IJBPAS, March, 2015, 4(3): 1305-1325

ISSN: 2277–4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)

'A Bridge Between Laboratory and Reader'

www.ijbpas.com

RISK PREDICTION OF GROWTH STOCKS AND VALUE STOCKS USING CONDITIONAL CAPITAL ASSET PRICING MODEL IN TEHRAN STOCK EXCHANGE

HOSSEIN OSTADI AND YOUNES RAJABI*

1: Department of Financial Engineering, Dehaghan Branch, Islamic Azad University, Isfahan, Iran

2: Department of Financial Engineering, Dehaghan Branch, Islamic Azad University, Isfahan, Iran

***Corresponding Author: E Mail: yns.rajabi@gmail.com**

ABSTRACT

Maintain and increase the value of the portfolio need to consider various factors affecting the yield of a portfolio of financial assets under different economic conditions. Investors seeking to take advantage of that market power with respect to the ascending and descending measure productivity and efficiency by identical other than beta- explanatory for review.

The population of this research consists of 140 companies listed on the Stock Exchange is in the period of 2007 to 2013. In this study, the conditional capital asset pricing model to examine the conditional relationship between risk and return of growth stocks and the value at risk and the stock market return and the explanatory power is used. And quantitative methods of statistical analysis consisted of bivariate regression analysis and mean Test is used to carry out the analysis of the data& mining research results , SPSS, Excel and Eviews softwares is used . Our findings indicate that for both types of stocks (growth or value stocks) between positive and negative market returns and risk premium There is, So we can say that the conditional relationship between return and risk premium Systematic growth stocks and value established in Tehran Stock Exchange. Also in the study of the relationship between value and growth stock systematic risk and systematic risk in stock market data show that in both positive and negative market risk

premium, value stocks have a greater impact on systematic risk, systemic risk market. Finally, a predictive model years2013 and 2012, The result suggests that the error rate of growth was lower stock And it is also more predictive power, But given the very large amounts of data errors, It can be concluded that a conditional CAPM model cannot be a good model for predicting the Tehran Stock Exchange.

Keywords: Systematic Risk, Growth Stocks and Value, The Conditional Capm, The Market Risk Premium

INTRODUCTION

Stock Exchange as a symbol of the capital markets, Influence the variation of the economic cycles. Investment managers, portfolio managers, and other individuals and entities involved in the stock market and other financial assets pay, To maintain and increase the value of their investment portfolio need to consider various factors affecting the yield of a portfolio of assets by a variety of economic issues. One factor that has great influence on the efficiency of financial asset is risk. Therefore all investments should be a sensitive measure of portfolio risk relative to their assets. To optimize their portfolio of assets in proportion to the level of risk is always looking to identify factors affecting the efficiency and methods of measuring and controlling factors. Lack of traditional theories and modern portfolio theory, capital market efficiency, financial scholars in response to questions on the one hand and arbitrage opportunities and broad domain of the price appointment of financial assets, emphasizes the effect of information on stock prices, on the other hand the use of new theories and models. Because modern portfolio theory and the efficient market hypothesis can be used to represent the investment of economic relations and psychology and that the use of models and new theories will lead to the realization of efficient financial markets. One of these techniques is the capital asset pricing model that an equilibrium model to show the relationship between risk and return of a single asset. This model shows how the assets according to their risk (beta) priced and represents a simple linear relationship between risk and expected return is positive. But the explanation of this relationship led to this model is repeatedly criticized and corrected, One of these reforms caused the model to be presented in the form That can be provided in terms of both the upside and the downside of the market (positive or negative market risk premium) Productivity and efficiency by measuring the strength of the explanatory variables, except for beta review. One of the most common categories of risk-taking in stocks, growth stocks and value stocks based on the classification of stock. In general , the company's shares in the stock market may be in a portfolio of growth stocks , value stocks or stock to neutral (normal stock) them. Furthermore, risk and return are two important factors in the investment decisions of investors to invest in securities risk, the risk that they incur higher expected rewards. Several theories have been proposed to determine the relationship between stock prices and stock prices and its influencing variables such as risk and return to regular.

Therefore, in this study we sought to answer four main questions is given below:

The first question: is the relationship between systematic risk and market risk premium growth stocks in Tehran Stock Exchange for the period 2007 to 2013 is provided?

The Second question: Is the conditional relationship between systematic risk and market risk premium on the market value of shares valued at Tehran Stock Exchange in the period 2007 to 2013 there?

The Third question: Is the systematic risk of value stocks relative to growth stocks further systemic risk is the systematic risk of the market?

The fourth question: Is there Systematic risk of stock price predictive power than the systematic risk of growth stocks in the Systematic risk prediction market?

Literature and Theoretical Investigations:

Concepts and Theoretical

Knowledge of financial management in recent years have a new approach to the complex realities of financial markets, especially capital markets. Due to the weaknesses of traditional portfolio theory and the efficient market hypothesis and the relative decline of credibility and trust funds, a new approach to the development of theories and models in finance scholars discussed and investigated. Acceptance loss due to the complexity and depth of the real world approaches and the impact on financial markets and the economic value of various traditional and modern portfolio theory can and Market Efficiency Hypothesis of finance scholars in response to questions on the one hand and the presence of arbitrage opportunities and a broad range of financial asset prices, and the impact on stock price data. . On the other hand, the use of new theories and models that are emphasized; because modern portfolio theory and the efficient market hypothesis can be used to represent the investment of economic relations and psychology. . . Governing the financial markets are and that the use of models and new theories will lead to the realization of efficient financial markets. One of the issues raised in this area, the use of different variables in predicting the expected risk investments. One of these techniques is the Capital Asset Pricing Model is an equilibrium model to show the relationship between risk and return of individual assets. This model shows how the assets according to their risk (beta) priced and represents a simple linear relationship between risk and expected return is positive. But the explanation of this relationship led to criticism and correction is the model many times, one of the reforms caused the model to be presented in the form that can be provided in terms of both the upside and the downside of the market (positive or negative market risk premium) efficiency measure and the explanatory power output by changing with the exception of the assess the beta. On the other hand, it is important for investors to invest in what kind corporation achieve optimal efficiency apart from the existing models to more accurately predict risk and return on equity, the classification of stock in their appetite for risk, one of the classifications used in this context, sorting stocks based on growth stocks and value stocks. In general, investing in stocks can be divided into two groups **(Ivani Farzad., 1999)**.

