

A Stock Market Reaction to Firm Leverage: An Investors' Insight from Developing Economy of Pakistan

Shehla Akhtar* and Syed Muhammad Aamir Shah†

Abstract

This study aims to examine the association and influence of firm leverage on stock market reaction with the control effect of firm size, firm growth, industry, cash flows and corporate earnings in all non-financial sector firms listed at Pakistan Stock Exchange. The research provides a deep insight of investors' perceptions, their expectations and fears while making an investment decision in leveraged companies. The data is collected from 200 investors making investments at Pakistan Stock Exchange. The paper finds a significant positive relationship and influence of firm leverage on stock market reaction with control variables i-e; cash flows, corporate earnings, and industry effect. The research will be useful for the companies to decide about their financial structure while accommodating the points of consideration provided by investors. The findings of the study will help the potential investors to consider the stock market reaction in Pakistan before making an investment in levered companies' stock. Based on market efficiency and prospect theory of behavioral finance, this study also overcomes a vital empirical and theoretical gap in Pakistan regarding investors' psychology of investment by examining the associations among leverage and stock market reaction with control variables like firm size, firm growth, industry, cash flows and corporate earnings.

Keywords: Financial Leverage, Stock Market Reaction, firm size, firm growth, industry, cash flows and corporate earnings.

Introduction

The Expected Utility theory by Von Neuman and Morgenstern (1944) leads to the basis of traditional finance followed by the subjective utility theory of Savage (1954). These theories assume the rationality of individuals as they stimulate their decision making under the conditions of risk and uncertainty. The basic concepts of traditional finance reflect

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the rational preferences of individuals. The “rationality” refers that the decision making of investors aim to maximize their utility within the boundary of their beliefs by applying the risk and return of various investment choices. In the 1960’s, Fama and Samuelson developed the Efficient Market Hypothesis independently which states that risk aversion is the attitude of a rational investor at every level of wealth.

The efficient market hypothesis is based on certain unrealistic assumptions while the behavioral finance relaxes such assumptions of pure traditional finance about the investors. It provides that the investors are fully rational individuals who maximize their utility only by the function of risk and returns. In contrast with the traditional finance, the behavioral finance conventions measure the investors’ perceptions under uncertainty and provide a base for understanding the functioning of the financial market and its participants. The models of behavioral finance like cognitive behavior (D. Dobson & Dobson 2009; K. Dobson & Dozois 2001, 3) and herd behavior (Banerjee 1992, 797; Bikhchandani, Hirshleifer & Welch 1992 & 1998, 992 and Chamley 2004, 1 & 58) better illuminate the irregular behavior of financial markets because the participants in the financial market have limited capacity to process information accurately and measure the risk associated with each investment alternative. As the investors update their expectations of future risk and return as per the amount of information available with their bounded capacity of information processing, their rationality becomes a question mark.

A base theory in behavioral finance is the Prospect or loss aversion theory presented by Amos Tversky and Daniel Kahneman in 1979, further developed in 1992. The theory assumes that individuals value the gains and losses differently under risk where probable outcomes are not known. The concept is deemed to be more accurate rather than that provided by utility theory. If two independent investment choices with fifty by fifty probabilities of losses and gains are presented to the investors, inclination towards gains is greatly perceived.

As the level of information for investors differs in the stock market by relaxing the assumption of efficient market hypothesis, investors’ behavior towards investment decision making may differ from one another based on their individual perceptions. It may drive the prices away from their fundamental values. The attitude of such investors towards investment in leveraged companies may cause a different stock market reaction at different times. Hence, the following inference may also be drawn;

“The investors’ perception of risky investments in leveraged companies may result in a negative stock market reaction reflected in market prices.”

