

The Investigation of Effective Factors on Access Stock Return in Tehran Stock Exchange (TSE)

Abbas Vahedi

Department of Accounting, Dehloran Branch, Islamic Azad University, Dehloran, Iran

ABSTRACT

In this research, regarding the importance of the relation between risk and return on access market return, company size and BV/MV ratio on access stock return are investigated. This investigation was conducted in a time series pattern of 1999 to 2005 in Tehran stock market. Cross section analysis is used in this research for the reliable test of these factors against the market change. Provided that the cross section coefficients are significant, the related variable will be reliable on the market change conditions. And the percentage of that coefficient will be equal to the risk premium of that factor. Finally the results of time series analysis show that all of the applied variables in this research were significant and effective and in the cross section analysis none of the variables significant, it means that none of the applied variables reliable in the market change conditions.

KEYWORDS: Access Market Return, Cross Section Analysis, Tehran Stock Exchange (TSE).

1- INTRODUCTION

The empirical finance literature has documented tantalizing associations between future stock returns and firm characteristics. We use the neoclassical q-theory of investment to provide the micro foundations for time-varying expected returns in the cross section, thus establishing a structural framework for understanding anomalies and for capturing them empirically. Under constant returns to scale stock returns equal investment returns, which are tied to firm characteristics through the optimality conditions for investment. We use these conditions to show how expected returns vary in the cross section with firm characteristics, corporate policies, and events. We show that q-theory can generate the following asset pricing anomalies. The first is the investment anomaly: The investment-to-assets ratio is negatively correlated with average returns. The second is the value anomaly: Value stocks (stocks with high book-to-market ratios) earn higher average returns than growth stocks (stocks with low book-to-market ratios), especially for small firms. The third is the post-earnings-announcement drift anomaly: Firms with positive earnings surprises earn higher average returns than firms with negative earnings surprises, especially for small firms. The intuition behind the way in which the q-theory predicts these anomalies is most transparent in a simple two-period example. The investment return from time t to $t + 1$ equals the ratio of the marginal profit of investment at $t + 1$ divided by the marginal cost of investment at t . This definition implies two economic forces that drive asset pricing anomalies. First, optimal investment produces a negative relation between investment and expected returns. The ratio of investment to assets increases with the net present value of capital, and the net present value decreases with the cost of capital or the expected return. The investment anomaly occurs because a low cost of capital implies a high net present value, which in turn implies high investment. There are many incentives for investment in capital market. Some of them invest for gain prestige, some for take control of the company and some for other motives. The main motivations for most investors are to gain efficiencies and curtailing benefits on capital returns. So one of the important criteria for investment decisions are the return on investment. Investments in financial assets have always found that kind of risk and uncertainty that threatens to return and principal investment. The value anomaly results from the same driving force because investment is an increasing function of marginal q , which is closely linked to the market-to-book ratio. The negative investment-return relation then implies a negative relation between market-to-book and expected returns (Liu et al., 2007). As the saying goes, the stock market is the barometer of business. Stocks reflect how the economy performs at any given time. Economists have divided the economy into three categories based on their economic behaviors: macroeconomics and microeconomics. Each own risk factors which affect stock prices and account for the variations in stock returns. As Li (2007) argued, stock prices are determined by these three economic environments. This study focuses on the macroeconomic environment. A stock market is a good tool for assessing the macroeconomic environment, which affects the performance of firms. To some degree, investment performance and opportunities are determined by the conditions of the macroeconomic environment. The rest of the paper proceeds in the following steps: Section two is literature review. Section three gives methodology. Section four presents results and Finally section five is paper's conclusion.

