establish a model to identify the relationship between profit, dividends and investment in a research. The results of this research showed that there is a pattern for dividends in Iran and the companies use a certain but simple policy for dividends. Also the results of this research showed that profit variables announced and distributed in the previous year are not among the important factors in decision makings. Also the investment policies are independent from dividends policies. Besharat Ehsani & Saeedi (2000) studied the effect of dividends policies on stock return of firms accepted in Tehran Stock Exchange. The results of this research showed that choosing a certain dividends policy by the management of a company does not affect the stock return of firms accepted in Tehran Stock Exchange.

Mehrani & Sedani (2003) studied the relationship between stock return and profitability ratios in different activities. The results of their research showed that some ratios such as return of assets and return of owners' equity have a meaningful relationship with stock return. On the contrary, some criteria such as sales' growth are not considered to be suitable measures for stock return prediction. Fakhkhari & Taheri (2010) studied the relationship between institutional investors and firms' stock return fluctuations accepted in Tehran Stock Exchange. They concluded that the presence of institutional investors will result in increasing the managers' performances and will reduce information asymmetry and finally by increasing the ownership percentage of this group of stockholders, stock return fluctuations will be reduced. Hemmatjoo (2010) carried out a research entitled: "Studying the relationship between agency costs of institutional stockholders and dividends" and showed that free cash flows and institutional stockholders have a positive relationship with profit ratio.

3. Research Hypotheses

The main goal of the present research is to study the effectiveness type of dividends policy on the relationship between institutional ownership and stock return fluctuations of firms accepted in Tehran Stock Exchange. There are also some minor goals. The first minor goal is to find out the relationship between institutional ownership and stock return fluctuations of firms accepted in Tehran Stock Exchange and in second and third minor goals we

will deal with the relationship between institutional ownership and stock return fluctuations of firms with high and low dividends amounts, respectively.

H₁: *There is a relationship between institutional ownership and stock return fluctuations.*

H₂: *The dividends policy affects the relationship between institutional ownership and stock return fluctuations.*

H₂₋₁: *How is the effect of the dividends policy on the relationship between institutional ownership and stock return fluctuations of firms with high dividends?*

H₂₋₂: *How is the effect of the dividends policy on the relationship between institutional ownership and stock return fluctuations of firms with low dividends?*

4. Data Analysis Methodology

Since in the present research we study the effect of the dividends policy on stock return fluctuations our research is a post-incident research. Our research is a field study and it deals with real data in companies. To prepare the data of the firms accepted in Tehran Stock Exchange and regarding the fact that the research variables related to financial statements of the companies, we have used different resources such as Tehran Stock Exchange CDs, Tadbirpardaaz software and Rahaward-e-Novin software, and the website of Stock Exchange organization. We have used SPSS and EXCELL for data processing. To analyze the research data and estimate the models, we have used pooled data approach. Basically the pooled data refer to the temporary units in time. Models based on these data are called regression models of pooled data.

After collecting and preparing the research data, model (1) was used to test the first research hypothesis regarding pooled data approach:

Equation (1):

$$Vol_{R_{it}} = \alpha + \beta_1 IO_{it} + \beta_2 DIV_{it} + \beta_3 DIV_{it} \cdot IO_{it} + \beta_4 AGE_{it} + \beta_5 BTM_{it} + \beta_6 Leverage_{it} + \beta_7 Size_{it} + \varepsilon_{it}$$

Where:

Vol_R: return fluctuation equal to daily return deviation scale of firm I's stock in the year t.

IO: the percentage of i firm's stock in the year t.

DIV: the ratio of firm's stock dividends in the year t.

AGE: the age of a firm which equals the number of days a company has been a member in Stock Exchange.

BTM: the ratio of book value to market value of i firm's stock market value in the year t.

Leverage: the ratio of leverage which equals the long-term liabilities divided by total assets of the company.

Size: firm size which equals the logarithm of the total firm assets' book value.

To test the second hypothesis in this research, the observations based on the average amounts of the dividends are categorized into two groups of firms with high dividends policy and firms with low dividends policy and model (2-3) is calculated for each of the ranks as follows:

Equation (2-3):

$$Vol_{R_{it}} = \alpha + \beta_1 IO_{it} + \beta_2 AGE_{it} + \beta_3 BTM_{it} + \beta_4 Leverage_{it} + \beta_5 Size_{it} + \varepsilon_{it}$$

Based on the second hypothesis in this research, it is expected that the variable coefficient of IO model estimated in companies with high dividends policies are meaningfully different from firms with low dividends policies.

