Research Journal of Applied Sciences, Engineering and Technology 12(10): 988-993, 2016
DOI:10.19026/rjaset.12.2817
ISSN: 2040-7459; e-ISSN: 2040-7467

Submitted: March 14, 2014 Accepted: April 15, 2014 Published: May 15, 2016

Research Article

Mispricing, Corporate Investment and Stock Returns: Evidence from Pakistani Stock Market

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Abstract: The present study empirically investigates the impact of stock mispricing (i.e., overvaluation or undervaluation of stocks) on corporate investment decision of firms. Mispricing in stocks is measured by discretionary accruals while corporate investment is measured by change in fixed tangible assets. A sample of 386 non financial firms listed on Karachi stock exchange during the period 1998-2011 is analyzed in the study. Fixed effect model is employed for estimation purposes. Congruent with existing literature, the results reveal that discretionary accrual has positive and significant effect on the corporate investment. Furthermore, the impact of the higher investment is investigated on future stock returns of the firm and it is observed that the resultant higher investment ultimately leads to lower subsequent stock returns. The study therefore, concludes that mispricing of stock returns will result in higher investments which would have its adverse effects on their future stock prices.

Keywords: Corporate investment, discretionary accrual, Pakistan

INTRODUCTION

Firms undertake investment in anticipation of future benefits and to enhance their productivity. Corporate investment usually entails huge amount of resources, which are obtained through multiple sources. Among others, stock market also provides an ample opportunity for firms to raise funds as they can issue IPOs (initial public offerings) or SEOs (seasoned equity offerings). Moreover, firms can also float their capital shares at prevailing prices in stock market to obtain desired funds which can later be used for investment spending. Therefore, stock prices could prove an important factor in corporate investment decisions. Several researchers like (Baker *et al*., 2003; Barro, 1990; Chan, Chan, Jegadeesh and Lakonishok, 2006; Gilchrist *et al*., 2005; Panageas, 2005; Polk and Sapienza, 2004, 2009; Stein, 1996) also asserted that stock prices have a definite impact on corporate investment decision.

Stock prices are often influenced by multiple factors and get deviates from their fundamental or fair value and hence are mispriced in the market. Stein (1996) postulated that when firms get overpriced, the managers would be inclined to issue new stock above the fundamental value to generate funds that can be used for new investment projects. On contrary, the managers would be reluctant to issue new stocks when firms get undervalued in the stock market. Managers would rather wait for the stocks to bounce back to its fair value, which would result in cuts in investment spending. Other researchers[1] also give credence to this proposition.

The impact of this high capital investment on future stock returns of the firms due to mispricing is another very important aspect. Morck *et al*. (1990) explained some suppositions about overall relationship of capital investment and stock returns. According to one assumption, stock market don't affect investment decision and managers don't regard it as an important predictor of future activity, as managers are better aware of inside situation than outside stakeholders, so there is nothing new information for them in stock market. Another supposition states that stock returns may retain important pieces of information that managers are unaware of and incorporate this information into their investment decisions such as it may reveal public's increased confidence in manager's competency when they are pessimist about it. However, this information may be accurate or inaccurate.

Another possibility is that stock market really affects investment as it is a distinct source of external financing. When stock market overvalues a firm, equity financing become cheaper for the firm. Firms can use this opportunity to get financing at cheaper cost that could later be used for investment projects. Yet, another opinion is that stock market force managers to take certain investment decision in order to satisfy shareholders. This investment is governed by the

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shareholders liking and disliking or otherwise managers could get sacked (Morck *et al*., 1990). Other researchers like Barro (1990), Blanchard *et al*. (1993) and Galeotti and Schiantarelli (1994) also signified the importance of stock returns in determining corporate investment.

However, the exact relationship of stock returns and corporate investment is ambiguous among researchers. Some researchers like Baker *et al*. (2003) and Stein (1996) etc observe that stock prices have certain positive influence on corporate investment decision, Chan *et al*. (2006) also bolster this argument and document a positive relationship between stock prices and investment and state that stock prices provide some new information to managers which is then utilizes into investment decisions. However, other researchers found that higher investment yields overinvestment problem that ultimately results in poorer results and would be reflected in future stock returns of the company. For example, Cooper *et al*. (2008), Polk and Sapienza (2009) and Yao *et al*. (2011) investigated stock returns and corporate investment relationship and experienced a negative and significant relationship between them.