To find out the investors’ perception of leveraged companies, the associated risk and the corresponding stock market reaction, this study investigates the significance of relationship and influence of financial leverage on Stock Market reaction with the impact of control variables i-e; cash flows, firm earnings, size, growth and industry effects. The leveraged companies are perceived riskier than low or zero leverage companies and the prospect theory describes that investors are generally risk averse. Therefore, the theoretical concept needs to be tested empirically via an investor’s insight and perception of investment in a levered firm. The study highlights the shareholders’ perception of investment decisions in levered companies and also provides a guideline to the companies for financial decisions by considering Stock Market Reaction expected with reference to their size, growth, free cash flow and nature of the industry. The research finally predicts the stock market reaction and proves to be useful for the investors as it guides them to invest in the stocks of the trusted levered companies with higher cash flows and earnings in a suitable industry.

Significance & Study Rationale

There are several studies conducted on the historical data from fact sheets regarding the relationship & impact of financial leverage on the book and market value (see e.g. Shah & Khan, 2007, 265; Frank & Goyal 2009, 1; Muradoglu and Sivapradad 2008, 39; Ozdagli 2009, 9; Adami, Gough, Muradoglu, Sivaparasad 2010; Hasanzadeh, Torabynia, Esgandari and Kordbacheh 2013; and Mumtaz, Rauf, Ahmed & Noreen 2013, 113). But the investors’ perception towards investment in leveraged companies has not been measured adequately in Pakistan and other emerging markets. This study attempts to fill such gap and intends to examine the investors’ response towards the investment in levered companies in the stock market of Pakistan. It is helpful not only to identify the stock market reaction based on investors’ psychological considerations in Pakistani market but the results of the study may be generalized upon the regional economies. It will provide a guideline for the investors about the stock market reaction towards investment in leveraged companies in Pakistan. At the same time, it is also helpful for the corporate managers who make the financial decisions by taking into consideration the investors point of view. Apart from the fact sheet data and historical figures, as what do the real owners or investors think in reality and how do they behave when they invest funds in leveraged

companies. It may be beneficial to predict the future market reaction towards the leveraged company's stock and its value.

Theoretical Framework

According to Hillier et al. (2017, 32 & 40), the financial leverage describes the level of a firm reliance on debt. Various theories are found in the literature regarding capital structure. Modigliani and Miller (1958, 261) established MM theory of capital structure that provided a base for further work on the dimensions of the capital structure. The theory states the irrelevance of capital structure to the value of the firm with the existence of the perfect market. Jarrell and Kim (1984, 857) found significant differences between Capital Structure of firms in different industries. There are several authors who found the relationship between leverage and stock market reaction. Graham, Hughson & Zender (1999) observed the reaction of the market to the decisions of capital structure and emphasize the statement that the stock market responds to the change in capital structure decisions of companies. The firm value decline at the same rate to the change in debt times represents the deficit resulting out of tax shield influence on debt. While the authors conclude that firm value is not associated significantly to marginal tax as the market reacts not only to the new capital structure announcement but also to the information related to the announcement of the new capital optimal structure.

Muradoglu and Sivapradad (2008, 39) found an inverse relationship between Leverage and Stock Returns. Ozdagli (2009, 9) proposed that Leverage is the main source of the value premium and a change in leverage results in the change in the value of the company in the same direction. Obreja (2013, 146) proposed that Value Premium firms are low in Productivity with very high operating leverages thus these firms have a positive significant relationship with the stock market returns, while the Book Leverage Premium firms being low productive firms have a negative relationship with the stock market returns.

Hasanzadeh, Torabynia, Esgandari and Kordbacheh (2013, 81) concluded that current leverage was not a necessary criterion for judging the future and prediction of the future stock market and a lack of relationship between leverage and firm value; thus approving Net Operational Income (NOI) theory and MM theory. According to these theories, both firm total capital cost and its published stock market value were independent from leverage degree used by the firm. Degryse, Goeij and Kappert (2012, 431) in their study established the impact of different firm and industry characteristic on the capital structure of small firms and concluded by stating that there are substantial intra industry

differences showing the degree of industry competition and the heterogeneity in technology. Mumtaz, Rauf, Ahmed and Noreen (2013, 113) found that some of the investors are highly interested in the performance of only those firms registered in Stock Exchanges and provide a significantly negative impact of capital structure on the financial performance of companies in Pakistan.