5. Population and statistical sample

In this research, our aim was to study the total community of firms accepted in stock exchange, but regarding the time range, the selected firms should have presented their financial statements during the 5 year period's investigated by this research. Thus, regarding the items mentioned, our sample was selected based on the followings:

1. The firm should have been accepted in Tehran Stock exchange before the end of Esfand 2006 (21 March) and its fiscal year should end in Esfand.
2. The firm should not have changed the fiscal year during the periods under investigation.
3. The firm should have had a continuous activity during the research period and its stocks should have been transacted and the book value of stock's owners' equity should not be negative in any year.
4. The financial data needed for doing this research should be presented completely during 2006 and 2010. It should not be included in the list of investing and financial and profitable investment companies.

The firms selected after applying the limitations in this statistical population involve 19 industries through which some are divided into two or more sub-industry groups. The final sample of the research includes 60 companies within 300 companies.

6. Research findings analysis

The research variables for the present research are as follows:

In order to test the first research hypothesis, we estimated model (1). To test the second research hypothesis also we used model (2) for firms with high and low dividends policies and the results were compared. To test the first research hypothesis, model (1) was used regarding pooled data approach. The

lack of meaningfulness of Limir's statistics (1/19) showed that model (1) has been estimated by a limited approach. The results are presented in Table (1).

Table(1): the descriptive statistics of the research

variables	min	max	center	mean	SD
VOL _R	0.00	0.15	0.02	0.03	0.03
IO	0.03	0.92	0.50	0.49	0.21
SIZE	4.30	7.05	5.41	5.47	0.54
AGE	3.04	4.14	3.68	3.69	0.20
LEVERA GE	0.00	1.04	0.05	0.08	0.13
BTM	0.00	0.73	0.53	0.91	2.66
DIV	0.00	4.22	0.79	0.80	0.49

VOLR : return fluctuation
 IO : Institutional ownership
 SIZE : firm size
 AGE : age of a firm
 LEVERAGE : ratio of leverage
 BTM : ratio of book value to market value
 DIV : ratio of firm's stock dividends

Table (2): the results of model (2)

variables	coefficient	t student statistics	Meaningfulness
latitude from the base	***38/53	7/68	0/00
IO	***19/32	14/54	0/00
DIV	***6/54	6/19	0/00
AGE	**2/00	2/07	0/04
BTM	**0/36	-2/15	0/03
LEVERAGE	**3/88	-2/72	0/01
SIZE	***-3/50	-9/48	0/00
Fisher's statistics (meaningfulness)	***191/21 (0/00)		
Adjusted identification coefficient	%84/09		
F Limir's statistics (meaningfulness)	1/19 (0/32)		
Durbin-Watson statistics	1/82		
Serial self-correlation test (meaningfulness)	0/61 (0/75)		
Inharmonious variance test (meaningfulness)	0/62 (0/54)		
*** And ** are meaningfulness with error levels of %1 and %5, respectively.			

The results of estimating model (1) with the approach mentioned above show that latitude from the base (38/53) and the coefficients of institutional ownership variables (19/32), the dividends ratio (6/54), institutional ownership in dividends ratio (-22/36), firm leverage (-3/88) and firm size (-3/50) in %1 level and the coefficient of the firm age variables (2/00) and the ratio of book value to market value of

