Multicultural Education

Volume 8, Issue 2, 2022

The Relationship between Asset Growth and Stock Returns In Different Size of Portfolios in Tehran Stock Exchange

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Article Info

Article History

Received:
July 04, 2021

Accepted:
February 07, 2022

Keywords :
Stock Return, Asset Growth, Investment Rate, Tehran Stock Exchange

DOI:
10.5281/zenodo.5998326

Abstract

In the present study, we tried to investigate the relationship between the investment effect and stock returns in Tehran Stock Exchange. The index information of 174 companies was collectedduring the period of 2009 to 2020. These 174 companies were divided into four very large, large, small and very smallportfolios. The results showed that there is no relationship between asset growth and stock returns in the Tehran Stock Exchange in very large and small companies. But in large and small companies, the main hypothesis of the research is confirmed. According to the results, there is no relationship between the investment rate on assets and stock returns in large, small and very small companies in Tehran Stock Exchange. Only in the very large companies the second hypothesis was approved. There is no relationship between investment growth and stock returns in the very large and small companies of the stock market. But in the case of large and small companies, there is a relationship between investment growth and stock returns.

Introduction

At the present time, the setting in which companies operate is a growing and competitive one, and companies also need to develop their activities through new investments in order to advance. Stock price changes are one of the most important issues for any investor. Investors who are investing for long-term goals are somewhat sensitive and responsive to the cost of the stock. Changes in prices, an important source of information and effective in assessing the status of firms, comparative evaluation with other units, evaluating the efficiency of managers and, most importantly, affecting the decisions of investors.

The asset growth index can be interpreted as good or bad news. Good news is that capital expenditures are likely to have a positive and significant correlation with investment opportunities.In addition, higher capital costs may indicate that the capital market which provides financial resources for investments, has a high degree of trust in company and management. The bad news aspect is that managers have this incentive for their own interests in companies. For example, managers in order to obtain higher salaries and benefits, they want to show the company's accounting profit excessively and in order to increase accounting earnings increase capital expenditures (Mashayekhi et al., 2013. Reviewing the status of changes in fixed assets, which are the main sources of future growth and development of companies are of great importance. But the important point is that with the development of firm assets, the company's returns over time are abnormally reduced.

While the decline in fixed assets makes the company more abnormal over time. Therefore, the company's assets and, consequently, volumes decrease investments in fixed assets include redemption of shares, repayment of debt and dividend payments to shareholders of the company (Broussard et al.,2005).

There is an effect of investment or the effect of asset growth on international stock markets. For example, researchers such as Cooper et al. (2008) (and Cooper and Prissetti, 2011), among others,has come to the conclusion that companies have more investment and greater tendency to earn returns on the stock market risk of the United States or its conversion; Johnson and Gray (2011) found a similar pattern to the Australian stock market; Titan et al. (2010) and Watanabe et al. (2013). They found that the negative relationship between asset growth and stock returns in developed markets is much stronger than emerging markets.

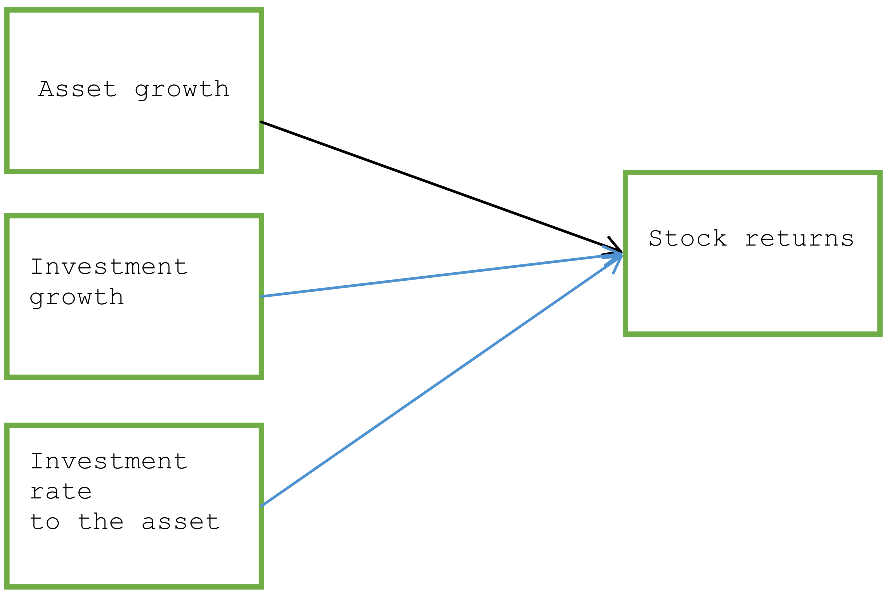
In order to explain the investment effect, there are two different explanations for this anomaly: one is logical and the other is behavioral. A set of theoretical models based on the selection real theory, Q theory has been proposed for investment and behavioral financial theory, and extensive empirical studies have been carried out (Wang et al., 2015).

