

A Study and Comparison of Growth and Value Stocks and Selection of Defining Criteria for Stocks being of growth/Value

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ABSTRACT

It is important for investors to invest in the kind of stock to achieve optimal efficiency. An investment is required to be done properly in order to gain a good return on it. Hence, an appropriate investment strategy is needed. An investment strategy is a set of rules, procedures or behaviors that can guide investors in selecting the investment portfolio. Investments in stock market can be classified into two categories: 1. Growth Investing and 2. Value Investing.

Growth strategy includes looking for stocks that have growth potentials where stock price goes up at certain times.

Value strategy is used by those investors who are looking for stocks whose price has been undervalued, i.e., their value are less than what the company has issued.

The goal of this study is to compare the growth and value investing in stocks and to determine which of these two groups can more efficiently make return for the investments.

The required data was obtained from the softwares of Tehran Stock Exchange. In this study, shares that have low ratio of book value to market value have been introduced as growth stocks and the ones with the higher ratio as value stocks. In addition, the research has investigated on the relationship between the stock return and the net yield return of book/market value. Linear regression was used to clarify the relationship, and then an average test was carried out between the two populations. The results showed that there exists a linear relationship between the stock return and the net yield return of book/market value, and growth firms obtain higher return than value firms.

KEYWORDS: investment, growth stocks, value stocks, stock.

1. INTRODUCTION

The transition from underdeveloped to developed economies requires capital and investment. Accordingly, a necessary condition for economic success, during the transition process, is providing and mobilizing capital resources and optimal allocation of these resources to the most efficient sectors. On the other hand, in an individual point of view, people are looking for to increase their welfare in any normal society. Thus, it is natural that investors as well seek investment opportunities with higher returns (Hejazi et al., fatemi., 2008)

An investment strategy is a set of rules, procedures or behaviors that guide the investors in selecting the right portfolio. A strategic plan is developed by the investors for distribution of assets among various investments, considering a number of factors such as individual goals, risk tolerance and time horizon. (Shavakhi., 2003)

Investment strategies can be classified into two types, growth and value (Eyvani., 2008) Growth and value stocks are the stocks that are very different in the effect of the basic factors in investment market such as efficiency risk, splendor, slump of the market, time prospect, company size, etc. while the purchase and sale of the companies' stocks, many variables and factors should be considered by active members of the investment market, so investigation and determination of growth and value is one of the very important issues in this field. (Iakonishok et al; Shleifer 1994)

The main motive of investors for investment in growth stock is the investment in future development of the company's profits. Growth investors are seeking investment in the stock of the companies that have a faster growth rather than medium level through the past periods and therefore have a high potential of growth (Fama et al., French., 2007)

Proponents of the growth approach believe that its main advantage is investing in future growth of the firm's profits. And the best type of stock, for acquisition, is the one expected to grow at a high average speed. That is why economic analysts try to identify companies that still have not reached their maturity, as they have a more

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robust program of research and development. Growth investors have always been seeking for companies that have consistently grown faster than average, and therefore have higher growth potentials. These investors aim to buy the kind of stocks with lower D/P, E/P and BV/MV, which are expected to follow a higher profitability growth. Growth stocks are expensive and reflect potentially higher incomes (Shavakhi, A., 2003)

The value approach engages key fundamental analysis. This approach is also referred to Graham's approach, named after the developer, Benjamin Graham. Investors note the day value of the company for investment in growth stock without expecting massive growth or a main change in profitability of the company. (petkova & lu 2005) For this reason such investors have a higher security circle than investors in growth stocks. Value stock belongs to the companies that have a good situation as a matter of profitability, but has been valued below the subjective value temporarily; so it is expected from the investors that the market should detect this fault in pricing and increase the price of this stock. (Rosenberg et al; reid and lanstein 1985) The investors, in this approach, focus on the firm's market value, without expecting remarkable growth or major changes. Then, they buy the stocks when the price is less than the inherent one. As a result, they enjoy a high safety margin that the growth investors usually lack (Fama et al., French., 1996) The value investors seek to buy stocks with higher D/P, E/P and BV/MV. In other words, the value of the stocks is defined. Value stocks are relatively cheaper (that is, with low P/B and high cash profit), with relatively lower growth opportunities. (Fama et al., French., 1992)

Growth and value stocks are at the both sides of profitability spectrum. Growth stock is at the base of this spectrum and value stock is at the top of this spectrum. So in the evolution process of the companies, growth stock is always moving upward fast, otherwise profitability is growing less rapidly and is moving toward low profitability.