2. REVIEW OF LITERATURE

Markowitz (1952, 1959) examined the liquidity risk factor in the Spanish stock market. The research result shows that the liquidity factor in asset pricing as one of the key components should be considered. Lintner

(1965) is subject to risk and liquidity risk and return for shareholders, and three alternative liquidity measures are used as following: Pastor Criteria, rate of return criteria and lack of liquidity criteria. As we know, stocks with low liquidity have higher returns than stocks with high liquidity. also, this study provides us in a level of liquidity, stocks with high-risk non-payment have expected return than stocks with low risk. Adding liquidity variables (market depth, market compactness, flexibility and elasticity of the market) will improve the performance of asset pricing model. Merton (1973) showed that the one of the internal source of liquidity is private equity in 19 developed economies. He announced that privatization has a negative impact on price volatility. Also a strong positive relationship between privatization and corporate liquidity exists. Breeden et al (1979) provide a model for investigating the behavior of stock prices, liquidity and volatility. In this model investors can predict price changes. When volatility is high, the risk is high and the current return on assets is low. Basu (1977) He believes that trading activities can explain the expected return transect. The research evidence suggests a relationship between cost and size of the liquidity of the company. The stocks of large companies are very liquid and have statistically and economically significant on the trading activities. Finally this study introduced trading activities as an indicator of liquidity provider. Also in this study using portfolio theory, asset pricing model has been fabricated to investigate. Jaffe et al (1989) are investigates the subject of asset pricing model with liquidity risk. They attributed the lack of liquidity in asset pricing model. The research result shows that the expected return of stock market liquidity and efficiency to the market depends on liquidity. If the stock returns as well as the current is small but has high efficiency foreseeable future liquidity is stable.

3. METHODOLOGY

In this investigation, the kind of regression models estimation is Panel Data. Considering independent and dependent variables, research models are explained as follows:

$$R_{it} = \beta_0 + \beta_1 RM + \beta_2 SMB_{it} + \beta_3 HML_{it} + \beta_4 IMV_{it} + \varepsilon_{it}$$

Where R is access return of firm portfolio, RM is access return of market portfolio, SMB is structural portfolio for size factor, HML is structural portfolio for ratio of book value to market value, IMV is structural portfolio for non-liquidity.

4. RESULTS

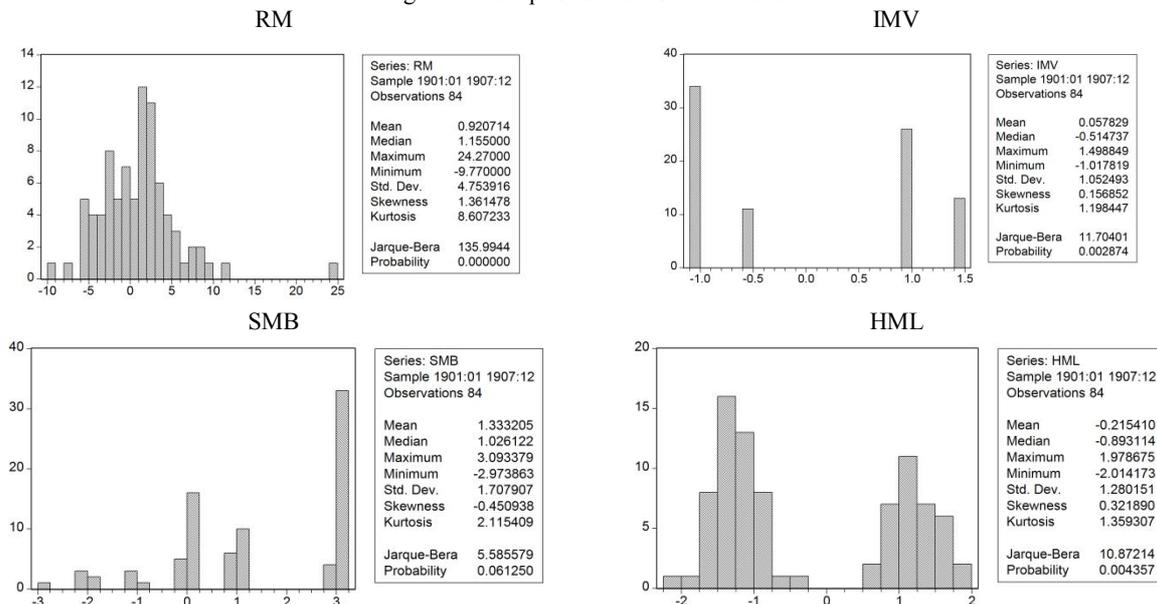
In first step, we examine correlation between variables. This result is shown in table1.