The investors' perception of risky investments in leveraged companies may result in a negative stock market reaction reflected in market prices. As the Prospect theory of behavioral finance states that the investors value the gains and losses differently as generally, the investors are risk-averse. While the Market efficiency theory in traditional finance assumes that every information in the market reflects in the share prices keeping other factors constant. Hence, an inference that may be developed from the above discussion may be hypothesized in the statement as;

H₁: The firm leverage may demonstrate an influence on the stock market reaction

Haugen and Senbet (1998, 27) linked the different firms operating in different industries with capital structure. Rajan and Zingales (1995, 1421) investigated the factors of capital structure with four variables of asset tangibility, market to book value, firm size and profitability. The stated variables provided the same results both at the firm and combined level. Shah and Khan (2007) observed the impact of capital structure on Tangibility, Earning Volatility, Depreciation, Growth, industry, Profitability and Size at PSX where a significant industry effect was approved. Suhaila, Mat and Wan (2008, 1) confirms the firm size, a predictor of a firm's capital structure. Frank & Goyal (2009, 1) examined the Industry effect, Market to Book value effect, Tangibility, Size and Inflation effect leverage and approved the presence of trade-off theory in American companies. The authors further stated that firms create a trade-off or balance in making financing decisions. Awan, Rashid and Rehman (2009) showed that the results of the combined industry cannot be judged as that of the specific industry due to unique characteristics. The researchers found a slightly positive and significant impact of Tangibility and Profitability on Leverage of Sugar industry in Pakistan.

Rezaei and Habashi (2012) analyzed that two exogenous factors Growth and Size show a positive and significant relationship with the Capital Structure and negative but significant relationship with the stock returns. Obreja (2013) argued that Firm Size and Book to Market value of equity are explanatory variables for the estimated equity returns, which had an impact on the firm leverage. Size and Book to Market

value of Equity had an impact on the leverage of the firm. Hens and Steude (2006) stated that the financial and operational leverage reveal an increase in the stock market returns. Adami, Gough, Muradoglu, Sivaparasad (2010) found that the returns decreased with leverage firms at the firm level and that the cash flow from debt financing was determined by the level of Leverage. Telberg et al. (2008) provided that the relationship did not exist across industries with differences for core variables such as Tangibility, Profitability and Market to Book growth variables. The industry dummy variable was found to be significant which indicated the industry effect on leverage. Therefore, a proposition may be drawn as;

H₂: The firm leverage may demonstrate an influence on stock market reaction with the control variables of firm size, firm growth, industry, cash flows and earnings.

Based on the above given hypotheses, the following model of the research is designed;

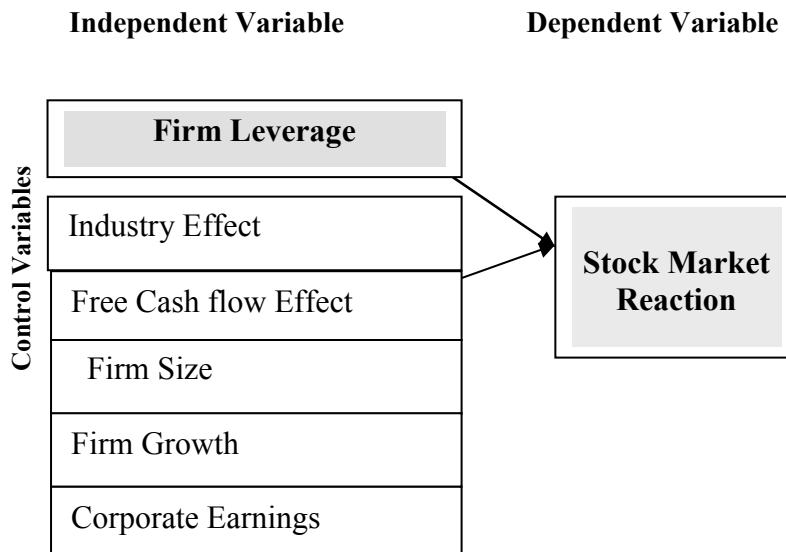


Figure 1: Study Model

Study Design & Methodology

The current study is a hypothesis testing descriptive study and the data is collected through a structured questionnaire design. The websites of some mutual funds like Van Guard referred at the end provide some basic and scattered information in their online forms to make the investment portfolios of their investors. The idea for formulating the study instrument is initially based on such forms, the literature available

on the concepts of variables and the measurement criteria used in literature. The literature lacks in the survey based researches to determine the relationship of stated study variables. To fill out such gap, the points on which the authors measure the variables quantitatively plus the general perception of investors about the variable concepts (how do they perceive) are taken as a base to form statements of the instrument as they are not aware of technical finance.

