Investors' Reaction to Growth Stability in Quarterly Performance Measures of Accounting

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ABSTRACT

This study aims to examine investors' reactions to growth stability in quarterly performance measures of accounting in the accepted companies of Tehran Stock Exchange. Accounting performance measures in this study include quarterly operational earnings, quarterly operational earnings before accruals, and quarterly cash flows of the companies tested in 9 hypotheses. Statistical population of this study included 100 companies accepted in Stock Exchange of Tehran from 2001-2008. To test research hypotheses, mean comparisons tests were exerted. The findings show that the investors don't react to the growth consistency of the companies with much (low) growth in quarterly performance measures of accounting(quarterly operational earnings, quarterly operational earnings before accruals, quarterly cash flows).
KEYWORDS: Growth Stability, Performance Measures, Pricing, Investors.

1. INTRODUCTION

Nowadays, market efficiency is highly regarded. Efficient market is a place where the prices of the securities can completely reflect existing information; in a way that market reveals the effects of new information on stocks' prices. Efficient market theory and the reasonability of investors' decisions are the main themes of modern financial sciences whose foundations lie in financial economy; but, after 1980s, new financial sciences appeared which criticized the reasonability of investors' decisions and the efficiency of the stock markets. The studies investigating the theories of efficient market postulate that the investors evaluate the stocks with favorable past performance better than the stocks with good natural value. During long-term periods, when the investors recognize that their previous evaluations about some stocks were wrong, those stocks receive the earnings less than expected amounts. From the other hand, the stock prices with weak financial records are undervalued. When the future performance of this stock exceeds investors' expectations, it will receive more than expected return. Consistency can exceptionally lead to highprice predictability in short term.

2. LITERATURE REVIEW

At the moment, the role of big companies in building the economy of the countries is not covered for anyone. These companies use many economical resources (like work force, raw materials, management sources, and etc); in return, they play a great role in developing the economies of the countries for their high production and sale amounts. For this reason, discussions on these companies and their roles in development, their goals, performance, control, division, and etc. are considered by the theoreticians and researchers of applied sciences. Especially, in recent decades, most classic theories about the companies have been revised and new theories like agency, ownership rights, and investment portfolio theories have been introduced.

Profit organizations

From traditional perspectives, the major goal of a company is maximizing earnings and value for the stakeholders. But, if it is regarded as a collection of contracts, the supposed goals for the company become meaningless; thus, the purposes of contract sides (that can be maximizing earnings) should be concerned. Since competition is the essence of market or capitalism, it is theoretically postulated that in fully competitive markets, economic factors are balanced. So, the goal of those contracts is reaching balance.

Earning maximization

Before buying stocks, stakeholders evaluate management efficiency of the company. A representation of management efficiency is the optimum usage of resources in the company which leads to the stock return; return is considered as the index of evaluating managers' efficiency. Efficiency is related to the

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optimum application of existing resources during the operational trends of a unit leading to higher earnings. In other words, efficient economy is the correct combination of production factors like work, land, capital and management.

Wealth maximization

The second goal of most companies is maximizing the value of the companies in long term, mostly referred as wealth maximization. Instead of direct emphasis on the earning as a goal, the focus is on the return resulting from company value; therefore, a bilateral correlation exists between the present value of the company and its long-term value. The manager who aims to maximize his wealth, concerns the current stock value of the company as the main factor of wealth increase. This strategy balances wealth maximization and its related goals like growth, stability, risk avoidance, stock market prices.

Grinblatt and Moskowitz(2004), Gutierrez and Kelly(2008) showed that trend consistency in capital return in the past is a determinant of future price changes.

Increasing research body on the predictability of stock return creates the picture that doesn't match with traditional market model based on the supposition that public accessible information are immediately reflected in market prices. Three previous decades have witnessed empirical evidences that show that future price changes can be predicted from the trend of their previous performance like stock returns (Jegadeesh and Titman 1993, 2001; De Bondt and Thaler 1985,1987) and cash flows and dividends (Lakonishok, Shleifer, and Vishney 1994).