Profitability and high expected growth with low expected output makes a high price to book value ratio (p/b) for growth stock, otherwise low profitability and expected growth with high expected output makes a high book price to value ratio (p/b) for growth stock makes a low price to book value ratio (p/b) for value stock. One of the conventional means for categorizing stocks (into value and growth) in several studies is the application of the ratios, the most established of which are as follow (Little., 2006)

- Low Beta
- P/E: price to earnings per share (value stocks have low P/E)
- D/P: dividend to price (value stocks have high D/P)
- S/P: sales to share price (value stocks have high S/P)
- CF/P: cash flow to share price (value stocks have high CF/P)
- B/P: book value of assets to price (value stocks have high B/P)
- D/E: debt to equity (value stocks have low D/E)

Although these ratios may be utilized, the ratio B/P is widely used as an individual value proxy (Fama et al ., French, 1992)

2. Previous Research

The comparison of growth and value portfolio returns has been the subject of many studies, with diverse results, in the international scale. Basu (1977), Jaffe, Keim, and Westerfield (1989), Chan, Hamao, and Lakonishok (1991), and Fama and French (1992) show that stocks with high P/E earn higher returns. Rosenberg, Reid, and Lanstein (1984) show that stocks with high M/B values of equity outperform the market (Hejazi et al, fatemi., 2008)

Perhaps the most important research has been carried out by Fama and French in 1996. They studied on some value and growth stocks in twelve major markets and in the United States' during the period 1975 to 1995. They chose the ratios M/B, E/P, C/P and D/P as the value proxies, developed the same portfolio at the beginning of each year based on these ratios, and then calculated the returns on these portfolios. The stocks with high values of these ratios were considered as value stocks and the ones with low values as growth stocks. Their results showed that in twelve countries, out of the thirteen surveyed, and per each one of the proxies, the value stocks have earned higher returns (Capaul et al., Ian et al., Sharp, 1993)

Blazenko and yufen in 2010 started two portfos of growth and value stocks in an investigation for years 1976 to 2007. They used an active evaluation model of the rights of the stockholders presented new criteria for evaluation of expected output and named these new criteria 'stable growth expected rate (SGER)'. The results of their survey show that increasing in output with increasing in profitability for value stock is more than that of growth stock. (blazenko et al; yufen 2010)

Gulen et. al in 2008 showed using the structure of substitution of Marco that was presented in 2010 that the expected output of Portfo of the value stock minus the expected output of Portfo of the growth stock represents discordant periodical changes.(gulen 2008)

Xing and zhang in 2006 made a comprehensive investigation of the motives of the basic factors on economy in value and growth companies. They showed that the basic factors in value companies are affected by economical shocks far more than growth companies and there have been meaningful differences between growth and value stocks in this field. (Xing et al, zhang 2006)

They also showed that value companies have less flexibility in investment than growth companies.

Fogger et.al in 2005 concluded that in average the P/E, P/B rates and income growth rate of any stock for growth stock is twice greater than value stock.

Petkova et.al made a research on the relationship between time differences of risk and the net price of the stock. They concluded that time differences of risk cannot explain the net price of the stock and the beta of the value and growth stock has a positive and negative correlation.(petkova 2005)

In conclusion, it has to be said that there are numerous factors that can anyhow affect selecting stocks to be of growth or value. Among these, the time period, risk, economic situation, and macroeconomic factors can be mentioned. So far, no single study has been undertaken on the performance of investment strategies in Tehran Stock Exchange. The main reasons include inadequate information and lack of familiarity of those involved in capital market with investment strategies (Shavakhi., 2003) In the present study, the stocks with low ratio of book value to market value have been considered as growth stocks and the ones with the higher ratio as value stocks.

3. Hypotheses

Growth investing strategy (with low BV/MV) generates higher return than value investing strategy (with high BV/MV) in Tehran Exchange Market.

3.1 Sub-goals:

Investigating the function of growth investing strategy (with low BV/MV) against value investing strategy (with high BV/MV) in Tehran Stock Exchange

The present research is descriptive (non-experimental) and causal-comparative.

4. RESEARCH METHOD

1) Library method: To collect information about theoretical basics, literature and background, English and Persian books, theses, articles and databases were used. 2) Field method: data were collected from Stock Exchange databases.

Statistical method for data analysis: To test the hypothesis, a comparison of two population means was made. Moreover, to study the relationship between portfolio returns and net yield of book/market value, regressions were used

Dependent variable in this research is the stock return of the companies under study and the independent variable is ratio of book value to market value of shares.