Titan et al., found that there was an international investment effect. In 2015, they ranked the stock in quintiles based on the annual investment indicator from 1994 to 2005 in the Chinese stock market and found that the investment has a negative relation with stock returns.

The capital market, with its undeniable role in the country's economic growth and development, is an intermediary so that companies can access their needed capital by looking at it. Optimal management, requires companies to invest in their own funds (other than working capital) in profitable activities or in the net present value of the positive, and there is no doubt about the new investments to grow, progress, and compete in today's world. Growth of assets and investment decisions on the value of the company is effective and, ultimately, on stockholders' wealth, and since each shareholder needs information about factors affecting return on equity to maintain and increase its capital, so identifying patterns and models that help to understand better the relationship between investment activities and asset growth with stock returns are of paramount importance to shareholders. There are different theories about the different effects of different asset growth and investment strategies on stock returns, but the belief in the studies is the existence of a negative investment relationship with returns (Khani and Afshari,1391). In the present study, the reseacher tried to investigate the relationship between the investment effect and stock returns in Tehran Stock Exchange. From asset growth, investment to asset ratio.

And growth of capital expenditures as independent variable and stock returns as dependent variable and from control variables, net profit to equity ratio, net income to asset ratio, asset-to-assets ratio and total assets for the recognition of listed companies Tehran Stock Exchange has been used for effective factors.

Conceptual Model of the Research



Literature Review

Parviz and Mokhtari (1393) in their research entitled "Investigating the relationship between asset growth and stock return on listed companies in the stock market" showed that there is a significant positive relationship between asset growth and stock returns. There is a significant positive relationship between the growth of current assets and stock returns, and there is a positive, but non-dominant relationship between the growth of non-current assets and stock returns. Finally, the third model states that there is a significant positive relationship between working capital changes and stock returns.

Mashayekhi et al. (2013) in a research entitled "Reviewing different asset growth rates in predicting future stock returns in Tehran Stock Exchange" indicated that based on the results of regression analysis, a negative relationship was observed between asset growth and stock returns. The results showed that the Growth Model of Lenders and colleagues assets has a higher predictive power than other criteria. In addition, the evidence shows that the calculated criterion through the factor analysis approach does not have a higher predictive power than other growth measures.

Darabi and Karimi (2010) in a study entitled "The effect of the growth rate of fixed assets on stock returns" shows that the results of research in this regard confirm the negative relationship between the increase in the growth rate of fixed assets and stock returns. In this study, the relationship between the growth rate of fixed assets and stock returns during the period of 2004-2008 listed companies on Tehran Stock Exchange. The results of the research show that there is a significant negative relationship between the increase in the growth rate of fixed assets and the short-term and long-term stock returns.

Findings of Khodadadi and Kargarpour (2009) in a study entitled "Investigating the Relationship between Operating Cash Flow and Liquidity Ratios with Stock Returns in Companies Listed in Tehran Stock Exchange" showed that between operating cash flow and instantaneous ratio with stock returns there is a positive and significant relationship, but between the ratio of net working capital to total assets the stock return of this relationship is not confirmed.

Farrokhi (2009) in a study entitled "Investigating the Relationship between the Components of Operational Assets Growth in the Forecasting of Return on Assets and Stock Returns" showed that the net growth of operating assets in general, as well as by dividing the two components of accruals and net asset growth Long-term operations have a negative relationship with asset returns in the coming year, and this is the case for bothcomponents.

Wang et al. (2015), in a study entitled "The relationship between asset growth and stock returns: evidence from the stock market in China," found that more investment stocks would experience less future returns and had a clear investment effect in There is a stock market in China. The investment is for state-owned companies or companies with cash flow higher, the loans are less, and they are stronger. They also found that there is a relationship between investment and returns over a period of three years with the formation of portfolios. The results show that companies with higher investment yield higher returns than less-paid companies prior to portfolio formation.