Growth stock:

Growth stock is stock price relative to cash flow, earnings, dividends and book values are higher than the market average. Growth stocks belong to companies that have not yet matured to the stage as possible the distribution of profits-they refused. These companies generally have good investment opportunities. Proponents of this approach believe that the main reason for investing in these stocks, investing in the future growth of the company's profits and therefore the acquisition of shares, a share that is expected to grow its profits at a high average speed. The economic analysts trying to identify companies that have not yet reached the stage of maturity; because these companies are more robust research and development program. Growth investors seek stocks of companies that historically have been growing faster than the average and therefore have high growth potential. Growth factors such as increased sales or profits of a company is measured. Growth stocks managers tend to accumulate as a dam managers to refrain from paying dividends, because they want to re-invest any cash in the company. Thus, growth investors, mainly from the increase in prices of stock returns on your investment gain **(IvaniFarzad., 1999)**.

Stock value:

Most experts stock market value of a share of the profits they share, dividends, book value or other criteria of stem per share compared to similar companies in the industry, less is as a result, taking into account criteria such as E / P and P / B cheap. Stock Value of shares owned by companies that are desirable in terms of profitability, but the market share temporarily, the intrinsic value is value. Thus, investors expect the market to discover the mistake in pricing the stock price to rise. Value investors seek stocks of companies that are in good condition but the stock market temporarily below their intrinsic value, are valued. We expect that the market will discover the error in the pricing of the stock price to rise **(Lakonishok, Shleifer, Vishny, 1994)**.

Neutral (normal) Stock:

Neutral shares some features equity shares that may be growth or value but are not any, Between growth stocks and value stocks, and may in the short term or long term, with a portfolio of growth stocks or value stocks migrate.

Background of Research:

External Research:

"Blaznko andJafen "observed (2010) in a study called "growth stocks in the stock price dynamics in equity investments" consists of two acting growth stock portfolio and prices for the years 1976 and 2007, respectively. They are evaluated using a dynamic model of equity, new metrics for evaluating expected returns and expected returns of the new benchmark steady growth (SGER) were named. Their results of research indicate that the increase in efficiency with increased profitability, the stock price is higher than growth stocks. **Campbell and colleagues' (2004)** in a study titled "Bad beta, good beta" to examine the relationship between stock market growth and price variables expressed, If adequate funds are available, growth equity investment opportunities in the future can be profitable as well **[3]**.

Gallon and colleagues' (2008) in a study titled," Growth Stocks vs. stock price, expected stock return variation "Marco replacement using the structure, which was proposed by Perez et al, 2000; Showed that the expected return on portfolio stock portfolio stock price minus the expected return period of dynamic growth is inconsistent. They are using some criteria, such as the ratio of fixed assets to total assets, financial leverage and operating leverage, showed that Implementing a bad economy, value firms than growth firms, the less flexibility the flexibility and low cost of capital will increase the value of the company **[4]**.

"Fama and French", in another study, titled "The structure of stock returns and stock price growth," the study of the factors in stock returns and stock price growth stock portfolio began. They use data for the years 1926 to 2006 and the Separation of growth stocks and large stocks, small price, the portfolio consists of six small growth, large growth, small neutral, large neutral, small price and a great price, the attitude of pragmatism and rational perspective on the evolution of stock returns and paid the price.They found that the stock price relative to growth stocks are better able to explain the market risk premium **[5].**

"Rnot and colleagues' (2009) in a study entitled" realistic value and growth stock-price cycle "to determine whether differences between growth stocks and stock price growth stock-price cycle began To the cycle of growth stocks - the price, the migration process of stock price growth is neutral and reverse. They found that in an Inefficient market, if limited access to market information, growth stocks have higher excess returns, and vice versa, when the widespread availability of market information is possible, Stock price is greater than the excess returns. Thus, when access to market information is limited,An investor with a focus on growth stocks could be unusual gains achieved. Also, when the market will expand access to information, an investor can earn abnormal profits by focusing on the stock price **[6]**.

"Fama and French '(2007) study entitled" Migration "using data from the 1927 and 2006 stock to stock price growth and scale. Then, on the basis of changes in equity during the period of study, each of the growth stock portfolios and price were divided into four groups. They found that the main cause of changes in equity stocks that migrate from one type to another cause, regardless of price, is the only **[7]**.

"Ayksyng& Zhang" (2006) in a study entitled "growth stock in the stock price, fundamental factors of economic stimulus," a comprehensive study of the factors underlying the economic stimulus program, continued growth for the company and price. They showed that a fundamental factor in the price of the company, the company's growth is very much affected by economic shocks are and significant differences between growth stocks and price in this area existed. They also showed that firms price relative to the company's growth from less flexibility in investments, are **[8]**.

"Bansal and colleagues' (2005) in a study entitled" Dividend assumptions compared to the stock price and the relationship between growth and stock returns are paid to systematic risk. They concluded that the stock price relative to cash flow and equity cash flow growth over the long term is more sensitive **[9]**.

"**Fuger and colleagues (2005)** in a study entitled" Identification and growth stock portfolio stock price of companies stock characteristics and price growth in the small, medium and large in a time period during the years 2001 to 2003 were reviewed.Their results showed that the average ratio and the growth rate of earnings per share for the stock P / B, P / E growth, two times greater than the stock price. The average price of large stocks relative to growth stocks of medium and large, with greater financial leverage and capital market brokers tend to invest in the stock is more expensive **[10]**.

"**Petkvva and colleagues' (2005)** in a study titled" Does a higher-risk growth stocks or stock price "to examine the relationship between changes in risk and time when the stock price was paid, They also conditional capital asset pricing model to evaluate changes in stocks of growth and price risk when used.Their results showed that when the price of risk is not only able to explain the risk premium and the beta of the stock price and the expected growth in the market, the positive and negative. The obtained covariance beta spend less than that observed in the mere price of a capital asset pricing model to explain the condition **[11]**.