Some of the researchers (Baker *et al*., 2003; Gilchrist *et al*., 2005; Panageas, 2005; Polk and Sapienza, 2009) also find sensitivity of different mispricing proxies with corporate investment. Existing literature illustrates that mangers manipulate earnings prior to equity issuance to mislead the investors. The maneuvering with accounts is generally done to portray the better picture of the firm in front of investors. Most of the investors rely on these distorted reported earnings and are unable to comprehend the true performance of the firm. Due to this manipulation, the market temporarily overvalues (misprice) the firm in stock market. This creates an opportunity for managers to raise fund at lower costs by issuing equity at this value. However, when investors realize their mistake and true position of the firm is revealed, the market corrects its position and stock price ultimately revert back to its fair value. Titman *et al*. (2004) and Gilchrist *et al*. (2005) also claimed that net equity issuance could be served as a proxy for mispricing. Similarly, the impact of accruals particularly discretionary accruals on corporate investment and other aspects of corporate finance are also well documented. Many researchers asserted that total accruals and particularly discretionary accruals could be used as measure of stock mispricing (Chan *et al*., 2006; DeAngelo, 1981; Polk and Sapienza, 2009). Accrual is a difference between the accounting earning and cash flow generated by the firms. Discretionary and non-discretionary accruals are two components of accrual. While non-discretionary accrual represents true accounting accounts and are related to the firm's performance (such as increase in sales, increase in accounts receivables etc) but discretionary accruals as the name suggests is subjected to manipulation and exploitation of accounting figures being done on the manager's part, like alteration in various accounts such as bad debts provisions, advance sales, credit sales etc. This exploitation is done to depict the better picture of the company in its annual reports to mislead the investors in order to overvalue (misprice) the firm in stock market as posited by Teoh *et al*. (1998), Yoon (2005) and Yoon and Miller (2002). The researchers (Chan *et al*., 2006; Polk and Sapienza, 2009) established a link that high levels of discretionary accruals would have lower stock returns which indicate that firm was actually overpriced (mispriced) earlier.

The objective of the current research is multifold. The paper first analyzes the effect of mispricing of stock price on individual firm's investment decisions. To the best of our knowledge this aspect of research is still uncovered for Pakistan market. We intend to investigate the relationship of mispricing of stock prices on firm's investment decision in presence of control variables which includes firm's cash flow, firm's size and Tobin's q. The sample of the study covers a time span of twelve years from 1998-2011 and includes all nonfinancial firms listed on Karachi Stock Exchange (KSE). Panel data methodology with fixed effect and random effect model has been employed for computation purposes. We find evidence that mispricing have a significant positive impact on corporate investment decisions. This implies that the managers tend to invest more when stock prices are overpriced. Various researchers have indicated that overinvestment results in distortion of firm's value and have negative impact on subsequent stock returns. We therefore, further investigated the impact of this overinvestment on future stock returns. Consistent with predictions, we have found that abnormal investment and mispricing have a significant and negative impact on future stock returns.

LITERATURE REVIEW

Morck *et al*. (1990) evaluated empirically the effect of stock market on investment on both firm level and aggregate data. They identified four main theories about stock market and investment. First, they postulated that stock market don't play a role in firms investment as manager had more information at their disposal than people outside the firm. Second was active information hypothesis which states that stock markets indeed have some information for managers that they can incorporate while undertaking investments. Third theory posited that stock market could provide firms the cheap source of financing, which could be used to undertake investment. Finally fourth theory stated that, investor sentiments drive managers to go only for certain projects. Based on their results they observed that stock returns don't provide new information to managers that could help them in investment decisions. They also documented that external financing is not a good deriving force for investment decision. Though they found a correlation of market pressure for manager's investment decision but the explanatory power was much less to consider this as

evidence. Consequently, they concluded that stock markets were not good predictor and didn't influence investment. However Barro (1990) while working on a US data asserted that stock returns play an important role in determining investment. While on the other hand Blanchard *et al*., (1993) documented a limited role of stock market in determining investment.