the stocks (-0/36) in %5 are meaningful. The meaningfulness of Fisher's statistics (191/21) shows that the model is totally meaningful in %1 assurance level. Also the adjusted identification coefficient shows that the independent variables in model (1) can determine about %84 of the changes in dependent variables. The amount of Durbin-Watson's statistics (1/82) also showed that the model residuals do not have the problem of first order serial self-correlation. The serial self-correlation test of Lagrange coefficients (0/61) and test of inharmonious variance (0/62) showed that there is not serial self-correlation and inharmonious variance problems among the elements of model (1), respectively. Thus, on the whole we can rely on the estimation results of this model. The meaningfulness level of the institutional ownership variable coefficient (19/32), shows that the first research hypothesis which stresses on the existence of a meaningful relationship between institutional ownership and stock return fluctuations of firms under investigation, are not rejected in error level of %1. Thus, the results of the first hypothesis as a whole are as follows: there is a positive relationship between institutional ownership and stock return fluctuations. That is the more percentage of institutional ownership would result in more stock return fluctuations and vice versa. Also there is a positive relationship between dividends policy and firm age and stock return fluctuations. It means that the older the company, there would be more stock return fluctuations and the more dividends ratio in the company will result in more stock return fluctuations and vice versa. There is a reverse relationship between BTM (the ratio of book value to market value of the stock) and financial leverage and firm size and stock return fluctuations. That is when the 3 factors above increase, stock return fluctuations decrease and vice versa.

The results of estimating model (2) and testing the second research hypothesis

The dividends policy affects the relationship between institutional ownership and stock returns. To test the second research hypothesis, model (2) was estimated regarding the companies with low dividends policy companies and high dividends policy companies and their results were used to test the second research hypothesis.

The results of estimating model (2) in companies with low dividends policy

In first step, model (2) was estimated in companies with low dividends policy by using pooled data approach. The lack of meaningfulness of Limir's statistics (0/16) showed that model (2) in companies with low dividends policy is estimated with a limited

approach. The results of this estimation are presented in Table (3).

Table (3): the results of estimating model (3) in companies with low dividends policy

variables	coefficient	t student statistics	Meanigfulness
latitude from the base	10.95	0.90	0.37
IO	5.28***	2.73	0.01
AGE	7.95***	3.04	0.00
BTM	-0.35*	-1.87	0.06
LEVERAGE	-5.99***	-2.83	0.01
SIZE	-1.73***	-3.65	0.00
Fisher's statistics (meaningfulness)	(0.00) 26.08***		
Adjusted identification coefficient	49.29%		
F LImir's statistics (meaningfulness)	0.16(0.96)		
Durbin-Watson statistics	1.94		
Serial self-correlation test (meaningfulness)	0.33(0.89)		
Inharmonious variance test (meaningfulness)	0.87(0.42)		
*** And * are meaningfulness with error levels of %1 and %10, respectively.			

The results above show that the coefficients of institutional ownership variables (5/28), the firm age (7/95), firm leverage (-5/99) and firm size (-1/73) in %1 level and the ratio of book value to market value of the stocks (-0/35) in %10 are meaningful. The meaningfulness of Fisher's statistics, (26/08), shows that the model is totally meaningful in %1 assurance level. Also the adjusted identification coefficient shows that the independent variables in model can determine about %49 of the changes in dependent variables. The amount of Durbin-Watson's statistics (1/94) also showed that the model residuals do not have the problem of first order serial self-correlation. The serial self-correlation test of Lagrange coefficients (0/33) and test of inharmonious variance (0/87) showed that there is not serial self-correlation and inharmonious variance problems among the elements of model, respectively. Thus, on the whole we can rely on the estimation results of this model.

The estimation results of this group of companies with low dividends policy show that:

The institutional ownership percentage has a positive effect on stock return fluctuations. That is the higher percentage of the ownership of institutional stockholders will result in more stock

return fluctuations and institutional stockholders try to favor their investment by creating the fluctuations in stock prices and thus compensate the shortage of the dividends.

Firm age has a direct effect on stock return fluctuations. That is the older the company, there would be more stock return fluctuations.

Financial leverage and the ratio of book value to market value (BTM) and firm size have a negative effect on stock return fluctuations in companies with low dividends policies.

The results of estimating model (3) in companies with high dividends policy

In second step, model (2-3) was used in companies with high dividends policy regarding pooled data approach. The lack of meaningfulness of Limir's statistics (0/94) showed that model (2-3) has been estimated by a limited approach. The results are presented in Table (4-5).

Table (4): the results of model (3) in companies with high dividends policy

variables	coefficient	t student statistics	Meaningfulness
latitude from the base		7.78	0.00
IO	73.43***	0.22	0.82
AGE	0.33	-2.53	0.01
BTM	-4.49***	-0.29	0.37
LEVERAGE	-0.19	-1.17	0.25
SIZE	-3.35	-6.75	0.00
Fisher's statistics (meaningfulness)	10.68(0.00)***		
Adjusted identification coefficient	28.78%		
F LImir's statistics (meaningfulness)	0.94(0.59)		
Durbin-Watson statistics	2.06		
Serial self-correlation test (meaningfulness)	0.71(0.62)		
Inharmonious variance test (meaningfulness)	0.47(0.63)		
*** is meaningfulness with error levels of %1.			

