JLSB
Journal of Life Science and Biomedicine

J. Life Sci. Biomed. 4(2): 135-137, 2014

ISSN 2251-9939

Survey Relationship Liquidity and Price Volatility with Stock Return in Firms Listed in Tehran Stock Exchange

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ABSTRACT: Capital Asset Pricing Model (CAPM) is one of the most useful methods for predicting stock return. According to this model, systematic risk as measured by beta, the only variable that has the ability to forecast returns. Studies in Iran and other countries in field of predictive ability of this model and use the other variables, suggests that in addition to the variable beta, there are other variables such as liquidity and price volatility and ... that have predictive power for stock returns better than beta. In the present study, relationship liquidity and price volatility with stock returns, examined in a 9-year period from fiscal year 2002 to 2010 in Tehran Stock Exchange. Using the software E-views, data collected from the firms tested in the multiple regression models and the OLS and found there is no significant relationship between liquidity and stock returns, also volatility of stock price variables that can to explain stock returns in listed firms in Tehran Stock Exchange.
Key Words: Stock Returns, Liquidity, Price Volatility, Capital Asset Pricing Model

ORIGINAL ARTICLE
Received 10 Jan. 2014
Accepted 10 Mar. 2014

INTRODUCTION

In standard asset pricing theory, expected stock returns are related cross-section ally to returns' sensitivities to state variables with pervasive effects on investors' overall welfare. A security whose lowest returns tend to accompany unfavorable shifts in that welfare must offer additional compensation to investors for holding the security. It seems reasonable that many investors might require higher expected returns on assets whose returns have higher sensitivities to aggregate liquidity. Consider, for example, any investor who employs some form of leverage and faces a margin or solvency constraint, in that if his overall wealth drops sufficiently he must liquidate some assets to raise cash. If he holds assets with higher sensitivities to liquidity, then such liquidations are more likely to occur when liquidity is low, since drops in his overall wealth are then more likely to accompany drops in liquidity. Liquidation is costlier when liquidity is lower, and those greater costs are especially unwelcome to an investor whose wealth has already dropped and who thus has higher marginal utility of wealth. Unless the investor expects higher returns from holding these assets, he would prefer assets less likely to require liquidation when liquidity is low, even if the latter assets are just as likely to require liquidation on average.

Amihud [1] found that liquidity has a negative relationship with stock returns. Marshall and Martin [2] examined the relationship between liquidity and stock returns. They found between liquidity and stock returns, there is a significant negative relationship. Baker and Stein [3] presented a model for to explain the increased liquidity while reducing gap buying and selling offer price and or reducing the impact of price on transaction and or increase asset turnover rate. The results indicate that liquidity measures are significantly positively related to stock returns. Omri et al. [4] were reviewed the impact of liquidity on stock returns in the Tunisian market through cross-sectional regressions and using monthly data over the years 1998 to 2003. They concluded that the relationship between liquidity and stock returns is negative.

Weimin [5] found that between liquidity and stock returns, there is a significant negative relationship. Clayton et al. [6] were reviewed Relationship between beta, firm size, liquidity and price volatility in Australian stock returns during the years 1998 to 2003. They concluded that there was no significant relationship between liquidity and stock returns and price volatility is stronger than beta for stock returns. Yahyazadehfar and Khoramdin [7] were reviewed role of liquidity on non-Liquidity Risk and stock returns in Tehran Stock Exchange. The results show effect of non-Liquidity and firm size on stock returns is negative but effect excess market return and book value to market value ratio is positive.

Mehrani and Rasaeian [8] were reviewed relationship between measures of stock liquidity and annually stock returns in Tehran Stock Exchange. Results also indicated there is significant relationship but much less important between annually stock returns and liquidity. Sirani [9] investigated the impact of liquidity risk and

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Journal homepage:http://jlsb.science-line.com/

other factors affecting the stock returns in listed firms in Tehran Stock Exchange. The results showed that the stock returns are significantly positively related to firm size and liquidity.

MATERIALS AND METHODS

Statistic Society in research Due to subject, type the required information and its application includes all firms listed in Tehran Stock Exchange is in the time domain 9-year-old in of fiscal year 2002 to 2010. Samples in this study were selected using the following screening criteria:

- Is not including banks, financial institutions, investment and leasing.
- To compare the observed variability, financial year ending 29 March each year.
- The firm during fiscal years 2002 to 2010 fiscal years has not changed.
- Until the end of 2002, the firm is listed on the Tehran Stock Exchange and during the years 2002 to 2010 is not out of the Tehran Stock Exchange.
- The financial statements of these companies are available.

In first step to compiling research theoretical fundamental is used of library method and in the second step, to collecting Intended data is used of financial statements and information presented to portfolio organization.

In order to test the research hypotheses; Shares of 126 firms in Tehran Stock Exchange for the fiscal period beginning April 2002 till March 2010 has been chosen. In this study to examine the relationship between different variables, initially shares firms selected separately by each of the two sets of variables liquidity and price volatility are ranked separately .

First, information about firms in all months calculated separately, then each month based on the liquidity have been arranged in decreasing order. At this stage for each month formed 30 portfolios and arithmetic mean returns and weight returns for liquidity and price volatility has been calculated for all portfolios. Then arithmetic mean returns and weight returns for liquidity and price volatility has been calculated for 30 new portfolios.

RESULTS

Figure (1) show relationship between arithmetic returns and weight returns portfolios with average liquidity for each portfolio. In this figure, the portfolios are arranged according to the downside liquidity, namely the portfolio (1) has the highest value of liquidity and portfolio (30) has the lowest value of liquidity.