((Groot and Gasper)) (2002) investigate the behavior of stock returns in Asia as further evidence for the relationship between expected stock returns, firm size and proportion in five Asian countries India, Korea, Malaysia, (M / B), Taiwan and Thailand were investigated. The results showed a strong relationship between firm size and efficiency in all countries, there. The appropriate relationship with the yield on the country of Korea, (M / B) was noted between Malaysia and Thailand. They found that although small firms, Asian, somewhat higher average stock returns than large companies,But it seems that changing the value of the firm's market value and uniform relation (M / B) yields a powerful book. But this means that the stock price higher average returns than growth stocks there **[12]**.

"**Fama and French" (1997)** in another study entitled "The stock went against the stock price, a fear of international evidence" showed that in most of the world financial markets, stock prices of growth stocks are higher efficiency. In this study, between 1975 and 1995 and were arranged in a global portfolio selection, returns the difference between P / B ratio by 6/7 percent and value stocks have higher returns than growth stocks.

Their results show that the capital asset pricing model to explain not only the price, It should be a two-factor model is used to return to international prices only described **[13]**.

Rosenberg and colleagues' (1985) research has shown convincing evidence that the market is inefficient and dividends received by the stock price is higher than average returns than growth stocks market **[14]**.

Internal investigation:

Shah bandeh (1385) in a study entitled "Comparison of growth stocks and stock firms in Tehran Stock Exchange price" with the collection and review of information required 123 companies listed in Tehran Stock Exchange, Between March 2002and March 2006, came to the conclusion that the size and price of each is not appropriate for the diagnosis of growth stocks. The results showed that between 2002 to 2006 per year And for the entire five-year period, a significant relationship between firm size and growth of the stock price does not exist. [1]

Foroughi *et al* (2011) in a study titled "Risk versus growth stocks and shares on the Tehran Stock Exchange price" To investigate the relationship between value and growth stock risk, market risk and systematic risk in stock and predictive power of systematic risk than growth stocks began. They are 274 companies listed in Tehran Stock Exchange for the period 2001 to 2008 using multivariate regression models examined and showed that the slowdown in growth stock risk associated with market risk is greater, also in Group C and D of the relationship between the stock and the market value at the peak is higher and there is no connection. The predictive power of systematic risk than the stock market, the stock price growth is of great advantage **[2]**.

MATERIALS AND METHODS

In this study, companies that have the following conditions, as selected examples.

1- In the course of researching companies that are not new to the market.

2- Companies whose financial year it was 29.12.

3- Companies whose shares are traded for at least 5 years in the Tehran Stock Exchange is located.

4- Companies whose shares are equity securities by the end of 2013 unless Tehran.

In the end, 140 companies, for example, has been tested and accepted. Data on variables of statistical data between the years 2007 - 2013 stock company that is collected is used. The study focused on companies in Tehran Stock Exchange is the place.

Research Model:

Conditional CAPM model is used to describe the following equation:

$$E(r_i) = r_f + [E(r_m) - r_f]\beta_i . D_t + [E(r_m) - r_f]_1 \beta_i . (1 - D_t) + \varepsilon_{i,t}$$

In this relation, we have:

$E(r_i)$= Expected Rate of Return

$[E(r_m) - r_f]$ =Positive risk premium

r_f= Risk-free rate of return

$[E(r_m) - r_f]_1$= Negative risk premium

β= Systematic risk

$E(r_m)$= Market Returns

Model 1-4 :$Ret_{i,t} = \beta_0 + \beta_1 MRP_{i,t} + \beta_2 Mrn_{i,t} + \varepsilon_{i,t}$

Model 2-4:$\mathrm{Ret}_{i,t} = \beta_0 + \beta_1 \mathrm{MRPG}_{i,t} + \beta_2 \mathrm{MRNG}_{i,t} + \varepsilon_{i,t}$

To calculate β, variance and correlation parameters, the following formulas are used:

$$S_i = \sqrt{E[(R_i - \mu_i)]^2}$$

$$S_{im} = E[(R_i - \mu_i)][(R_m - \mu_m)]$$

$$\rho_{im} = \frac{\sigma_{im}}{\sigma_i . \sigma_m} = \frac{E[(R_i - \mu_i)(R_m - \mu_m)]}{\sqrt{E[(R_i - \mu_i)^2] . E[(R_m - \mu_m)^2]}}$$

$$\beta_i = \frac{E[(R_i - \mu_i)(R_m - \mu_m)]}{E[(R_m - \mu_m)^2]}$$

In general, the conditional CAPM model when the market risk premium is positive, D-value variable equal to 1 if the market risk premium is negative, the value of the variable D will be equal to zero. This is precisely the point, according to **Stephan von (1999)** has argued, CAPM model assumptions, such as the relationship between risk and high returns true when the market risk premium is positive and In the case that the market risk premium is negative, the inverse relationship between high-risk and low yield will be.

Research variables and How to Calculate Variables:

Variables in this study to test the hypothesis, the efficiency of the return value and market value model and the risk-free return on the value of a positive risk premium on the value of negative risk premium value model, a systematic risk value model (1 β), Systemic risk in the value model (2 β), yielding a growth model, growth model, market efficiency, risk-free return on a growth model, only positive risks in the development, Negative risk premium in the growth model, the systematic risk of developmental models (1 β), the systematic risk of developmental models (2β), the variables used to test the research hypotheses are summarized in the table below is expressed.

To calculate variables must first data to variables of value and growth variables divided. It needs to include 1000 data is the first data, The company's book value and price to the closing stock acquired after obtaining the values, Book value per share divided by the closing price, calculated after the split, all the columns in terms of the amount earned, Arranged from smallest to largest, and thirty percent of the initial data as the data value and thirty percent as the developmental divide. After dividing the calculated value and growth, companies must vary for each market efficiency, productivity and efficiency without the risk and systemic risk if the risk premium is positive and In the case of a negative risk premium earned, Need to calculate the systemic risk, the regression models, So the data on a monthly basis and calculated regression models and systemic risk in the case of positive and negative results are obtained regardless of risk.

First Question:

The first question of this study is as follows: Is Tehran Stock Exchange systemic risk in the market value of stock market risk premium is a conditional relationship? To examine this hypothesis, the question should be written in the conditional model is a model of stock value or not?

H0 hypothesis indicates that the model is provided and the hypothesis H1 indicates that the model is provided. Results show that if the coefficients of the variables in the above equation is significant at the 95% confidence level, The relationship between independent variables and the dependent variable was. The significant coefficient of zero indicates the opposite hypothesis H_1 and H_1's approval of a conditional relationships between variables.