Finally, the instrument is designed on five points Likert scale from literature and modified as per the opinions of field experts to verify the content validity. Hence, the instrument addresses the financial concepts in simple statements that the investors could understand and the respondents were guided properly about the terms used in the instrument to ensure the investors; literacy about the financial terms. As it is mentioned in the limitations that the local investors are not technically literate of the finance concepts. Such limitation was overcome by illustrating the respondent meanings of each concept asked verbally in laymen language. The questionnaires were personally administered to ensure the reliability.

The first section of the instrument consists of demographics like Gender, Age, qualification, investment experience etc. The second section consists of questions organized to measure the predictor variable financial leverage (LEV) while the predicted variable is stock market reaction (SMRC). The control variables are cash flow effect (CF), industry effect (ID), corporate earnings (CE), firm size (FS) and firm growth (FG). The measurement of all these variables on the scale is based on the following criteria adopted from literature;

Firm Leverage: The firm's financial leverage (LEV) is measured by using 5 items based on the conceptual dimensions including the risk of the firm, level of borrowing, chances of bankruptcy, borrowing to total assets and proportional debt to equity. According to Schwartz (1959, 18), the financial leverage refers to the total liabilities and owners' equity that combines to formulate the firm's capital structure. Further, the author explains that the ratio of all the liabilities to the net worth is the best single determining factor of gross risk.

Stock Market Reaction: The stock market reaction (SMRC) is estimated by using 4 items and is based on dimensions of the required rate of return, rising market value consideration by investors. Shim & Siegel (2000) document that market information is essential to be included as the theory suggests because it takes into account the available information in the market value.

Firm Size: The firm size (FS) is determined by using 4 items by using the dimensions of companies' capitalization and bankruptcy. Berk (1997,

12) used an approach of three indicators to measure the size effect; the market capitalization, book value and sales while Okada (2006, 1) suggests that the credit risk premium and the liquidity premium are the factors that generate the size effect as the companies with less book value and sales possess relatively higher bankruptcy risk. On the other hand, the stock liquidity of companies with less book value and sales is low which increases the cost to conduct arbitrage for the investors.

Firm Growth: The firm growth is measured by asking 4 questions measured by dimensions of productivity, chances of loss and bankruptcy as suggested by the literature. The indicators that determine the firm's growth are stock price, sales and revenue, the capacity of production, productivity value, and production value added (Delmar 2006, 156 & Ardishvili et al. 1998, 21). First Ricardian Theory (1817); Jang & Park (2011, 1027) examined that the rate of previous profit is the measure of the current growth rate. Following the pecking order theory by Myers and Majluf (1984, 127), Heshmati (2001, 213) and Honjo & Harada (2006, 289) identified leverage as a determinant of a firm's growth.

Industry effect: The industry effect is measured by 5 items collectively based on the dimensions of industry risk, industry price volatility and chances of bankruptcy in the relevant industry. Moskowitz and Grinblatt (1999, 1249) observe maximum momentum anomaly due to the industry component of stock market return. The industry describes the expected return on equity as the corporate finance theory provides (Hillier et al. 2006, 98) and such return is the function of industry risk. Likewise, Hadlock & James (2002, 1383) and Ross (2010, 32) assert that a high volatility in stock return may show the investors' uncertainty about the fundamental firm value or the firms reveal information asymmetry to a larger extent to outside investors.