Loughran and Ritter (1995) documented that firms earned negative stock returns after seasoned equity offerings. They explained that the negative returns were due to the investment in negative Net Present Value (NPV) projects. Similarly Ikenberry *et al*. (1995) found that decreased investment due to share repurchases were accompanied by having high returns. They also stressed that market ignore the important information content in share repurchases announcements and undervalue these announcements.

Sloan (1996) claimed that managers manipulate earnings with the help of accrual accounting methods and firms with high amount of accruals experienced lower future returns while low amount of accruals yields higher future returns. Stein (1996) stressed that a firm investment is affected by the mispricing of its stock value. He asserted that firm would not invest if its stock price is undervalued but at the same time if it is overvalued the firm will issue new stocks and invest more.

Based on their analysis of all non-financial Compustat firms during 1980-1999, Baker *et al*. (2003) provided evidence that increased capital investment have low future stock returns. Shleifer and Vishny (2003) further confirmed the effect of mispricing on investment in US firms by showing that when firms stock is overvalued they can acquire more firms and while they are undervalued other firms have incentive to acquire them. Titman *et al*. (2004) observed that firms with unexpected investment or with larger investment discretion ultimately yields negative stock returns. The negative relation is stronger for those firms with high level of cash flows and lower debt position.

Gilchrist *et al*. (2005) also analyzed the mispricing and investment relationship during 1986-2000. They used panel data VAR (vector auto regression) to examine the relationship between dispersion of investor opinion, Tobin's q, new equity issuance and investment. They found positive and significant effect of dispersion of investor opinion on investment and other variables. They argued that when firm's stock price is overpriced, it is exploited by issuing new stocks which lead to increase in investment.

Cooper *et al*. (2008) also tested the corporate investment and subsequent stock returns relationship and pointed out that asset growth is a strong determinant of future stock returns. By analyzing the data involving all nonfinancial firms listed on NYSE, NASDAQ and AMEX exchanges from 1968-2003, a strong negative relationship between asset growth and future stock returns was observed. They found that firms with high asset growth rates have less risk adjusted returns than firms with low asset growth rates which lead to negative stock returns. Fama and French (2008) suggested that this effect of negative stock returns with investment is only for firms with smaller size while on contrary Gray and Johnson (2011) documented a negative relationship of stock returns with asset growth and found that the negative effect prevailed even among the biggest Australian companies.

The impact of financial market mispricing and financial constraints in investments on 2116 US manufacturing firms during 1971-2004 was studied by Wong *et al*. (2009). They classified the firms into financially constrained and unconstrained firms. The discretionary accrual and composite share issuance were used to measure mispricing. Their findings suggest that unconstrained firms can adjust their dependence on cash flow for investment purposes in response to market mispricing, i.e., reducing the dependence on cash flow when they are overvalued and vice versa. However, financial constrained firms couldn't adjust their financing in response to mispricing. Polk and Sapienza (2009) studied the effect of mispricing of firm in stock market and firm level investment during the period 1963-2000. They found that investment is positively and significantly related to discretionary accrual, which they had taken as a proxy for mispricing of firm in stock market. They explained that presence of high discretionary accruals is indication of more manipulation by managers to overprice their firms in the market. They also stressed that when the firm is mispriced in the market, the managers will increase their investments to cater the investors demand by taking negative NPV projects. This affect the firm operating performance and it would lead to negative future returns. Similarly, when the stock is underpriced the managers will be reluctant to invest even for brighter projects. In contrast, (Biddle and Hilary, 2006) found conflicting results that lower earnings quality actually doesn't result in over-investment.