Lee et al. (2012), in a study entitled "Stock Asset Growth and Stock Return: International Documents," concluded that there is a high predictive power in asset growth measures for stock returns. This predictive power for Four years after the date of the initial measurement, it continued, and they stated that these results could be achieved. In addition, they stated that the results are generalized in different samples, including sample of large companies, small companies and companies in a geographical area.

According to a study by Titans et al. (2010) entitled "Access to stock markets, corporate ventures and stock returns: international evidence," there is a negative relationship between investment and stock returns, and the negative relationship between Growth of assets and returns in developed countries which is stronger than the emerging markets.

Lepson et al. (2009), in a research entitled "What explains the effect of asset growth on stock returns", found that asset-based risk factor does not generate premium risk significantly. Their findings emphasize the effect of asset growth and specific risk and suggest that erroneous pricing can result in high arithmetic costs that play a major role in this effect.

Cooper et al. (2008), in their study entitled "asset growth and stock returns", concluded that asset growth predicts future stock returns in a significant way.In addition, asset growth rate their ability to predict in their stocks asserts that asset growth is better than other yield-based variables such as B / M, commitments, etc., in predicting future returns, and the growth rate of total asset strength is the explanation of efficiency in comparison with other criteria.

Zhang et al. (2009), in a study entitled "High Specific Oscillations of Low Productivity: International Documents and US Documents," concluded that there was a negative relationship between the growth of corporate assets and future stock returns. In addition, they found that this negative relationship was weaker in financially-motivated markets through banks.

Talsma (2010) in a study titled "Stock Asset Growth: Empirical Evidence from the Dutch Stock Market" concluded that there was only a significant impact on the size of the company, a business strategy that had a long position in companies with a low growth and a short position in high growth companies, it has a remarkable abnormal return.There are no small and large companies. Therefore, asset growth does not predict future stock returns.

Watanabe et al. (2013) in a research entitled "The Effect of Asset Growth: An Interview on International Stock Markets" showed that the cross-sectional relationship between asset growth and stock returns is most likely due to the effect of optimal investment due to over-investment , market timing or other forms of false pricing.

Titan et al. (2004), in a research entitled "Corporate Investment and Stock Returns," showed that negative investment or abnormal returns are stronger for firms that have a free reinvestment.

Lam et al. (2011) found in the study "Arbitrage constraints, investment friction, and asset growth anomalies" (1) proxies for limiting the arithmetic of proxies for investment friction are often highly correlated; (2) On the same weight returns, which shows significant support for both hypotheses, while evidence of the return on the value of weight is weaker, and (3) in companies, each hypothesis is supported by a fair and similar amount of evidence.

Research Method

The method of this research is descriptive correlational and post-event method based on the purpose of the applied research type. According to the purpose and subject of research, the statistical population of this study is all companies listed in Tehran Stock Exchange between 2009 and 2020, which includes 360 companies. In this study, the statistical sample is selected by systematic deletion, and all companies that have the following conditions are selected as the sample: a. End of fiscal year all of them are ending March; B) Companies have their financial period during the time domain have not changed; c) companies did not change their type of activity during the time period considered (2009 -2020); the required data is available; d) Companies that have interrupted more than six months do not have any deals.

The companies in this research were selected by software such as RahavodNovin and TadbirPardaz during the period from 2009 to 2020. Due to the conditions mentioned above, as well as due to limitations such as lack of annual report and limitation of the symbol, it was more than 6 months. These restrictions made companies with all the conditions of our project from 360 companies to 174. The companies dropped as an example that these companies reported on a timely basis each year.

These 174 stock companies are divided into four very small, small, big and very large groups. In order to determine the effect of the size of the company (very small, small, large and very large companies), we compile a portfolio. To do this,the logarithm of the total value of the assets of each company is considered, and then, using the quark technique, the first, second, third, and fourth quarters were calculated for companies with a natural logarithm of their totalof asset in the first quartile, a very small company and companies in the second quarter of the smaller firms and in the third quarter of the companies big type and very big companies in fourth quarry.

Examining and Analyzing the Findings

Hypothesis 1: There is a relationship between the growth of assets and stock returns in Tehran Stock Exchange.

Table 1. Study of the first hypothesis of research

The significance level	T Statistics	Effect size	The intended effect
---	1.26	.58	Very large companies
***	19.60	.11	Large companies
---	-1.47	-2.28	Small companies
***	3.51	.14	Very small companies

:--- No significance

:***significance with a probability of more than 99percent.

