



Changes in interest and stock market prices reaction

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ABSTRACT

The primary objective of the investment in stock companies is profit like many other investment opportunities and possibilities. Investment in shares has solved the problem of indivisibility of big plans and stock market facilitates investment in securities. Another problem of investment in physical assets, as the lower liquidity ability, is resolved by investing in shares. The present study is descriptive and correlation-based with applied results and is done with the aim of the effect of changes in interest stock market prices reaction to interest change. The statistical population of the study consisted of all companies listed on Tehran stock exchange (from 2007 to 2011 that 176 companies were selected as the sample using systematic sampling (systematic elimination)). The required data was collected using Rahavard Novin software and information bank of stock market and the research hypothesis was analyzed using correlation and regression tests. The results show that there is a significant relationship between interest changes and stockholders' wealth and stock market prices shows positive reaction to positive profit and shows negative reaction to small profit.

Keywords: stock brokers, cash profit, dividend, stock exchange

INTRODUCTION

In Theoretically, the relationship between profits and stock prices is a definite thing and investors openly take into consideration the profit reported by companies. Maybe one of the important profit impacts on stock prices is that the predicted profit helps stockholders to predict dividend profit as one of the effective factors on the stock prices.

In case, some companies predict their profits with a cynical view that would cause a sudden fall in their stock price.

One of the main hypotheses is the Accounting statement in 1960. Accounting reports are the only information source of companies to use the market and since these reports are the only information source of investors and managers, they are very flexible and powerful in the selection of accounting trend to calculate the profit. So, managers can present their favorite reports selecting a special trend and mislead the market. Administrators can cause the shares value to be assessed more by illustrating the profits higher. The assumption that accounting reports are the only information source of market caused the importance of accounting profit calculations.

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Numerous researches have shown that stock profit has a significant relationship with stock prices and is a proven principle in finance issues. But the study regarding the kind of changes the changes in interest cause in the wealth of stockholders is an issue that has been less paid attention to. So, this study seeks to examine whether changes in interest can have a correlated relationship in the changes in the stockholders investment and what is the stock market reaction to these changes?

METHOD

The method in this research is correlation-based, an examination of the relationship and correlation between variables through regression, and post-event study methodology (using past data).

The statistical population of this study included all companies active in Tehran stock market and their shares in the in the research span that were studied continuously. The selection reason for this statistical population is that Tehran Stock Market has relatively comprehensive information about the status of companies and economic and financial trends functions and it can be said that it is the only information source by which we can access the financial information resources of companies and test research models. These restrictions were applied in the sample.

1. Companies that their financial statements is available for the 2007-2011 fiscal period.
2. Companies that their fiscal year ends in March.
3. The shares of the companies that are consistently traded in Tehran Stock Exchange from 2007 to 2011.
4. Companies that are not of banks, Insurance companies, brokerage firms and financial intermediaries.

So, by the restrictions above, 176 companies were selected whose information was used in testing hypotheses.

The data for the research hypotheses test and analysis were gathered from the financial information and reports of the Assembly of Companies Accepted in Tehran Stock Exchange, Tehran Stock Exchange website and Iran's Financial Information Process Center. Company's stock price, as the stock price defined in this study, is the last price of shares at the end of each year reflect at the stock market board and used by buyers and sellers of stock. So, stock prices for 2007 to 2011 years are collected from the exchange Technology management Co. website and statistical reports on the site.

Companies profit for 2007 to 2011 years was calculated from the information banks of the Tehran Stock Exchange website the General Assembly of Companies minutes in Codal site.

RESULTS

Time series are one of the most important statistical data used in the empirical analysis. Researches have always assumed that the time series are stable and if it does not exist, statistical tests based on the t, F, Xi2 Chi are disputed. On the other hand, if time series variables are not stable, a problem in the name of false regression may occur.

Changes in interest and stock market prices reaction

A time series variable is stable when the mean, variance and self-correlation coefficients remain constant over time.

Stability has two modes: weak and strong. We usually consider the weak mode. If all the torque remains constant over time, the series is a strong stable, but if the first and second torques remains constant, the stable series is weak.

H_0 of the data has single root.

H_1 of the data has not a single root (stability of the data).

According to the fact that the data in this research in this table are studied using normal statistics, it can be said that the data are stable.

Therefore, before estimating the model, it is necessary to test the stability of all variables used in the estimates, because the stability of both time series and board variables cause the occurrence of false regression problem. However, it is essential to use of the five methods below to test the panel unit root.

1. Lin Chu Levin test .
2. Im, Pesaran and Shin test.
3. Bertoung test .
4. Fisher test.
5. Hoddry.

These tests are commonly called panel unit root tests. Theoretically, they are multiple series unit root tests used for panel data structures. In these tests, the stability trends are the same except for the Hoddry and by rejecting the lack of H_0 , the stability is also rejected which shows changing stability.