METHODOLOGY

The data used in the study is obtained from firms listed in Karachi Stock Exchange (KSE). The sample encompasses the data from 1998-2011. Initially, all non-financial firms were selected for the study but after dropping firms with less than three years of observations, 381 firms with 4094 observations were left for estimation purposes. The data was collected from KSE website, companies' financial reports, State Bank Reports and business recorder websites. To

Table 1: Descriptive statistics

	Mean	S.D	p^{25}	p^{50}	p^{75}	Obs
R	0.516	2.161	0.090	0.200	0.469	5179
I/K	0.021	1.349	0.001	0.025	0.090	4925
CF/K	0.085	0.321	0.007	0.065	0.142	5297
DACCR	0.322	13.349	-0.056	0.047	0.169	2827
Q	0.516	2.161	0.090	0.200	0.469	5179
SIZE	20.755	1.741	19.707	20.638	20.776	5302

estimate the effect of mispricing on corporate investment and its effect on future stock returns, panel data methodology is employed with fixed effect and random effect model. Hausman (1978) specification test is applied for suitability measures between fixed effect model and random effect model. If Hausman test value is significant than it means fixed effect model is more precise over random effect model. Following models are estimated using fixed effect and random effect model:

Model 1:

$$I_{i,t}/K_{i,t-1} = \alpha + \beta_1\left(CF_{i,t}/K_{i,t-1}\right) + \beta_2 DACCR_{i,t} + \beta_3 Q_{i,t-1} + \beta_4 SIZE_{i,t} + \varepsilon_{i,t}$$

Model 2:

$$R_{i,t} = \alpha + \beta_1\left(I_{i,t-1}/K_{i,t-2}\right) + \beta_2\left(I_{i,t-2}/K_{i,t-3}\right) + \beta_3\left(CF_{i,t}/K_{i,t-1}\right) + \beta_4 DACCR_{i,t} + \beta_5 Q_{i,t-1} + \beta_6 SIZE_{i,t} + \varepsilon_{i,t}$$

Where, $I_{i,t}$ is corporate investment, $K_{i,t-1}$ is beginning of period value of total assets, $CF_{i,t}$ represents cash flow, $SIZE_{i,t}$ is the firm's size, $Q_{i,t}$ (Tobin's Q) which is a proxy for growth and investment opportunities, $DACCR_{i,t}$ is discretionary accrual (mispricing proxy), $R_{i,t}$ is the equity returns.

Important descriptive statistics are highlighted in (Table 1). Total numbers of firms included in the sample are 386. The time span of the study constitutes 14 years from 1998 to 2011. The variables included in the study are corporate investment, cash flow, discretionary accrual, firm size, Tobin's q and equity returns.

Corporate investment and equity returns are the dependent variables and the former is measured as investment made by firms in fixed assets, cash flow is measured by the sum of earning before extra ordinary items, depreciation and amortization, Size is measured by the log of assets, Tobin's q is measured by the market value of the assets divided by book value of assets, stock return ($R_{i,t}$) is calculated as mean market capitalization of the firm and $Daccr_{i,t}$ is mainly calculated by Chen *et al*. (2001) and Polk and Sapienza (2009) method. Discretionary accrual is a good proxy for mispricing and is a measure of abnormal noncash earning of a firm. Earlier researchers found a strong linkage between higher level of discretionary accruals and negative future stock returns which suggest that the higher discretionary accrual firms were overpriced that ultimately leads to negative stock returns in the future[2].

Corporate investment has a mean value of 0.021 with a standard deviation of 1.349. The median investment value is 0.200 and has 4925 observations. Cash flow variable shows the mean value of 0.085 with a deviation of 0.321 with 5297 observations. Discretionary accrual variable has a 0.322 mean value and large variation of 13.349. The median value is 0.047 with 2827 number of observations. The mean value of equity return is 0.516 (2.161 standard deviation) and 5179 observations. The mean and standard deviation values of Tobin's q are 0.516 and 2.161 (5179 observations). Firm size depicts a 20.755 mean value with a variation of 1.741.

In Regression Model 1, the impact of mispricing is analyzed on corporate investment. Cash flow, Tobin's q and firms' size are included in the model as control variables. The random effect and fixed effect models are used to estimate the regression Model 1 and later Hausman specification test is applied to scrutinize the appropriate method (results are reported in Table 2). The significant value of Hasusman test suggests fixed effect model is more suitable for this model (only fixed effect results are included after Hausman specification test). Results show that discretionary accrual is significant and positively affecting corporate investment. The coefficient of DACCR is 0.015 (p value = 0.021) and is statistically significant at 5% level. The result is in congruent with previous researchers like (Chen *et al*., 2001; Polk and Sapienza, 2009; Titman *et al*., 2004). Cash flow, firm size and Tobin's Q are all positive and significantly affecting corporate investment.