According to this figure, it is seen that highest return is according to portfolio (28) and lowest return is according to portfolio (30). As regards stock liquidity for shareholders are very important and shareholders preferred stock into a greater degree of liquidity and consideration relationship between stock returns and liquidity in the figure above; could not it be advice to shareholders.

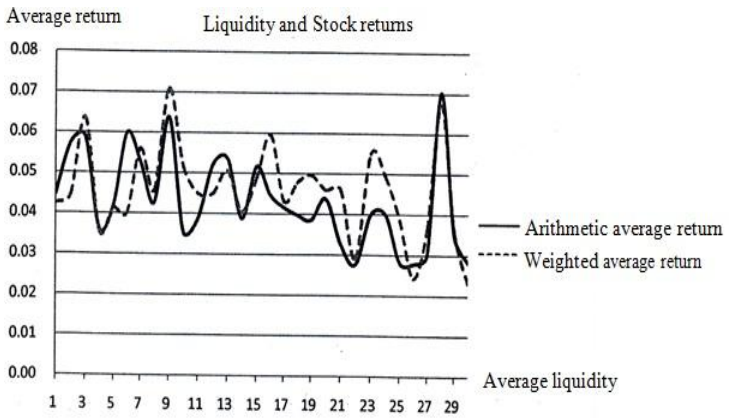

Figure 1. Comparison of changes average returns arithmetic and weight based on liquidity sorting variable in terms of liquidity

Figure 2 show relationship between arithmetic returns and weight returns portfolios with average price volatility for each portfolio. In this figure, the portfolios are arranged according to the downside price volatility, namely the portfolio (1) has the highest value of price volatility and portfolio (30) has the lowest value of price volatility.

According to this figure, it is seen that highest return is according to portfolio (1) and lowest return is according to portfolio (29). Shareholders tend to equal return, purchase shares that have less volatility until are incurred the lowest risk, but is this figure view simultaneously with reducing price volatility; stock return will be reduced.

Therefore the results show there is between price volatility and returns almost significant positive relationship.

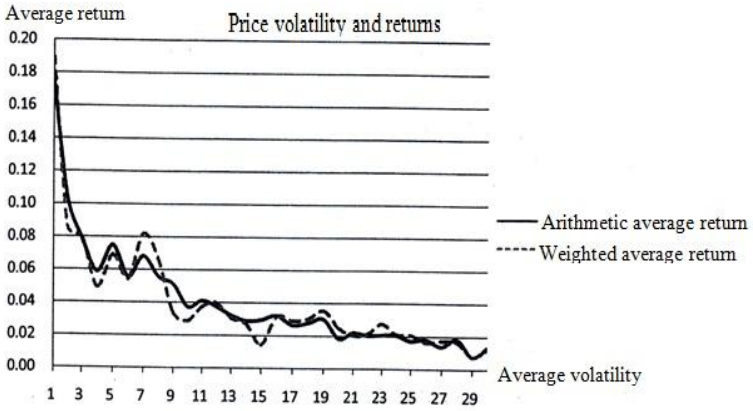

Figure 2. Comparison of changes average returns arithmetic and weight based on price volatility sorting variable in terms of price volatility

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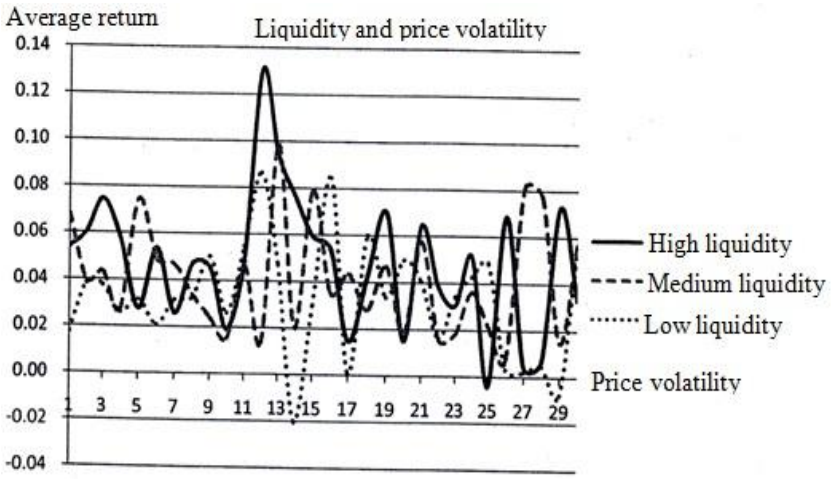

Figure 3. Comparison of average returns arithmetic based on liquidity sorting variable in terms of price volatility

Figure 3 was review relationship liquidity and price volatility with stock returns. Looking at the figure, it is observed that there is relatively positive linear relationship between liquidity and price volatility and are observed minimum amount stock returns in association with little liquidity.

DISCUSSION

In this study, using statistical techniques, the data were collected. Then, using figures, were investigated the relationship between the independent variables (liquidity and price volatility) to the dependent variable (return portfolios).

Then using E-views software to investigate the relationship between independent variables and the dependent variable was attempted divided weight return and arithmetic return. Using the software E-views, data collected from the firms tested in the multiple regression models and the OLS and found there is no significant relationship between liquidity and stock returns, also volatility of stock price variables that can to explain stock returns in listed firms in Tehran Stock Exchange.

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