By rejecting H_0 , instability or unified root is rejected and stability is accepted which is stabilized at the level or with one or two subtracts. To diagnose this part, the Prob is paid attention to that should be smaller than 5%. According to the test results, it was determined that all variables are stable.

To study the collective stability, three Lin Chu Levin, Im, Pesaran and Shin and Fisher tests were used. The results are presented in the following table. The results of the following table and the evaluation of the calculated statistics and the acceptance probability show that all variables are stabilized at the level.

Table (1). Stability test

Obs	Cross-Sections	Prob.* *	Statistics	Method
519	3	0.0000	-5759.19	Levin, Lin & Chu t*
519	3	0.0000	-7324.16	Im, Pesaran and Shin W-stat
519	3	0.0000	227.178	ADF - Fisher Chi-square
519	3	0.0000	274282	PP - Fisher Chi-square

The data are stable due to the hypotheses above and the above table and regression can be used to analyze the hypotheses. According to all tests at the level of 95% significance, it can be said that H_0 based on the instability is rejected and the data are stable.

Table (2). Jark Berra test

Parameters	Test statistics	Level of significance	H./H1 acceptance	Distribution
ROFSH	5.26	0.07	H0	Normal
MVR	2.93	0.32	H0	Normal
DPS	4.10	0.20	H0	Normal

Resource: research results

According to the results of both tests, it can be noted that the test data are normal and regression can be used. In other words, at the level of 95% significance, H0 based on the normality of the data is not rejected.

In order to make a comparison between the fixed effects models and accidental effects in terms of the explain ability of the dependant variable, a test called Limer is used.

Table (3). F Limer

Parameters	Test statistics	Level of significance
Cross-section	1.125	0.178
Time	3.845	0.022
Total	1.156	0.128

Resource: research results

According to the above table, it can be accepted that H0 is not rejected because the amount of a Fisher statistics is equal to 1.156 and its significance level is 0.128 and at the significance level of 95%, collection in data is used.

Table (4). Total evaluation of the second model

Parameters	Estimation coefficient	Level of significance
Determination coefficient	0.503	0.00
Adjusted Determination coefficient	0.502	0.00
Standard error	0.066	0.00
Estimation error deviation	2.337	0.00
Likelihood	681.688	0.00
Fisher statistics	533.722	0.00
Dependant variable mean	0.205	0.00
Dependant variable standard deviation	0.094	0.00
Akaik	-2.574	0.00
Schwartz	-2.558	0.00
Henan & Queen	-2.568	0.00
Durbin Watson	1.951	0.00

Resource: research results

The self-correlation in this section does not have an effect on the model. Due to the fact that the Durbin Watson statistics is from 1.5 to 2.5, it can be stated that using regression does not have self-correlation problem and prevents false regression.

Due to the significance level of 95%, it can be analyzed that regression has a general significance.

Changes in interest and stock market prices reaction

H₀: The regression does not have statistical significance.

Subordinate hypothesis: The regression has statistical significance.

Based on Fisher statistics, it can be stated that the statistic is over-critical and H₀ due to the lack of significance is rejected and subordinate hypothesis at the 95% significance level cannot be rejected.

Table (5). Regression coefficients

Variable	Coefficients	Standard deviation	t statistics	Level of significance
(Constant)	0.105	0.005	20.122	0.00
DPS	0.486	0.021	23.102	0.000

Table (6). Regression coefficients significance analysis

Variable	T	Level of significance	Accept/reject
(Constant)	20.122	0.00	Accept
DPS	23.102	0.00	Accept

Based on the obtained Prob which is less than 5%, it can be concluded that H₀ at the 95% significance level and H₁ based on the significance of the regression coefficients can be accepted.

CONCLUSION

This study examines the relationship between stock market prices and changes in interest. The information in tables and test results show that there is a significant relationship between the two hypotheses of the research; meaning that the increase in the dividend shows a positive reaction and vice versa. Due to the fact that the research is done in the field of evaluating the effect of changes of dividend on stockholders and stock market prices reactions to profit changes has been very low and most researches are conducted on studying the effect of profit changes on market prices, the results of profit changes on market prices of the internal researches done by Tabrizi et al (2006), Javaheri Kamel (2007), Jahankhani and Safarian (2003), and researches of Easton (1991), Gorgol et al (2003), Dasyilas and Levent (2011) all emphasize the stock market reaction to profit change. The results of the present study also show the significant reaction between the profit changes and markets prices.

Investors are in two groups: one group are people who are after long-term output and the priority for these people is the increase of the company's profit and are not after the price increase in a short-term span. Another group is people who are after short-term output and their aim of investment is shares' price increase and profitability and increase in wealth. According to the research results, the second group should select companies' shares for investment that have the experience of paying profits to investors than to keep the profit in the company for the invest increase.

On the other hand, investors and stockholders in Tehran stock exchange should study the profitability and the growth trend of stock prices during past years before making any decision of investment.

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