Growth in Cash Flows: The cash flow effect is estimated by using 4 items described by the dimensions of financing and growth opportunities. As Fazzari et al. (1988, 141) suggest that sensitivity of investment cash flow demonstrates the increased costs of external financing compared with internal financing as a result of information asymmetries as proposed by Myers and Majluf (1984, 127). Particularly, the firms which possess negative cash flow sensitivity illustrate low internal liquidity, the highest potential growth opportunities, and seem mostly to be financially constrained (Hovakimian 2009, 161) as established by Kaplan and Zingales (1997, 169). According to Telmoudi, Ziadi and Noubbigh (2010, 198), timely debt collection and payment, flow of stock and the gross marketable margin yields the operating cash flow while it is independent of Earnings and turnover variation.

Corporate Earnings: The corporate earnings are measured by using 4 items in the instrument. The corporate earnings refer to the earnings after tax available for common stockholders which are presented by the income statements of the companies in their annual reports.

Population & Sample

The study population includes all the equity investors registered at Pakistan Stock Exchange. The total number of registered investors is 244,753 with the stock market with a Unique Identification Number[‡]. Various categories of investors' profile are classified as; the individual investors, Corporate investors, Individual or corporate Brokerage houses, Mutual funds investors and the Foreign and other Individuals.

The study is delimited to the individual investors' category as they occupy the major proportion equal to 95% of the total number of registered investors[§]. The sample size is 284 individual investors. There was no exact segregation of different categories of investors available hence sample selected as Uma Sekaran (2003, 286& 2016) suggests 284, a representative sample for the population of above 200,000.

Data Collection & Analysis Techniques

For the Data Collection, total 284 personally administered questionnaires were floated to the individual investors who use to invest at PSX via convenient sampling technique and 245 forms were finally received back with 86.27% response rate. The collected questionnaires were sorted out and the incomplete forms were discarded. Finally, 200 questionnaires were considered to analyze the data. A pilot testing was applied to the study and the items showing lower factor loading and reliability scores were excluded.

The Statistical Package for the Social Sciences (SPSS) version 20 is used to analyze the data by applying correlation & regression techniques to analyze the data. A stepwise regression is carried out to measure the impact of control variables at each level. Prior to the application of tests reliability, sample adequacy, factor loadings and validity of the data are determined.

[‡] Source: National Clearing Company Pakistan Limited-News Letter for December 2016

[§] The precise figures for the number of investors registered under UIN are mentioned in the News Letter of National Clearing Company Pakistan Limited for December 2016.

Statistical Analysis

Validity & Reliability Testing

The validity of the data is confirmed by using the factor analysis via the component method as the factor analysis suggests that the group items measure the same variable in the dimensions. The values lower than the acceptable range were discarded as per the criteria suggested by Leech et al. (2007, 233). Hence, the factor analysis confirms that all the component values are higher than 0.40 which confirms the validity of data (see table1).

Kimberlin & Winterstein (2008) explain that the internal or Criterion validity describes the good association of results by using a novel instrument with the other research instruments measuring the same or the relevant constructs. The pilot testing confirms the validity of the research instrument as the internal validity assumes the tendency of a research instrument to determine what it is purposed to determine (Cooper & Schindler, 2003). The study also determines the content validity as a part of external validity and construct validity on the basis of previous literature and suggestions provided by subject experts. Initially, a comprehensive questionnaire was designed to estimate the constructs of the study but later on, some items were removed and the instrument was readjusted as per the feedback received in pilot testing responses.

The Cronbach's alpha, α measures the reliability for all items in the Questionnaire as Cooper & Schindler (2003) suggests that the reliability of data ensures the consistent findings by using various data collection methods and they demonstrate similar findings as that of other researchers. The values less than 0.50 below the acceptable range are already discarded for further analysis as suggested by George & Mallery (2003) and Nunnally (1978, 245). Table 1 illustrates the reliability scores for the predicted, predictor and control variables. Finally, the factor analysis and the Cronbach alpha lead to the modifications and repeated pilot testing of the questionnaire.