Mispricing is the deviation of the stock price from its original fair value, when a firm's stock price is overpriced the firm will issue new stock and there will be an increase in investment. Previous researchers have found a similar association between mispricing and investment. Stein (1996) pointed out that a firm investment is affected by the mispricing of its stock value. He asserted that firm will not invest if its stock price is undervalued and at the same time if it is overvalued the firm will issue new stock and invest. Teoh *et al*. (1998) also stated that earning quality is the source of external equity financing in future periods. Polk and Sapienza (2009) by using discretionary accrual as a proxy for mispricing also found that it is positively affecting firm's investment. Other researchers such as (Baker *et al*., 2003; Wong *et al*., 2009; Gilchrist *et al*., 2005; Shleifer and Vishny, 2003) also confirm the same effect of mispricing on investment. Haque and Sarwar (2013) found that discretionary accrual has a significant and positive effect on Pakistani stock returns which implies that managers manipulate earning to misinform investors which consequently overvalue the firm's stock.

The researchers however found that this higher investment could be a sign of overinvestment problem which would ultimately have its adverse effect on firms' value. This deterioration is later reflected in firms' future stock returns.

Model II check the impact of abnormal investment on future stock returns by regressing the individual stock return with one and two year lagged investment (t-1, t-2), lagged discretionary accruals while controlling for firm characteristics variables like cash flow, size and Tobin's q. (Results of regression Model II are presented in Table 3).

Table 2: Regression results of Model 1

$$\frac{I_{i,t}}{K_{i,t-1}} = \alpha + \beta_1\left(\frac{CF_{i,t}}{K_{i,t-1}}\right) + \beta_2 DACCR_{i,t} + \beta_3 Q_{i,t-1} + \beta_4 SIZE_{i,t} + \varepsilon_{i,t}$$

Intercept	-1.933*** (0.000)
$(CF/K)_{i,t-1}$	0.078* (0.091)
$DACCR_{i,t}$	0.015** (0.021)
$Q_{i,t-1}$	0.026*** (0.008)
$Size_{it}$	0.093*** (0.000)
$SIZE_{i,t}$	0.5509
R^2	0.0176
Hausman test	0.000
Observations	2796
Groups/Companies	386

Regression results (FEM model) with p values in parenthesis, $I_{i,t,}/K_{i,t-1}$ (corporate investment) is the dependent variable. Other variables are $CF/K_{i,t-1}$ (cash flow), $Size_{i,t}$ (Firm's size) and $Q_{i,t-1}$ (Tobin's Q), ***: 1% significant level, **: 5% significant level, *: 10% significant level

Table 3: Regression results of Model 2

$$R_{it} = \beta_0 + \beta_1 Inv_{it-1} + \beta_2 Inv_{it-2} + \beta_3 Daccr_{it-1} + \beta_4 CF_{it-1} + \beta_5 Q_{it-1} + \beta_6 Size_{it-1} + \varepsilon_{it} \text{ (Model 2)}$$

Intercept	-1.343 (0.186)
$I_{i,t-1}/K_{i,t-1}$	-0.094* (0.065)
$I_{i,t-2}/K_{i,t-2}$	-0.053 (0.398)
$CF_{i,t-1,}/K_{i,t-2}$	-0.026 (0.808)
$DACCR_{i,t-1}$	0.043*** (0.000)
$Q_{i,t-1}$	0.502*** (0.000)
$SIZE_{i,t-1}$	0.076 (0.112)
R^2	0.6982
Hausman Test	0.000
Observations	2415
Groups/Companies	376

Regression results (FEM model) with *p values* in parenthesis. $R_{i,t}$ (equity return) is the dependent variable, $I_{i,t,}/K_{i,t-1}$ and $I_{i,t-1,}/K_{i,t-2}$ represents lagged investment, $CF_{i,t-1,}/K_{i,t-2}$ (cash flow), $Size_{i,t-1}$ (Firm's size) and $Q_{i,t-1}$ (Tobin's Q). ***1% significant level, **5% significant level, *10% significant level