The researches on the relationship between accounting criteria and future price changes only focused on the ability of past dividends size in predicting expected returns. Although the relation between accounting variables consistency and future price changes.

Park (2008) stated that after terrorist attacks to global trade center, invertors overreacted to the stock prices of insurance companies in stock exchange of America. He found evidences indicating the reverse movements of stock return of insurance companies after Sep 11th, proving their overreaction in short terms. He found the similar results as a risk criterion even after controlling market β. He concluded that the reason for investors' overreaction is the existence of main ambiguity about the stock future in the market after that event.

The present study aims to answer the question that whether the investors react to the growth stability in quarterly performance measures of accounting in the accepted companies of Tehran Stock Exchange. Answering this question can facilitate investors' decision-makings, encouraging them to usethe ideas and analysis of financial analyzers.

Hypotheses

H1. Investors react to the consistency of average growth rate in quarterly operational earnings of accounting in the companies.

H2. Investors react to the consistency of average growth rate in quarterly operational earnings of accounting before accruals and blocked accounting operations in the companies.

H3. Investors react to the consistency of average growth rate in quarterly cash flows of accounting in the companies.

H4. Investors react to the consistency of average growth rate in quarterly operational earnings of accounting in the companies with high growth.

H5. Investors react to the consistency of average growth rate in quarterly operational earnings of accounting before accruals and blocked accounting operations in the companies with high growth.

H6. Investors react to the consistency of average growth rate in quarterly cash flows of accounting in the companies with high growth.

H7. Investors don't react to the consistency of average growth rate in quarterly operational earnings of accounting in the companies with low growth.

H8. Investors don't react to the consistency of average growth rate in quarterly operational earnings of accounting before accruals and blocked accounting operations in the companies with low growth.

H9. Investors react to the consistency of average growth rate in quarterly cash flows of accounting in the companies with low growth.

3. RESEARCH METHODOLOGY

Quarterly growth rate in earnings (OEG andEBG) and cash flow growth in the form of current per share quarterly earnings or cash flow less per share are calculated from the corresponding quarter ofone year ago. Then, quarterly change in each of these measures is divided by the absolute value of averageper share lagged values for the same variable in the lasttwo quarters.For the cash flows, the same method is applied.

$$\frac{(EPS_{jq} - EPS_{gq-2})}{\left|(EPS_{jq} + EPS_{jq-1})\right|/2}$$ =Growth rate

Growth consistency in a firm's past quarterly earnings (i.e. OEG and EGB) and cash flow (CFG) is defined as the number of quarters in which a firm maintains a quarterly growth rates that place it in the top 30% of all firms for the last 6quarters prior to portfolio formation date.

Companies are divided in 3 groups: upper 30 percent, middle 40 percent, and bottom 30 percent. The companies ranking in the highest (lowest) 30% based on their quarterly growth rates for the entire estimation period are regarded as consistent high (low) growth firms. If the companies fall in the highest (lowest) 30 percent category for at least one (but not more than two quarters), they are classified as inconsistent high (low)growth firms.

To test the hypotheses (1,2,and 3) growth consistency in firms quarterly account-based` measures (i.e. earnings and cash flow) was used to form four individual portfolios (consistent high-growth, inconsistent high-growth, consistent low-growth, inconsistent low-growth) and 2 hedge portfolios as shown in Fig 1. The first hedge portfolio takes a long position in consistent high-growth firms (CHG) and a short position in inconsistent high-growth firms (IHG) and it is called a high-growth portfolio and its return is referred as CHG-IHG.The second hedge portfolio buys consistent low-performing firms (CLG) and sells consistent low-growth firms (ILG) and it is defined as low-growth portfolio and its return performance is labeled CLG – ILG. Portfolio formation and test period

Portfolio formation (ranking) and test periods for any of performance measures are shown in Table 1.