Table 1: The Validity and Reliability of variables

| Variables | Dimensions/Items | Standardized Factor Loadings (St. FL) | Cronbach α |
|-----------|------------------|--|-------------------|
| 1. LEV | D1 | .826 | 0.87 |
| | D2 | .858 | |
| | D3 | .808 | |
| | D4 | .714 | |
| | D5 | .837 | |
| 2. SMRC | D1 | .810 | 0.60 |
| | D2 | .660 | |
| | D3 | .731 | |

| | | | | |
|----|----|----|------|------|
| 3. | CF | D4 | .465 | 0.77 |
| | | D1 | .816 | |
| | | D2 | .794 | |
| | | D3 | .766 | |
| 4. | ID | D4 | .712 | 0.69 |
| | | D1 | .807 | |
| | | D2 | .713 | |
| | | D3 | .693 | |
| 5. | CE | D4 | .656 | 0.57 |
| | | D5 | .479 | |
| | | D1 | .830 | |
| | | D2 | .819 | |
| 6. | FS | D3 | .815 | 0.51 |
| | | D1 | .829 | |
| | | D2 | .810 | |
| 7. | FG | D3 | .760 | 0.64 |
| | | D1 | .801 | |
| | | D2 | .80 | |
| | | D3 | .679 | |

Note: FL represents the "factor loadings" measuring the validity.

"Cronbach α " represents the reliability of data.

Exploratory Factor Analysis & Sample Adequacy Test

The Kaiser-Meyer-Olkin test KMO and Bartlett's test scores are represented on the table 2 which prove the significance and determines the multivariate normality as sample adequacy. Although the values near to 1 explain a goodness of sample adequacy as suggested by Field (2009) yet the values above 0.50 confirm that the sample is adequate. The value of Bartlett's Test of Sphericity measures the significance. The values less than 0.05 and closer to 0.00 refers that the high level of significance.

Table 2: KMO and Bartlett's Test for investors' Questionnaire

| Sr. No. | Variables | KMO | Bartlett's Test |
|---------|-----------|------|-----------------|
| 1. | LEV | .827 | 0.000 |
| 2. | SMRC | .663 | 0.000 |
| 3. | CF | .770 | 0.000 |
| 4. | ID | .660 | 0.000 |
| 5. | CE | .694 | 0.000 |
| 6. | FS | .668 | 0.000 |
| 7. | FG | .627 | 0.000 |

LEV=Leverage, SMRC= Stock market reaction, CF= cash flow, ID=industry effect, CE= corporate earnings, FS=firm size, FG=firm growth.

Note: ***=P<1% level, **=P<5% level, *=P<10% level

Descriptive Statistics

The standard deviation, skewness and kurtosis lie in the appropriate acceptable ranges represented by the table 3.

Table 3: Means, Standard Deviation, Skewness, Kurtosis

| Scales | Mean (SD) | Skewness Std. Error (.1735) | Kurtosis Std. Error (.344) |
|--------|------------------|--------------------------------|-------------------------------|
| 1 LEV | 3.667 (.822) | -1.105 | 1.711 |
| 2 SMRC | 3.642 (.759) | -1.102 | .832 |
| 3 CF | 3.715 (.662) | -.885 | 1.514 |
| 4 ID | 3.997 (s.535) | -.281 | 1.059 |
| 5 CE | 3.841 (.589) | -.971 | 1.507 |
| 6 FS | 3.767 (.599) | -.872 | .634 |
| 7 FG | 4.053 (.590) | -.610 | 1.654 |

Note. The values in parenthesis represent square root of AVE of every construct

Analysis of Correlation

The bivariate correlation technique was used to measure the interrelationships of the variables. A significant positive relationship is found among firm leverage, stock market reaction and control variables illustrated in table 4.

Table 4: Correlation matrix among predictor, predicted & control variables

| | LEV | SMRC | CF | ID | CE | FS | FG |
|------|--------|--------|--------|--------|--------|-------|----|
| LEV | 1 | | | | | | |
| SMRC | .603** | 1 | | | | | |
| CF | .627** | .496** | 1 | | | | |
| ID | .504** | .368** | .593** | 1 | | | |
| CE | .522** | .532** | .489** | .465** | 1 | | |
| FS | -.065 | .052 | -.092 | -.066 | .251** | 1 | |
| FG | .380** | .262** | .416** | .453** | .334** | -.012 | 1 |

Note: ** Correlation is significant at the 0.01 level (2-tailed).