Method of Test hypotheses:

H1: At least one of the coefficients against zero.	**H0: All regression coefficients are equal to zero.**

Second question:

The second question of this study is as follows:Is the conditional relationship between systemic risk and market risk premium bonds in Tehran stock exchange market growth in the period 2007 to 2013there?

H1: At least one of the coefficients against zero.	**H0: All regression coefficients are equal to zero**

H0 hypothesis indicates that the model is provided and H1 hypothesis indicates that the model is provided. If the coefficient of the variable in the equation is significant at the 95% significance level of correlation between the independent variables and the dependent variable was. The significant coefficient of zero indicates the opposite hypothesis H_1 and confirmH_1. To determine the significance of the F statistic of the model used.

Third question:

The second question of this study is as follows:Do systematic risk value stocks relative to growth stocks further systematic risk is market risk Systematic? Examine the relationship between the two boom mode (positive risk premium) and a market downturn (negative risk premium) is performed. In case of a positive risk premium: Assuming H_0 show that the average systematic risk value stocks, growth stocks have lower risk Systematic? And H_1 hypothesis suggests that the average systematic risk value stocks, growth stocks released systematic risk.

$$H_0: \mu_{1\beta 1} = \mu_{2\beta 1}$$
$$H_1: \mu_{1B1} \neq \mu_{2\beta 1}$$

To perform this test, the first test of the equality of two out and the tying two-out testing is not ,If 0.05 Sig obtained from the error rate was lower than the mean score of the test is rejected, After rejecting the test, review the μ_1B1 <μ_2B1 or μ_1B1> μ_2B1 is.To judge the μ_1B1 <μ_2B1 or μ_1B1> μ_2B1 should be considered to mark the lower and upper limit is positive if the population mean is greater than zero that μ_1B1> μ_2B1 is no limit if the population mean is less than zero, so μ_1B1 <μ_2B1 is.

The negative risk premium:

To determine the significance of this hypothesis H_0, H_1 can be expressed as follows: Assuming H_0 show that the average systematic risk than value stocks, growth stocks and risk Systematic and H_1 hypothesis suggests that the average systematic risk value stocks, growth stocks released systematic risk.

$$H_0: \mu_{1\beta 2} = \mu_{2\beta 2}$$

$$H_1: \mu_{1B2} \neq \mu_{2\beta 2}$$

To perform this test, the first test of the equality of two out and the tying two-out testing is not, If 0.05 Sig obtained from the error rate was lower than the mean score of the test is rejected, After rejecting the test , review the μ_1B2 <μ_2B2 or μ_1B2> μ_2B2 is. To judge the μ_1B2 <μ_2B2 or μ_1B2> μ_2B2 should be considered to mark the lower and upper limit is positive if the population mean is greater than zero that μ_1B2> μ_2B2 is no limit if the population mean is less than zero, so μ_1B2 <μ_2B2 is.

Forth question:

The Forth question of this study is as follows: Systematic risk of stock price predictive power of systematic risk than growth stocks in the market systematic risk prediction. To investigate this hypothesis, the regression model for the 2012 data for each company separately, for firms with growth and value stocks and calculates Expected returns generated by the model predicted 2013 years and $\hat{y}_i$call. Real returns of 2013 y_i call, we reduce the real value of the predicted value Values $\varepsilon = \mathrm{y}_i - \hat{y}_i$call.For companies with growth stocks, the value of ε is calculated separately and added together, For companies with shares worth doing and Finally, the total error resulting from growth stocks and value we compare whichever is less, Better predictive power.Because the exchange fluctuation was seen in 2013 years, May result in an answer to this question cannot be properly So in addition to 2013 years, 2012 years, both in terms of the question, we review and summarize the results.

The findings of researches:

Descriptive Statistics:

In this section, we first examine the descriptive statistics of the variables have been studied and classified, In order to facilitate the reporting of tables set of symbols related to these variables can be used.As can be seen in Table 2, Research has described all the original data set and the skewness is. These findings are consistent with the results of many empirical studies of the financial strain that many of the fundamental variables of the show.

Inferential statistics:

Normal test:

One of the main assumptions made in many studies, social science and statistical inferences that The data is normally distributed. Kolmogorov-Smirnov tests based on Shapiro and to evaluate the normal distribution of the main variables used. The research also explored in this section to test the hypothesis that the data is normally distributed.

Null hypothesis: the data is normally distributed	Hypothesis One: distribution of data is not normal.

According to information in the **Table 3** and obtained significant level statistics, Both these tests show that the assumption of normality of the data desired error level of five percent (column P) be rejected for all variables and According to the results of the statistical analysis using the Spearman correlation test (abnormal) in order to test the research hypotheses are necessary correlation For comparison with normal distribution are expressed as Pearson's correlation test for non-normality of the variables, but the Spearman test (non-normal) is more essential.

Correlation analysis:

In Table 4-3, the correlation coefficient between the main factors in the growth and value model is presented According to their data from both Pearson and Spearman correlation test was used to, in diameter at the top of tables 4 Pearson correlation coefficient andin bottom diameter of Tables 5, Spearman correlation coefficient is presented. According to Table (4) Information on value of model variables, the Pearson and Spearman test is offered at a significant level 0.05, The criterion of significance (P-value), the level of significance between the two variables is that if the error level is less 0.05 correlation between these two variables is, But if the level is between the two variables is larger than the error level 0.05 correlation between variables does not exist.

According to **Table (5)** data on the developmental model variables, the Pearson and Spearman test is offered at a significant level 0.05, The criterion of significance (P-value), the level of significance between the two variables is that if the error level is less 0.05 correlation between these two variables is, However, if the level of significance between the two variables is larger than the error level 0.05 correlation between variables does not exist.