According to the above table, the effect is not significant in large and small companies. Therefore, the first hypothesis of the present study is rejected in large and small companies, and it can be stated that there is no relationship between asset growth and stock returns in Tehran Stock Exchange. But in the case of large and very large companies, the first hypothesis of the research is confirmed and it can be stated that there is a relationship between asset growth and stock returns in Tehran stock exchange market.

*** It can be said that large and very small companies have been able to be meaningful in this hypothesis because of the effect of variables of investment growth and asset returns.

Second hypothesis: There is a relationship between the investment rate and the return on equity in Tehran Stock Exchange.

Table 2. Study of the second hypothesis of research

Level of Significance	T statics	Effect size	Intended effect
**	-2.03	-28.78	Very large companies
---	.02	.01	Large companies
---	-.19	-8.29	Small companies
---	.28	.16	Very small companies

:---No significance

:***significance with a probability of more than 99percent.

According to the above table, the effect is not significant in large, small and very small companies. Therefore, the second hypothesis of the research is rejected by large, small and very small companies. For this group it can be stated that there is no relation between investment rate to asset and stock return in Tehran stock exchange market. In the very large companies, the second hypothesis is confirmed, and for very large companies, there is a relationship between the investment rate and the return on equity in Tehran Stock Exchange.

***It can be said that the very large companies due to the effect of asset variables and portfolio can be meaningful in this hypothesis.

Hypothesis 3: There is a relationship between investment growth and stock returns in Tehran Stock Exchange.

Table 3. Study of the third hypothesis of research

Level of significance	T statics	Effect size	Intended effect
---	.50	1.13	**Very Large Companies**
***	7.23	.14	Large Companies
---	.33	.36	Small Companies
***	2.84	.17	Very Small Companies

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:---No significance

:***significance with a probability of more than 99percent.

According to the above table, the effect is not significant in large and small companies. Therefore, the main hypothesis of the present research is rejected by the large and small companies. It can be stated that there is no relationship between investment growth and stock returns in Tehran stock exchange market. It seems that very large companies and small companies have become so stable that investment growth in these companies does not have a significant effect on stock returns in the stock market. But in the case of large and very large companies, the main hypothesis of the research is confirmed and it can be stated that there is a relationship between investment growth and stock returns in Tehran Stock Exchange.

***It can be stated that large and small companies have been able to make sense in this hypothesis because of the impact of the variables of investment growth and return on assets.

Discussion and Conclusion

First hypothesis: There is a relationship between the growth of assets and stock returns in Tehran Stock Exchange.

Considering the significance level of the test, this hypothesis is not confirmed as a result of the growth of asset and stock returns in Tehran Stock Exchange in many companies.There is no big and small connection.But in the case of large and very small companies, the main hypothesis of the research is confirmed and there is a relationship between asset growth and stock returns in the Tehran Stock Exchange.Therefore, it can be said that large and very small companies have been able to be meaningful in this hypothesis due to the effect of investment growth variables and asset returns.

This result is not consistent with the results of the Pirayesh and Mokhtari's research (2014), because they investigated the relationship between the growth of assets and the stock returns of listed companies in the stock exchange, which showed that between asset growth and Stock returns there is a significant positive relationship.Mashayekhi et al. (2013) also found a negative relationship between asset growth and stock returns in a research entitled "Reviewing different asset growth criteria in the prediction of future stock returns in Tehran Stock Exchange", based on the results of regression analysis. Ahmadpour and AzimianMoez (2012) in a study entitled "Investigating the relationship between asset growth and stock returns in Tehran Stock Exchange". The results of the analysis of data suggest that althoughasset growth independently has not a retroactive effect on stock returns. but , in a situation where the Fama and Franch added to three-factor model, it has a negative effect on stock returns. Darabi and Karimi (2010) in a study entitled "The effect of the growth rate of fixed assets on stock returns" confirmed the negative relationship between the increase in the growth rate of fixed assets and stock returns. Lee et al. (2012) in a study entitled "Stock Asset Growth and Stock Returns: International Documents" found that there is a high predictive power in asset growth rates for stock returns.