We have experienced a negative relationship of individual stock returns with lagged investment. The coefficient of investment (t-1) is -0.094 (p value 0.065) and investment *(t-2)* is -0.053 however with an insignificant (p value 0.39). The significant result of lagged investment (t-1) suggests that high investment will leads to lower subsequent stock returns. Jensen (1986) described that when managers have more cash flow at their disposal and more control over resources, they will be inclined to waste the resources in investing negative Net Present Value (NPV) projects. The more investment in such projects will ultimately results in more loss which will affect the future stock returns of the firm. Other researcher like (Baker and Wurgler, 2002; Chan *et al*., 2006; Wong *et al*., 2009; Cooper *et al*., 2008; Gilchrist *et al*., 2005; Panageas, 2005; Polk and Sapienza, 2009; Sloan, 1996; Titman *et al*., 2004) also documented same results, whereas (Wang *et al*., 2009) didn't find a significant relationship between market valuation and investment. The result of control variable reveals that Tobin's q is positive and significant while size and cash flow remained insignificant in Model II. Discretionary accrual is also found to be positive and significant at 1% significance level with coefficient of 0.043. This suggests that earning manipulation by managers results in overvaluation of stock. The higher discretionary accrual represents more manipulation by the managers and lower earning quality. According to Liang and Wen (2007), these are less efficient firms because they distort or maneuver the earnings in order to display good condition of the firm which however is not factual. This could be another reason that explains why these companies later perform poor and have lower future stock returns.

CONCLUSION AND RECOMMENDATIONS

The present research aims to study the relationship of corporate investment, mispricing and stock returns. The data comprises mainly all non-financial companies of KSE, however, due to missing values of some firms the final data set constitute 386 companies. The study period is from 1998-2011. We investigated the relationship between mispricing, corporate investment and stock returns in two steps. First the impact of mispricing (as measured by discretionary accrual) is studied on corporate investment while controlling for firms growth opportunities, cash flow and size. In second step, we evaluated the impact of corporate investment and mispricing on future stock returns. Fixed effect model on panel data is employed to investigate the linkages between corporate investment mispricing and stock returns. We observed that mispricing (proxy by discretionary accrual) is significantly and positively attributed to firm investment and equity returns, while resultant higher investment significantly and negatively affects the future stock returns. We therefore concludes that manager manipulate earnings to present good picture and overvalue their company stocks to obtain cheaper financing and later misallocate these resources by overinvesting in value less projects which ultimately distorts the subsequent returns. Control variables like cash flow, size and Tobin's q were found to be positively affecting the corporate investment. The present study would be useful for managers, researchers and policy makers to get more insight on corporate investment behavior in Pakistani context. However, the limitations of the study is that the corporate investment depends upon many factors and in this study we have focused upon only firm related factors, further research could be conducted on macroeconomic along with micro economic factors to get further insight on the topic.

REFERENCES

Baker, M. and J. Wurgler, 2002. Market timing and capital structure. J. Financ., 57(1): 1-32.

Baker, M., J.C. Stein and J. Wurgler, 2003. When does the market matter? Stock prices and the investment of equity-dependent firms. Q. J. Econ., 118(3): 969-1005.

Barro, R.J., 1990. The stock market and investment. Rev. Financ. Stud., 3: 115-31.

Biddle, G.C. and G. Hilary, 2006. Accounting quality and firm-level capital investment. Account. Rev., 81(5): 963-982.

Blanchard, O., C. Rhee and L. Summers, 1993. The stock market, profit, and investment. Q. J. Econ., 108(1): 115-136.

Chen, C.J.P., S. Chen and X. Su, 2001. Profitability regulation, earnings management and modified audit opinions: Evidence from China. Auditing-J. Pract. Th., 20(2): 9-30.

Chirinko, R.S. and H. Schaller, 2001. Business fixed investment and "bubbles": The Japanese case. Am. Econ. Rev., 91: 663-80.

Cooper, M.J., H. Gulen and M.J. Schill, 2008. Asset growth and the cross-section of stock returns. J. Financ., 63(4): 1609-1651.

DeAngelo, L.E., 1981. Auditor size and audit quality. J. Account. Econ., 3(3): 183-199.

Fama, E.F. and K.R. French, 2008. Dissecting anomalies. J. Financ., 63(4): 1653-1678.