Hypotheses analysis:

Conditional relationship between return and risk premium on the value model:

To determine the significance of the F statistic is used. Based on the calculated probability of F statistics in **Table 6** (0.001) and the fault 0.05 = a H0 hypothesis is accepted (0.001 <0.05), this means that the model was significant, and conditional and at least one of the coefficients of the regression model is zero. Also according to Table (6) the estimated value of the coefficient of determination for the regression model of equation (1) is the coefficient of determination 0.08.The estimated value of the coefficient of determination, suggests that about 8% of the dependent variable explained by the independent variables. We examined the relationship of the individual variables in the risk premium is positive and negative risk premium paid. Positive risk premium:

$$H_0: \beta_1 = 0$$

$$H_1: \beta_1 \neq 0$$

Given the possibility calculated t-statistics in **Table 6** (0.001) and the fault a=0.05 hypothesis H0 is not accepted.(0.001 <0.05), the relationship was significant and positive relationship between return and risk premium is significant.

Negative risk premium:

$$H_0: \beta_2 = 0$$

$$H_1: \beta_2 \neq 0$$

Given the possibility calculated t-statistics in **Table 6** (0.001) and the fault a=0.05 hypothesis H0 is not accepted.0.001 <0.05) the relationship between return and risk premium negative and significant relationship exists.

Conditional relationship between return and risk premium on the growth model:

Based on the calculated probability of F statistics in **Table 7** (0.03) and the fault a=0.05 hypothesis H0 is not accepted, (0.03 <0.05), the model was significant and at least one of the coefficients of the regression model is zero. Also according to **Table (7)** the estimated value of the coefficient of determination for the regression model of equation (2) is the coefficient of determination 0.02. The estimated value of the coefficient of determination, suggests that about 2% of the dependent variable explained by the independent variables. We examined the relationship of the individual variables in the risk premium is positive and negative risk premium paid. Positive risk premium:

$$H_0: \beta_1 = 0$$
$$H_1: \beta_1 \neq 0$$

Given the possibility calculated t-statistics in **Table 7** (0.04) and the fault a=0.05 hypothesis H0 is not accepted. (0.04<0.05), the relationship was significant and positive relationship between return and risk premium is significant.

Negative risk premium:

$$H_0: \beta_2 = 0$$
$$H_1: \beta_2 \neq 0$$

Given the possibility calculated t-statistics in **Table 7** (0.045) and the fault a=0.05 hypothesis H0 is not accepted, (0.045 <0.05) the relationship between return and risk premium negative and significant relationship exists.

Do systemic risk value stocks relative to growth stocks further systematic risk is market risk Systematic?

To assess systematic risk value stocks relative to growth stocks regardless of risk to both positive and negative risk premium paid to the study of the relationship. Positive risk premium:

By examining **Table (8)**, and the results have been observed between different time intervals that in years 2007-2013 assuming the same average growth and value stock risk has declined.

Since the level of significance (sig) is less than the amount 0.05. But greater than zero because of the limit, we can conclude that μ_1B1> μ_2β1 the population mean is greater than the risk of value stocks, growth stocks and hypothesis H1 is accepted. Negative risk premium:

By examining **Table 9**, and the results have been observed between different time intervals that In years 2007-2013 assuming the same average growth and value stock risk has declined. Since the level of significance (sig) of the amount due is greater than zero but less 0.05 limit, μ_1B2> μ_2β2, we can conclude that the population mean is the better value stock risk, and hypothesis H1 is accepted becomes.

Systematic risk of stock price predictive power of systematic risk than growth stocks in the market systematic risk prediction:

To predict the risk of value stocks and growth stocks in 2013 and compare it are, first, the desired regression model for each firm in 2012 earned and Regression model years 2012 through 2013for each firm yields predicted and actual value comparison and the actual values of the company lost its predictive value and ε is named and Finally, the values of ε together and the total error resulting in a growth mode and the value to be compared. Some companies in 2013 are not available because the data is removed from the model predictions.

By comparing the values of the total error value model and the model of growth, growth stocks, value stocks have lower levels of total errors and In 2013, when the error rate is less than the growth stocks that are expected to be higher. To predict the risk of value stocks and growth stocks in 1391 and compare it are, first, the desired regression model for each firm in 2011 earned and Regression model years 2012 through 2011 for each firm yields predicted and actual value comparison and The actual values of each company lowered its forecast and ε is called. Finally, the values of ε together and the total error resulting in a growth mode and the value to be compared. Some companies since 2012 are not available because the data is removed from the model predictions.

Table 1: Factors related to research:

Sign	Variable	Sign	Variable
Rg	Yielda developmentalmodel	Rv	Returnvalue model
Rmg	Developmentalmodelof marketefficiency	Rmv	Market returnsvalue model
Rfg	Developmentalmodel ofrisk-freereturns	Rfv	Returnswithout RiskModel
Mrpg	Takepositiverisksdevelopmentalmodel	Mrpv	Positiverisk premiumvalue model
Mrng	Negativerisk premiumgrowthmodel	Mrnv	Negativerisk premiumvalue model
1gβ	Systematic riskmodel ofgrowth(boom)	1vβ	Systemic riskvalue model(boom)
2gβ	Developmentalmodel ofsystemic risk(market crash)	2vβ	Systemic riskvalue model(downswing)

Table 2: Descriptivestatistics forthe main variables

No.	Strain	Skewness	SD	The median	Mean	Variable
1	6.7	2.23	130.61	29.82	82.48	Rv
2	-0.282	1.05	29.95	13.34	26.52	Rmv
3	1.8	1.56	0.78	14.96	15.02	Rfv
4	-0.51	1.30	26.70	0.0	15.71	Mrpv
5	3.46	-2.12	7.29	-0.9	-4.25	MrNv

6	4.13	-3.63	3.28	0.05	-1.61	B1v
7	6.56	12.71	1.71	0.16	0.39	B2v
8	137.16	1.1	89.83	5.29	19.11	Rg
9	-0.71	79.79	32.37	13.34	24.69	Rmg
10	3.10	2.5	0.67	15.02	15.17	Rfg
11	-0.33	1.16	26.47	0.0	16.96	Mrpg
12	-0.63	-1.05	10.19	-0.9	-7.44	MRng
13	18.48	0.77	2.94	0.04	-0.01	1gβ
14	13.27	1.34	1.92	-0.003	-0.003	2gβ