Our statistical population included all companies listed in Tehran Stock Exchange. The time period of study was from 2002 to 2006. The method used for sampling was the judgment sampling. As the samples (that is the entire population) had to be made homogeneous with respect to some variables, we used preceding research methods. The method of drawing samples was as follows:

- Companies whose symbol has been closed down for over 3 subsequent months in a fiscal year,
- Loss making companies,
- Companies active in financial intermediation industry (financial companies were not selected because of their high leverage ratio; however,
- this would not necessarily imply that they enjoy weak financials.),
- Companies whose shares have not been traded on for more than three months,
- Companies whose fiscal year did not end in (March) were omitted from the selected sample. The number of companies that met the above conditions ranged from 129 in 2002 to 106 in 2006.

Table1. Number of qualified companies:

2002	2003	2004	2005	2006
129	133	132	152	106

4.1. Hypotheses Testing

Growth investing strategy (with low BV/MV) generates higher return than value investing strategy (with high BV/MV) in Tehran Exchange Market.

Table2 : T-Test Statistics

H ML1	N	Mean	Std. Deviation	Std. Error Mean
Stockreturn	30	4.0412	4.32472	.78958
growth company	30	2.1577	3.52778	.64408
Value company				

Table 3: Independent Samples Test

	t-test for Equality of Means						
	t	df	Sig.(2-tailed)	Mean Difference	Std.Error Difference	95% Confidence Interval of Difference	
						Lower	Upper
Stock return	2.870	58	.040 ⁱⁱⁱ	1.8835	1.01896	-.15620	3.92314

As indicated in the table, $T=2.87$ and $\text{sig}=0.4$ which means that the rate of stock return is different for growth companies and value companies and as the growth stocks show higher average returns, we should accept that growth stocks earn higher returns than value stocks. The strategy of investing in small companies produces higher returns than investing in large companies in Tehran Stock Exchange

5. REGRESSION

This regression reflects the relationship between portfolio return and HML return.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std.Error of the Estimate
1	.312 ^a	.097	.082	3.85833

a.Predictors:(Constant), HML

In the table above, R square is the coefficient of determination which is .197. That is to say 1% of the data can be explained by this regression model. In other words, 1% of changes in stock returns are determined by market HML.

H_0 = There is not a linear relationship between HML and stock return

H_1 = There is a linear relationship between HML and stock return

Table 5: ANOVAb

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std.Error	Beta		
1	(Constant)	2.500	.553	-.312	4.524	.000
	HML	-.199	.080		-2.501	.015

a.Predictors:(Constant), HML

b. Dependent Variable: stock returns

The table above is the table of variance analysis and suggests that if there is a linear relationship between HML and stock returns. Since $\text{sig} = .015$ and it is smaller than the significance level ($\alpha = .05$), so we can conclude that H_0 hypothesis is rejected and there is a linear relationship between HML and stock returns. H_0 = HML variable and/or constant variable do not influence the rate of stock returns.

H_1 = HML variable and/or constant variable influence the rate of stock returns.

Table 6: Coefficientsa

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	93.087	1	93.087	6.253	.015a
Residual	863.430	58	14.887		
Total	956.517	59			

a. Dependent Variable: stock return

In the table above, regression coefficients have been calculated for the independent variable of HML, and for the constant value. Since sig = 015, sig = .0 and it is smaller than .05, so they are left in the regression model as follows:

$$\text{Stock returns} = 2.5 + (\text{HML}) - .199$$

6. Summary and Concluding Remarks

Results of testing hypothesis

1: hypothesis 1 testing indicated that we can say we are 95% confident that growth companies have higher returns than value companies.

Risk-adjusted return for growth companies compared with value companies in the period of 2002-2006 is as follows:

Table 7. Coefficient of variation of returns IN 2002-2006	
Growth companies	1.07
Value companies	1.63

Comparing the coefficient of variations of these two groups suggests that growth companies offer adjusted returns with higher risks.

7. Suggestions

Some of the subjects and issues that are proposed to be considered in future research include:

1. One of the most important subjects in investment market is the survey of stock migration from growth to value vice versa. So the survey of migration process and its causes can have an important role in decision making of the investors and useful investment.
2. survey of the relationship between cash flows of growth and value stock with the factors of making stock output
3. survey of the possibility of using financial ratios for forecasting the risk of growth and value companies
4. It is suggested that investment managers select their strategies based on investment period, financial stability, and the degree of risk-taking.
5. As different indices can be used to reflect the growth or value nature of companies, including $\frac{BE}{ME}$, $\frac{P}{E}$, ... "Finding an appropriate index for growth companies in Tehran Stock Exchange " is suggested as a topic for writing a thesis.

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