Table 1. Portfolio formation and test period

period	Test period	Formation period
1	2006-2004	2002-2001
2	2003-2008	2003-2002
3	2006-2008	
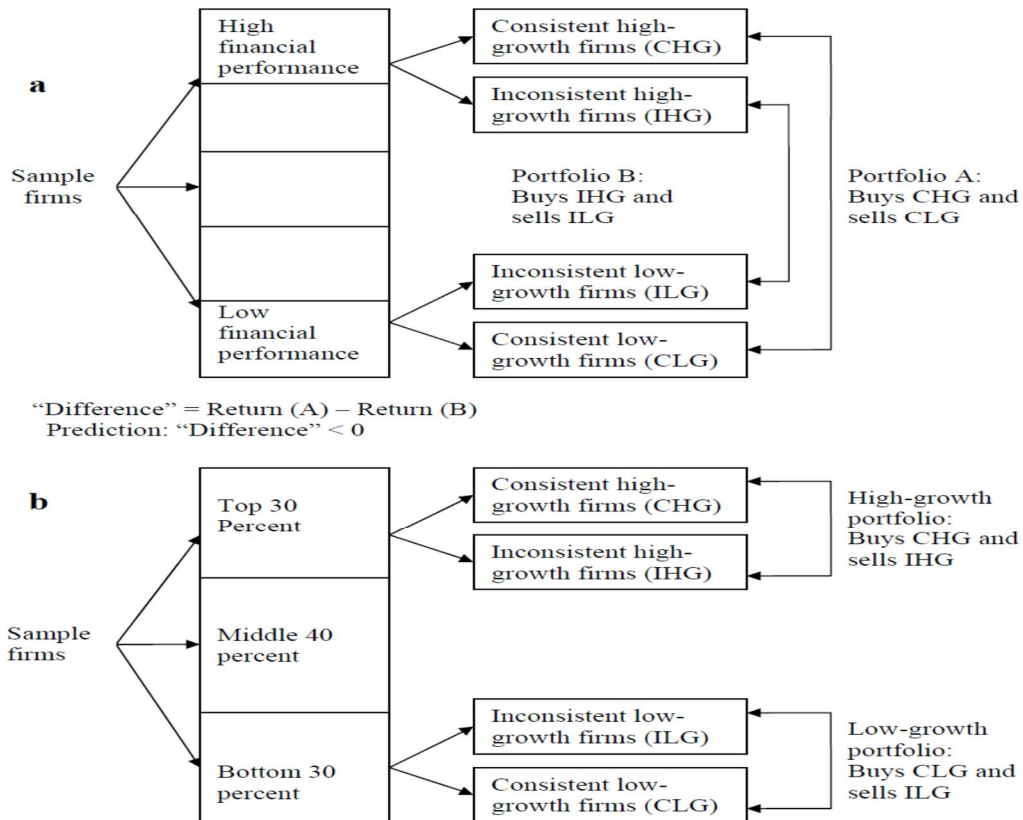
(Alwathainani, 2010)

H1, H2, and H3 hold when changes' mean of A and B returns have significant difference with zero.
H4, H5, and H6 hold when changes' mean of IHG and CHG returns have significant difference with zero.
H7, H8, and H9 hold when changes mean of ILG and CLG returns have no significant difference with zero.

3.2 Sample selection

Table 2.The trend of sample –selection of the companies-observation

companies			observations
Basic sample	1650		340
deletions			
Financial institutes	213		45
Foreign firms	0		0
Inaccessible information of cash flows quality	621	137	
Final sample			

4. Empirical results

4.1. Hypothesis test

Testing H 1 and based on the results of Table 3, it can be said that mean differences in third test period is insignificant.

Table 3. A-B comparison in the third test period. Based on the resulted significance value which is below 0.05(sig=0.191), differences in third test period is insignificant.

		Paired Differences					t	df	Sig level (bilateral error)
		Mean	Std deviation	Mean std error	95% confidence level				
					Lower boundary				
Pair 1	A - B	-1.037971	47.38319	7.78975	-26.17807	5.41861	-1.332	36	.191

Based on Table 4, the difference in second test period is insignificant.