Table 3: The test results are normal variables

Shapiro-Wilkie test			Kolmogorov-Smirnov test.			Variable
Significant level	Degrees of freedom	Statistics	Significant level	Degrees of freedom	Statistics	
0.0001	271	0.780	0.0001	271	0.168	Rv
0.0001	271	0.760	0.0001	271	0.356	Rmv
0.0001	271	0.703	0.0001	271	0.370	Rfv
0.0001	271	0.597	0.0001	271	0.430	Mrpv
0.0001	271	0.616	0.0001	271	0.305	MrNv
0.0001	271	0.528	0.0001	271	0.256	B1v
0.0001	271	0.863	0.0001	271	0.134	B2v
0.0001	271	0.384	0.0001	271	0.240	Rg
0.0001	271	0.828	0.0001	271	0.289	Rmg
0.0001	271	0.570	0.0001	271	0.458	Rfg
0.0001	271	0.641	0.0001	271	0.413	Mrpg
0.0001	271	0.691	0.0001	271	0.293	MRng
0.0001	271	0.758	0.0001	271	0.174	1gβ
0.0001	271	0.770	0.0001	271	0.200	2gβ

Table 4: The correlation between values (above the main diagonal: Pearson correlation coefficient / lower main diagonal, Spearman correlation coefficient)

MrNv	Mrpv	B2v	B1v	Rv	Variable
0.218** (0.001)	*-1.11 (0.056)	0.077 (0.201)	0.084 (0.162)	1	RV
0.254** (0.00)	0.097 (0.106)	-6.04** (0.001)	1	0.075 (0.213)	B1v
-0.036 (0.552)	-0.059 (0.329)	1	-4.64** (0.001)	0.132** (0.028)	B2v
0.344** (0.001)	1	-0.053 (0.379)	0.084 (0.159)	0.114**- (0.048)	Mrpv
1	0.847** (0.001)	0.019)0.751(	0.072 (0.240)	0.107* (0.066)	MrNv

(Test statistic withsignificance level, ** at the 5% error level, and *at the10% level oferror wasprovided.)

Table 5: The correlation between growth (above the main diagonal: Pearson Correlation Coefficient / Spearman below the main diagonal)

MRng	Mrpg	2gβ	1gβ	Rg	Variable
0.14 (0.01)	0.107 (0.6)	0.007 (0.90)	0.039 (0.50)	1	Rg
0.128 (0.028)	0.42 (0.477)	-4.89 (0.001)	1	0.093 (0.113)	1gβ
0.017 (0.768)	0.065 (9.5)	1	-4.78 (0.001)	0.024 (0.683)	2gβ
0.470 (0.001)	1	0.060 (0.310)	0.036 (0.546)	0.232 (0.001)	Mrpg
1	0.869 (0.001)	0.077 (0.187)	0.091 (0.119)	0.186 (0.001)	MRng

Test statisticwithsignificance level, ** at the 5% error level, and *at the10% level oferror wasprovided.

Table 6: The results of estimating equation (1)

$Ret_{i,t} = \beta_0 + \beta_1 MRP_{i,t} + \beta_2 Mrn_{i,t} + \varepsilon_{i,t}$			
Significance level	**Statistics t**	**Factor**	**Variable**
0.0001	11.65	120	B0
0.0004	-3.56	-1.03	Mrp
0.001	4.91	5.20	Mrn
The coefficient of determination	0.28	StatisticsF	14.05
Adjusted R^2	0.086	Meaningful statisticsF	0.001

Table 7: The results of estimating equation (2) for the growth

$\text{Ret}_{i,t} = \beta_0 + \beta_1 \text{MRPG}_{i,t} + \beta_2 \text{MRNG}_{i,t} + \varepsilon_{i,t}$			
Significance level	**Statistics t**	**Factor**	**Variable**
0.0048	2.84	24.38	B0
0.044	0.75	0.16	Mrpg
0.045	1.89	1.08	Mrng
The coefficient of determination	0.14	Statistics F	3.54
Adjusted R^2	0.02	Meaningful statistics F	0.03

Table 8: Comparison of two normal population positive risk premium (t)

The t-testforequality ofvariance,0.95confidence level						
Upper	**Lower**	**sig**	**Df**	**T**	**Variance test result**	**Returntime(years)**
0.7	0.9	0.04	523	0.56	Assumingequalvariances	2007-2013

Table 9: Comparison of the normal population have negative risk premium (t)

The t-testforequality ofvariance,0.95confidence level						
Upper	**Lower**	**sig**	**Df**	**T**	**Variance test result**	**Returntime(years)**
0.9	0.6	0.09	695	-2.6	Assumingequalvariances	2007-2013

Table 10: 2013-year forecast of growth stocks

Company Name	Mean difference $\varepsilon_i = y_i - \hat{y}_i$	2013-year yieldforecast	Model ofYear2012	The actualefficiencyof2013
Tehran Darou	-57.1	5.4	$y_t = 5.4 - 2.2x_1 + \varepsilon_1$	-51.70
Khavar spring	214.97	-1.1	$y_t = -0.8 - 0.1x_1 - 0.3x_2 + \varepsilon_1$	213.97
Iran Cardboard	28.26	4.8	$y_t = 4.6 - 1.09x_1 + 0.2x_2 + \varepsilon_1$	33.06
FirouzaEngineering	5.87	1.27	$y_t = 1.1 - 0.11x_1 + 0.17x_2 + \varepsilon_1$	7.14
Sar- pars toosheh	200.6	26	$y_t = 23.9 - 1.7x_1 + 2.1x_2 + \varepsilon_1$	226.6
	392.6	Total		

Table 11: 2013-year forecast stock value

Company Name	Mean difference $\varepsilon_i = y_i - \hat{y}_i$	2013-year yieldforecast	Model ofYear2012	The actualefficiencyof2013
Aloomorad	228.45	0.32	$y_t = 0.7 - 0.3x_1 + 0.25x_2 + \varepsilon_1$	228.77
Pars darou	191.42	1.9	$y_t = 1.7 - 0.5x_1 + 0.2x_2 + \varepsilon_1$	193.32
Shiraz petrochemical	42.26	0.17	$y_t = 1.2 + 2.6x_1 - 1.03x_2 + \varepsilon_1$	42.43
Farabi petrochemical	141.19	33.2	$y_t = 31.6 - 5.2x_1 + 1.6x_2 + \varepsilon_1$	174.39
Pars feed	15.40	-0.9	$y_t = -1..8 + 4.8x_1 + 0.9x_2 + \varepsilon_1$	14.5
Daroupakhsh	186.64	-2.1	$y_t = -1.9 - 0.004x_1 - 0.2x_2 + \varepsilon_1$	184.54
Saipaazin	686.17	3.75	$y_t = 1.7 - 0.2x_1 + 2.05x_2 + \varepsilon_1$	689.92
Ardakan ceramic	204.33	9.96	$y_t = 9.85 + 1.2x_1 + 1.1x_2 + \varepsilon_1$	214.29
Behbahan cement	147.23	2.63	$y_t = 2.02 + 0.67x_1 + 0.61x_2 + \varepsilon_1$	149.86
Qhazvin glass	34.47	-9.01	$y_t = -6.4 - 2.61x_2 + \varepsilon_1$	25.46