The results of estimating the model above show that latitude from the base (73/45) and the coefficients of firm age variables (-4/94), and firm size (-4/87) in %1 level are meaningful. The meaningfulness of Fisher's statistics (10/86) shows that the model is totally meaningful in %1 error level. Also the adjusted identification coefficient shows that the independent variables in the model can determine about %29 of the changes in dependent variables.

The amount of Durbin-Watson's statistics (2/06) also showed that the model residuals do not have the problem of first order serial self-correlation. The serial self-correlation test of Lagrange coefficients (0/71) and test of inharmonious variance (0/47) showed that there is not serial self-correlation and inharmonious variance problems among the elements of model, respectively. Thus, on the whole we can rely on the estimation results of this model. The estimation results showed that in this group of companies there is not a meaningful relationship between institutional ownership and stock return fluctuations.

The estimation results of this group of companies with high dividends policy show that:

- The institutional ownership does not affect stock return fluctuations.
- Firm age and firm size have a negative effect on stock return fluctuations in their own places. That is the older and larger the company, there would be less stock return fluctuations in companies with high dividends policy and vice versa.
- Financial leverage and the ratio of book value to market value (BTM) do not affect stock return fluctuations in companies with high dividends policies.

7. Conclusions:

In this research we studied the effect of dividends policy on the relationship between institutional ownership and stock return fluctuations in firms accepted in Tehran Stock Exchange. The dividends policy as an adjusting variable is categorized into two groups of high and low dividends policies and the effectiveness of each of them was investigated. The research data based on the information presented for the years between 2006 and 2010 were tested in meaningfulness levels of %1 and %5. Both hypotheses of the present research were approved and they showed the presence of a meaningful relationship between institutional investors and stock return fluctuations and the meaningful effectiveness of dividends policy on the relationship between institutional ownership and stock return fluctuations, respectively. The research results have been presented below in separate parts. By using Peter Noster & et al's test (1998), the existence of a meaningful difference in institutional ownership variable coefficient in companies with low dividends policy (5/28) and companies with high dividends policy (0/33) showed that the dividends policy affects the relationship between institutional ownership and stock return fluctuations. Thus, the second research hypothesis is not rejected, too. In other words, the dividends policy affects the relationship between institutional ownership and

stock return fluctuations in firms accepted in Tehran Stock Exchange. The results of testing this hypothesis accords with findings of researchers such as Rubin (2009) and Azzam (2010) in which the effectiveness of dividends policy on the relationship between institutional ownership and stock return fluctuations have been shown to be meaningful.

8. Suggestions resulted from the present research:

Regarding the research results of testing the hypotheses, the managers and those who are active in Stock Exchanges and financial foundations can use the meaningfulness of the relationship between institutional ownership and stock return fluctuations as a criterion for risk in their decision makings in capital and financial markets and use the measurement of the amount of vulnerability of the stock markets in making decisions about capital and financial markets. Also the identification of the effect of the important factor of dividends policy on the type of the relationship between institutional ownership and stock return fluctuations can affect the reduction of investment risks when investment and managerial decision are being made.

Regarding the studies carried out about the fluctuations in stock returns and the present needs of capital market, the following suggestions are advised for the future researches:

- 1) Studying the relationship between information revealing quality and stock return fluctuations;
- 2) Studying the effect of stock return fluctuations in investors' decision makings;
- 3) Studying the effect of macro-economic variables on stock return fluctuations;
- 4) Studying the type of effectiveness of cash dividends policy on the relationship between institutional ownership and stock return fluctuations;
- 5) Studying the effectiveness of profit smoothing policy on the relationship between institutional ownership and stock return fluctuations;
- 6) Regarding the fact that firms having financial intermediary activities were omitted from our research sample, it is suggested that in a separate research the effectiveness of dividends policy on the relationship between institutional ownership and stock return fluctuations in this type of companies be carried out and the results be compared with the findings of the present research.

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