Table1: Correlation Matrix

	RM	SMB	HML	IMV
RM	1	-0.03779	0.205726	-0.23264
SMB	-0.03779	1	0.055679	0.052805
HML	0.205726	0.055679	1	-0.03911
IMV	-0.23264	0.052805	-0.039108	1

In next step we show the description statistics of variables.

Figure1: description statistics of variables



The results of the model estimation are shown in tables2.

Table2: the results of estimation model

Model	Variable	Coefficient	Std. error	t-Statistic	Prob.	R-squared	F-statistic
Original Model	C	1.855269	0.582715	3.183835	0.0021	0.697339	45.50454
	RM	1.052346	0.098148	10.72205	0.0000		
	SMB	-0.63671	0.261002	-2.43948	0.0169		
	HML	1.052669	0.355221	2.963416	0.0040		
	IMV	-1.20589	0.434273	-2.77679	0.0069		
Single Factor	C	0.591078	0.499239	1.183959	0.2399	0.612841	129.7994
	RM	1.181416	0.103697	11.39296	0.0000		

Due to the table2, we show that all variables have significant effect on depended variable.

5. Conclusion

In this research, regarding the importance of the relation between risk and return on access market return, company size and BV/MV ratio on access stock return are investigated. HML, SMB, IMV variables are applied for a more precise measurement of the effect of the mentioned factors. In this research also portfolio approach is applied for the reduction of correlation among the variables. This investigation was conducted in a time series pattern of 1999 to 2005 (1378-1384 in Persian date) in Tehran stock market. Cross section analysis is used in this research for the reliable test of these factors against the market change. Provided that the cross section coefficients are significant, the related variable will be reliable on the market change conditions. And the percentage of that coefficient will be equal to the risk premium of that factor. Finally the results of time series analysis shows that all of the applied variables in this research were significant and effective and in the cross section analysis non of the variables significant, it means that non of the applied variables reliable in the market change conditions.

REFERENCES

- Basu, S., (1983): "The Relationship between Earnings Yield, Market Value and Return for NYSE Common Stocks: Further Evidence", *Journal of Financial Economics*, 12, 129-156.
- Breeden, D., (1979): "An Inter temporal Asset Pricing Model with Stochastic Consumption and Investment Opportunities", *Journal of Financial Economics*, 7, 265-296.
- Financial Times (2010): "Tehran exchange extends advance". Retrieved November, 8
- Jaffe, J., D.B., Keim, and R., Westerfield, (1989): "Earnings Yields, Market Values, and Stock Returns", *Journal of Finance*, 44, 135-148.
- Lintner, J., (1965): "The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets", *Review of Economics and Statistics*, 47, 13-37.
- Liu, L.X.L., T.M., Whited and L., Zhang, (2007): "Investment-Based Expected Stock Returns", University of Michigan, NBER, September.
- Markowitz, H., (1952): "Portfolio Selection", *Journal of Finance*, 7, 77-91.
- Markowitz, H., (1959): "Portfolio Selection: Efficient Diversification of Investment", New York: John Wiley and Sons.
- Merton, R.C., (1973): "An Inter temporal Capital Asset Pricing Model", *Econometrica*, 41, 867-887.
- Mossin, J., (1966): "Equilibrium in a Capital Asset Market", *Econometrica*, 34, 768-783.
- Sharpe, W.F., (1964): "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk", *Journal of Finance*, 19, 425-442.