Khozestan steel Co.	**-4.91**	**4.91**	$y_t = 5.02 - 0.5x_1 - 0.11x_2 + \varepsilon_1$	**0.00**
Kavian steel Co.	**15.90**	**-1.90**	$y_t = -1.7 + 0.14x_1 - 0.20x_2 + \varepsilon_1$	**14.00**
Khorasan steel co.	**20.91**	**-2.71**	$y_t = -2.04 + 2.7x_1 - 0.67x_2 + \varepsilon_1$	**18.20**
IndustrialGroupSADID	**129.21**	**-2.22**	$y_t = -2.2 + 0.26x_1 - 0.02x_2 + \varepsilon_1$	**126.99**
Qholtash	**183.38**	**5.10**	$y_t = 5.5 + 0.18x_1 - 0.4x_2 + \varepsilon_1$	**188.48**
Alborz tires	**128.50**	**0.30**	$y_t = 1.1 - 0.02x_1 - 0.8x_2 + \varepsilon_1$	**128.80**
IranTelecom	**25.92**	**0.40**	$y_t = -0.3 - 1.9x_1 + 0.7x_2 + \varepsilon_1$	**26.32**
Iran Mineralsalts	**202.71**	**3.05**	$y_t = 3.07 + 4.5x_1 - 0.02x_2 + \varepsilon_1$	**205.76**
	2603.94	**Total**		

Table 12: Value stock values in 2012 and predicted values

Company Name	**Mean difference** $\varepsilon_i = y_i - \hat{y}_i$	**2012-year yieldforecast**	**Model ofYear2011**	**The actualefficiencyof2013**
Iran packing	**-7.22**	**-0.93**	$y_t = -1.04 - 0.05x_1 + 0.11x_2 + \varepsilon_1$	**6.29**
Pars packing	**27.82**	**-1.46**	$y_t = -1.5 + 0.02x_1 + 0.04x_2 + \varepsilon_1$	**26.36**
Pars darou	**64.43**	**-3.2**	$y_t = -2.4 + 0.13x_1 - 0.8x_2 + \varepsilon_1$	**61.23**
Farabi petrochemical	**315.22**	**4.3**	$y_t = 3.9 - 0.4x_1 + 0.4x_2 + \varepsilon_1$	**310.92**
Azabayejanpeghah	**-43.81**	**1.2**	$y_t = 0.7 + 0.9x_1 + 0.5x_2 + \varepsilon_1$	**-42.61**
Iran Chinese territory	**19.51**	**8.3**	$y_t = 7.2 + 0.5x_1 + 1.1x_2 + \varepsilon_1$	**27.81**
Pars feed	**76.47**	**5**	$y_t = 4.2 + 0.4x_1 + 0.8x_2 + \varepsilon_1$	**81.47**
Zahravidarou	**-8.34**	**-1.19**	$y_t = -1.2 + 0.06x_1 + 0.01x_2 + \varepsilon_1$	**-9.53**
Daroupakhsh	**-5.06**	**4.2**	$y_t = 1.4 - 0.2x_1 + 2.8x_2 + \varepsilon_1$	**-0.26**
Ardakan ceramic	**197.79**	**4.8**	$y_t = 3.7 + 2.2x_1 + 1.1x_2 + \varepsilon_1$	**199.59**
Behbahan cement	**71.64**	**4.8**	$y_t = 4.3 + 0.18x_1 + 0.5x_2 + \varepsilon_1$	**76.44**
Ghaen cement	**30.13**	**2.38**	$y_t = 2.2 - 0.05x_1 + 0.18x_2 + \varepsilon_1$	**32.51**
Shahd	**98.91**	**18.5**	$y_t = 17.4 - 1.1x_1 + 1.1x_2 + \varepsilon_1$	**117.41**
Qhazvin glass	**2.34**	**-2.34**	$y_t = -2.2 + 0.08x_1 - 0.14x_2 + \varepsilon_1$	**0.00**
Metal ind.	**-34.84**	**-0.52**	$y_t = -0.02 - 0.3x_1 - 0.5x_2 + \varepsilon_1$	**-35.36**
MarineIndustry	**-32.86**	**-2.5**	$y_t = -3.8 + 1.9x_1 + 1.3x_2 + \varepsilon_1$	**-35.36**
Khozestan steel Co.	**-3.99**	**3.99**	$y_t = 3.2 + 1.5x_1 + 0.79x_2 + \varepsilon_1$	**0.00**
IndustrialGroupSADID	**-13.63**	**13.1**	$y_t = 10.9 - 1.4x_1 + 2.2x_2 + \varepsilon_1$	**-0.53**
Alborz tire	**227.79**	**-14.6**	$y_t = -13.2 + 1.8x_1 - 1.4x_2 + \varepsilon_1$	**213.19**
Iran Mineralsalts	**62.26**	**3.17**	$y_t = 3.1 - 0.3x_1 + 0.07x_2 + \varepsilon_1$	**65.43**
	1043.78	**Total**		