Table 4. A-B comparison in the second test period. Based on the resulted significance value which is below 0.05(sig=0.132), differences in third test period is insignificant

		Paired Differences					t	df	Sig level (bilateral error)
		Mean	Std deviation	Mean std error	95% confidence level				
					Lower boundary	Upper boundary			
Pair 1	A-B	1.12940E1	41.32774	7.30578	-3.60628	26.19420	1.546	31	.132

Table 5 below confirms that there is no significant difference between two groups in the first period.

Table 5.A-B comparison in the first test period. Based on the resulted significance value which is below 0.05(sig=0.655), there is no significant difference between two groups in the first period.

		Paired Differences					t	df	Sig level (bilateral error)
		Mean	Std deviation	Mean std error	95% confidence level				
					Lower boundary	Upper boundary			
Pair 1	A - B	3.37086	41.52008	7.45723	-11.85883	18.60055	.452	30	.655

Testing H2, the results of Table 6 shows that there are many means differences, but they are insignificant. Although error significance level is lower than previous hypothesis, it is above 0.05, revealing their insignificant differences.

Table6.A-B comparison in the third test period. Based on the resulted significance value which is below 0.05(sig=0.104), there is no significant difference between two groups.

		Paired Differences					t	df	Sig level (bilateral error)
		Mean	Std deviation	Mean std error	95% confidence level				
					Lower boundary	Upper boundary			
Pair 1	A - B	1.31992	48.11393	7.90988	-2.84279	29.24117	1.669	36	.104

Table 7. A-B comparison in the second test period. Based on the resulted significance value which is below 0.05(sig=0.655), there is no significant difference between two groups.

	Paired Differences					t	df	Sig level (bilateral error)
			Mean std error	95% confidence level				
	Mean	Std deviation		Lower boundary	Lower boundary			
Pair 1 A - B	-1.63758	39.80983	6.93000	-15.75353	12.47838	-.236	32	.815

Table 8. A-B comparison in the first test period. Based on the resulted significance value which is below 0.05(sig=0.655), there is no significant difference between two groups in the first period.

	Paired Differences					t	df	Sig level (bilateral error)
			Mean std error	95% confidence level				
	Mean	Std deviation		Lower boundary				
Pair 1 A - B	5.96806	36.38256	6.53450	-7.37717	19.31330	.913	30	.368

Other hypotheses were also tested in similar manner whose results are reflected in Table 9.

Table 9. Summary of hypotheses tests results

Hypothesis	First period of test	First period of test	Second period of test	Third period of test
1	Rejected	Rejected	Rejected	Rejected
2	Rejected	Rejected	Rejected	Rejected
3	Rejected	Rejected	Rejected	Confirmed
4	Rejected	Rejected	Rejected	Rejected
5	Rejected	Rejected	Rejected	Rejected
6	Confirmed	Confirmed	Rejected	Rejected
7	Confirmed	Confirmed	Confirmed	Rejected
8	Confirmed	Confirmed	Confirmed	Confirmed
9	Confirmed	Confirmed	Confirmed	Rejected

5. Conclusion

Examining the decisions of the managers in investment institutes and the behaviors of the dealers of stock exchange with financial-behavioral theory approach the researchers have concluded that the managers and investors who overreact to the past financial performance of the companies make mistakes in their decision-makings. So, the research examining whether the investors react to growth consistency in quarterly performance measures of accounting is of great importance. The findings showed that the investors don't overreact to the growth consistency of the companies with low or high growth in quarterly accounting performance measures (i.e. quarterly operational earnings, operational earnings before accruals, and quarterly cash flows).This result agrees with the findings of Lakonishok et al (1994) who found that investors attribute their success to their abilities, but they attribute their failures to their bad luck; so, they trust their stock selection skills excessively which leads to extravagant market reaction before cost return to its natural value in long-term. Then, unfavorable events don't affect their confidence level or they have low effects.

Based on previous studies and mentioned points, it can be said that investors regard growth consistency in quarterly performance measures of accounting as less important than annual reports.

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