Farrokhi (2009) in a study entitled "The Study of the Relationship between the Growth Components of Operational Assets in the Forecast of Return on Assets and Stock Returns" shows that the net growth of operating assets in general, as well as split into two accrual components and net growth of long-term operating assets, have a negative relationship with asset returns in the coming year and this relationship is the same for both components.Wang et al. (2015), in a research entitled "The relationship between asset growth and cross section of stock returqns: evidence from the stock market in China," found that stocks with more investment would experience less future returns, and there is a explicit effect in china stock market.Watanabe et al. (2013) in a study entitled "The Effect of Growth Asset: A View of International Stock Markets" showed that the cross-sectional relationship between asset growth and stock returns is more likely due to the effect of optimal investment than over-investment, market scheduling or other forms of false pricing.

Second hypothesis: There is a relationship between the investment rate and stock returns in Tehran Stock Exchange.

Considering the significance level of the test, this hypothesis was not approved in large, small and very small companies. As a result, there is no relationship between the investment rate on asset and the stock return in Tehran Stock Exchange. And only in the very large companies the second hypothesis is approved. So, it can be said that the very large companies, because of the impact of asset variables, can be significant in this hypothesis.

According to a study carried out by Titans et al. (2010) entitled "Access to Stock Markets, Large Corporate Investments, and Stock Returns: International Documents," found that there is a negative relationship between investment and stock returns. Lam et al. (2011) found in a study entitled "Arbitrage constraints, investment friction, and asset growth anomalies." Titan et al. (2004) in a study titled "Corporate Investment and Stock Returns" showed that the negative investment or abnormal returns for companies with a higher degree of investment freedom are stronger.

Hypothesis 3: There is a relationship between investment growth and stock returns in Tehran Stock Exchange.

Considering the significance level of the test, this hypothesis was not confirmed in very large and small companies. As a result, there is no relationship between investment growth and stock returns in Tehran stock exchange market. But in the case of large and very small companies, this research hypothesis is confirmed and there is a relationship between investment growth and stock returns in the Tehran Stock Exchange. So, it can be said that large and very small firms have been able be significance in this hypothesis because of the impact of the variables of investment growth and return on assets.

Titans et al. (2010), Watanabe et al. (2013), and Yao et al. (2011) have found that there is a negative relationship between investment and stock returns on the stock market, but these articles do not consider the cause of investment anomalies separately. In this research, the researchers tried to investigate the relationship between the investment effect and stock returns in Tehran Stock Exchange. The growth of assets, the ratio of investment to assets and the growth of capital costs as an independent variable and stock returns as a dependent variable, from the control variables of the company size, the ratio of book value to market, the ratio of net profit to equity, the ratio of net profit to assets, the ratio of debt to assets and total assets to align the listed companies in the Tehran Stock Exchange used in terms of effective factors.

There is no relationship between the growth of assets and stock returns in the Tehran Stock Exchange in very large and small companies. But in large and very small companies, the main hypothesis of the research is confirmed and there is a correlation between the growth of assets and stock returns in Tehran Stock Exchange. So, it can be said that large and very small companies have been able to be significance in this hypothesis because of the impact of the variables of investment growth and return on assets. According to the results, there is no relationship between the investment rate on assets and stock returns in large, small and very small companies in Tehran Stock Exchange. And only in the very large companies the second hypothesis was approved. There is no relationship between investment growth and stock returns in the very large and the small companies of Tehran Stock Exchange. But in the case of large and very small companies, there is a relationship between investment growth and stock returns in Tehran Stock Exchange.

There are higher limitations of equations such as short selling restrictions, weaker investor protection, complex professional issues such as institutional investors and a lot of uproarious information on the stock market. Our results are based on this expectation that the effect of investment should be stronger among countries with less efficient financial markets and this provides a useful perspective to understand the relationship between the company's investment activities and stock returns.

In general, stock portfolios and regression analysis show that behavioral financial theories are better than the theory of the risk explained the investment's effect in the stock market. Our findings are complemented by the findings of Titan et al. (2010), Watanabe et al. (2013), and Yao et al. (2011), and develope our understanding of investment anomalies.

Research Suggestions

1. Not considering the factor of asset growth leads to mispricing of the assets, which is the result of the judgment of the unprofessional investors resulting in generalizing past profits to asset growth. Hence, it is better to pay attention to this issue.
2. Information that companies offer from their assets should be transparent and honest so that the customer can understand the facts and financial reports and ultimately make the right decisions
3. listed companies in stock exchange should increase domestic and foreign investments so that they can fundamentally influence the share price and increase the yield of each share and consequently the price of each share.
4. It is generally suggested to companies that they use financial analysts' ideas when making a decision to invest and try to clarify profit and increase stock returns.
5. Increasing clarity reduces profit management and reducing information transparency increases profit management.

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