Table 13: Stock value growth in 2012 and forecast values

Company name	Mean difference $\varepsilon_i = y_i - \hat{y}_i$	2013-year yieldforecast	Model ofYear2011	The actualefficiencyof2012
Absan	35.67	-2.3	$y_t = -2.2 + 1.2x_1 + 0.17x_2 + \varepsilon_1$	33.37
Parsian bank	6	-1.08	$y_t = -1.3 - 0.01x_1 + 0.22x_2 + \varepsilon_1$	4.92
Pars khazar	74.79	3.6	$y_t = 3.2 - 0.1x_1 + 0.4x_2 + \varepsilon_1$	71.19
Iran Fiberglass	0.36	-0.36	$y_t = -0.3 + 0.24x_1 - 0.06x_2 + \varepsilon_1$	0.00
Dashtemorghab	7.9	-1.23	$y_t = -1.8 + 0.06x_1 + 0.57x_2 + \varepsilon_1$	6.67
Teractor Casting	4.71	-4.71	$y_t = -4.8 - 0.5x_1 + 0.09x_2 + \varepsilon_1$	0.00
Sar pars tosheh	15.78	-0.38	$y_t = -0.32 + 0.24x_1 - 0.06x_2 + \varepsilon_1$	15.40
Sarmaafarin	7.7	4.4	$y_t = 3.3 + 0.7x_1 + 1.1x_2 + \varepsilon_1$	12.1
Shargh cement	14.35	3.78	$y_t = 2.7 - 0.25x_1 + 1.08x_2 + \varepsilon_1$	18.13
Shomal cement	53.88	1.00	$y_t = 0.5 - 0.009x_1 + 0.5x_2 + \varepsilon_1$	54.88
kerman cement	29.13	3.57	$y_t = 2.9 - 0.02x_1 + 0.67x_2 + \varepsilon_1$	32.7
Boutan industry	121.59	0.72	$y_t = 0.68 - 0.35x_1 + 0.4x_2 + \varepsilon_1$	122.31
Azar Refractories	17.76	-3.45	$y_t = -3.6 + 1.2x_1 + 0.15x_2 + \varepsilon_1$	14.31
Khavar spring	2.73	-0.23	$y_t = -0.8 - 0.4x_1 + 0.57x_2 + \varepsilon_1$	2.5
Zar spring	-34.51	4.4	$y_t = 3.6 - 0.7x_1 + 0.8x_2 + \varepsilon_1$	-30.11
Iran Cardboard	22.56	-6.2	$y_t = -4.6 + 0.3x_1 - 1.6x_2 + \varepsilon_1$	16.36
Isfahan tile	-34.11	1.00	$y_t = 0.8 + 1.3x_1 + 0.2x_2 + \varepsilon_1$	-33.11
Alvand tile	-8.44	-0.98	$y_t = -0.8 + 0.6x_1 - 0.18x_2 + \varepsilon_1$	-9.39
Pars tile	-9.78	-7.6	$y_t = -6.1 + 1.05x_1 - 1.5x_2 + \varepsilon_1$	-17.38
Mapna group	24.06	2.6	$y_t = 1.4 - 0.4x_1 1.2x_2 + \varepsilon_1$	26.66
Industry and Mine Leasing	4.35	-4.35	$y_t = -4.05 + 0.5x_1 - 0.3x_2 + \varepsilon_1$	0.00
Firouza Engineering	0.9	4.6	$y_t = 4.2 - 0.5x_1 + 0.4x_2 + \varepsilon_1$	5.5
	275.85	Total		

Table 14: Summary

The question title	Result
Is the relationship between systematic risk and the risk premium on the market value of shares on the Tehran Stock Exchange for the period 2007 to 2013 is provided?	Accepted
Is the relationship between systemic risk and growth equity risk premium in Tehran Stock Exchange for the period 2007 to 2013 is provided?	Accepted
Do systemic risk value stocks relative to growth stocks further systematic risk is market risk Systematic (boom)?	Accepted
Do systemic risk value stocks relative to growth stocks further systematic risk is market risk Systematic (downswing)	Accepted

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The predictive model years 2013 and 2012, when the error rate is less than the growth stocks that are expected to be higher. But given the very large amounts of data errors, it can be concluded that a conditional CAPM model is a good model for predicting the Tehran Stock Exchange cannot be.

SUGGESTIONS

Some of the topics and issues which should be considered in future research, as follows:

- As one of the most important topics in the study of immigrant stock market investment is the growth in value and vice versa. The study of migration and its causes can be a good investment decisions, investors and play an important role.

- Investigate the relationship between cash flow and stock price growth shares constituting the stock returns.
- Evaluation of financial ratios to predict business risk and price growth.
- Evaluating the Effect of shares and price growth in the size and time spent creating or altering the price on the stock exchange.
- Evaluating the effect of temporal variation in risk-risk growth stocks and stock prices.

REFERENCES

[1] Campbell, John Y. and Tuomo Vuolteenaho, (2004), Bad Beta, GoodBeta, American Economic Review, 94,5, 1249-1275

[2] Gulen, Xing and Zhang, (2008),Value Versus Growth: Time-Varying Expected Stock Returns, Ross School of Business Paper, 1115,1,11-46

[3] Fama, Eugene F. and Kenneth R.French, (2007), The Anatomy of Value and Growth Stock Returns, Financial Analysts Journal, 63, 6, 44-54

[4] Arnott. Robert. D. FeifeiLi , Katrina. F.Sherrerd, (2009), Clairvoyant Value and the Growth–Value Cycle, Journal of Portfolio Management, 35, 4, 142-157

[5] Fama, Eugene F. and Kenneth R.French, (2007), Migration, Financial Analysts Journal, 63, 48- 58

[6] Xing Yuhang, Lu Zhang, (2006),Value Versus Growth: Movements inEconomic Fundamentals, Bureau ofEconomic Research, 15993,1,5-10

[7] Bansal, Ravi, Robert. F. Dittmar, and Christian T. Lundblad, (2005),Consumption, Dividends, and the Cross-Section of Equity Returns,Journal of Finance, 60,4, 3-54

[8] Faugère Christophe, Hany A. Shawkyand David M. Smith, (2005),University at Albany working paper,2005, 1, 22-47

[9] Petkova, Ralitsa and Zhang, Lu,(2005), Is Value Riskier than Growth?,Journal of Financial Economics, 78,1,187-202.

[10] Groot and Gasper, (2002), Further Evidence on Asian Stock Returns Behavior, Emerging Markets Review,3, 2, 179-193

[11] Fama, Eugene F. and Kenneth R. French, (1997), Value Versus Growth: International Evidence, Journal of

Financial Economics, 53, 1, 1775-1799

[12] Rosenberg, Barr, Kenneth Reid, and Ronald Lanstein, (1985), Persuasive Evidence of Market Inefficiency, Journal of Portfolio Management, 11,3,9-16.