Galeotti, M. and F. Schiantarelli, 1994. Stock market volatility and investment: Do only fundamentals matter? Economica, 61(242): 147-165.

Gilchrist, S., C.P. Himmelberg and G. Huberman, 2005. Do stock price bubbles influence corporate investment? J. Monetary Econ., 52(4): 805-827.

Gray, P. and J. Johnson, 2011. The relationship between asset growth and the cross-section of stock returns. J. Bank. Financ., 35(3): 670-680.

Haque, A. and S. Sarwar, 2013. Effect of Fundamental and Stock Market Variables on Equity Return in Pakistan. Working Paper.

Hausman, J.A., 1978. Specification tests in econometrics. Econometrica, 46(6): 1251-1271.

Ikenberry, D., J. Lakonishok and T. Vermaelen, 1995. Market underreaction to open market share repurchases. J. Financ. Econ., 39(2-3): 181-208.

Jensen, M.C., 1986. Agency cost of free cash flow, corporate finance, and takeovers. Am. Econ. Rev., 76: 323-329.

Liang, P.J. and X. Wen, 2007. Accounting measurement basis, market mispricing, and firm investment efficiency. J. Account. Res., 45(1): 155-197.

Loughran, T. and J.R. Ritter, 1995. The new issues puzzle. J. Financ., 50(1): 23-51.

Morck, R., A. Shleifer and R.W. Vishny, 1990. The stock market and investment: Is the market a sideshow? Brookings Paper. Econ. Activity, 21(2): 157-216.

Panageas, S., 2005. The Neoclassical Theory of Investment in Speculative Markets. Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=720464.

Polk, C. and P. Sapienza, 2004. The Real Effects of Investor Sentiment. NBER Working Paper No. 10563, National Bureau of Economic Research.

Polk, C. and P. Sapienza, 2009. The stock market and corporate investment: A test of catering theory. Rev. Financ. Stud., 22(1): 187-217.

Shleifer, A. and R.W. Vishny, 2003. Stock market driven acquisitions. J. Financ. Econ., 70(3): 295-311.

Sloan, R.G., 1996. Do stock prices fully reflect information in accruals and cash flows about future earnings? Account. Rev., 71(3): 289-315.

Stein, J.C., 1996. Rational capital budgeting in an irrational world. J. Bus., 69(4): 429-455.

Teoh, S.H., I. Welch and T.J. Wong, 1998. Earnings management and the underperformance of seasoned equity offerings. J. Financ. Econ., 50(1): 63-99.

Titman, S., K.C.J. Wei and F. Xie, 2004. Capital investments and stock returns. J. Financ. Quant. Anal., 39(4): 677-700.

Wang, Y., L. Wu and Y. Yang, 2009. Does the stock market affect firm investment in China? A price informativeness perspective. J. Bank. Financ., 33(1): 53-62.

Wong, G., R.W. Faff, W.C. Kwok and X. Chang, 2009. Financial Constraints, Mispricing and Corporate Investment. Working Paper Series. Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1101361. (Accessed on: March 12, 2009)

Yao, T., T. Yu, T. Zhang and S. Chen, 2011. Asset growth and stock returns: Evidence from Asian financial markets. Pacific-Basin Financ. J., 19(1): 115-139.

Yoon, S.S., 2005. A comparison of earnings management between KSE firms and KOSDAQ firms. J. Bus. Financ. Account., 32(7-8): 1347-1372.

Yoon, S.S. and G.A. Miller, 2002. Cash from operations and earnings management in Korea. Int. J. Account., 37(4): 395-412.

End note:

[1]: Several researchers like Baker and Wurgler (2002), Baker *et al*. (2003), Chirinko and Schaller (2001), Panageas (2005), Gilchrist *et al*. (2005) and Polk and Sapienza (2009) also found that this mispricing in stock market affects the corporate investments.

[2]: The market value of assets is calculated as the sum of the book value of assets and the market value of common equity less the sum of the book value of common equity and the balance sheet deferred taxes.

[3]: For further reading see, Baker *et al*. (2003), Gilchrist *et al*. (2005), Titman *et al*. (2004), Panageas (2005), Cooper *et al*. (2008) and Polk and Spaienze (2004).