The leverage explains 60.3% highly significant positive relationship with stock market reaction. While the cash flow growth, nature of the industry, corporate earnings and the firm growth exhibit highly significant coefficients of correlation .627**, .504**, .522** and .380** respectively. It means the cash flows are the most preferable consideration for the equity investors. They prefer to invest in the leveraged firms as far as their cash flows are sufficient and their other considerations next to cash flows include the nature of the industry in which they invest, then, corporate earnings follow the sequence. While firm growth is also a vital and reasonable consideration.

Regression Analysis

To measure the impact of leverage on stock market reaction, simple linear regression is applied. The results are shown in table 5 and represent a highly significant model fit with a coefficient of .363.

Table 5: Linear Regression statistics of Predicted Variable SMRC

| Variable | B | SE B | B | T | Sig(t) | R ² | Adjusted R ² |
|--------------------------------|------|------|------|--------|--------|----------------|-------------------------|
| LEV | .603 | .053 | .603 | 10.413 | 0.000 | .363 | .360 |
| F for change in R ² | | | | | | | 108.426** |

Note: *p < .05. **p < .01.

The stepwise regression is used to measure the influence of firm leverage on stock market reaction by taking into account the effect of control variables at each step. Table 6 explains the values of R, R Square, adjusted R² and Durbin-Watson for the opinions made by investors. The results indicate the dominance of firm leverage over other variables that is responsible for the maximum variation of 33.3% in the predicted variable. The corporate earnings bring 40% change in SMRC while 34.9% change in the predicted variable is brought by cash flows. Some factors unseen in the study make the rest 67.7% fluctuation in the Stock Market reaction. If the control variables effect is considered, the cash flows and the corporate earnings are the most influencing variables as compared to the rest. The model has a quite good fit described by F significance value as it is highly significant at 95% confidence interval. Hence, the hypotheses of the study are confirmed.

Table 6: Stepwise Regression statistics of Predicted Variable SMRC

| Variable | B | SE B | β | T | Sig(t) | VIF | R ² | Adjusted R ² | ΔR^2 |
|--------------------|-------|------|---------|-------|--------|------|----------------|-------------------------|--------------|
| LEV | .540 | .057 | .577 | 9.484 | 0.000 | 1.00 | .333 | .330 | .333 |
| F for ΔR^2 | | | | | | | | | 89.952** |
| CF | .603 | .086 | .157 | 2.079 | 0.039 | 1.00 | .349 | .342 | 0.16 |
| F for ΔR^2 | | | | | | | | | 4.322* |
| ID | -.011 | .108 | -.007 | -.098 | 0.922 | 1.00 | .349 | .338 | 0.000 |
| F for ΔR^2 | | | | | | | | | .010 |
| CE | .354 | .091 | .267 | 3.873 | 0.000 | 1.00 | .400 | .386 | 0.051 |
| F for ΔR^2 | | | | | | | | | 15.003** |
| FS | .019 | .077 | .015 | .242 | 0.809 | 1.00 | .400 | .383 | 0.000 |
| F for ΔR^2 | | | | | | | | | .059 |
| FG | .005 | .087 | .004 | .055 | .957 | 1.00 | .400 | .379 | 0.000 |
| F for ΔR^2 | | | | | | | | | .003 |

Note: *p < .05. **p < .01.

Therefore, the research hypotheses H₁ is approved while H₂ is partially accepted as the firm size and firm growth shows an insignificant impact on the predicted variable.

Conclusion & Discussion

The results of the study conclude that the investors agree that the leverage determines the reaction of the stock market and consider the role of a firm's cash flows important for the levered companies. In the view of investors, the companies who possess an adequate amount of cash flows and earnings may capture the maximum investors' attention for investment. On the other hand, the nature of industry also plays an important role to trigger the investors' decisions for making the investment in levered companies stock. The equity investors least consider the firm size and growth while deciding for their investments.

The study reveals that the behavior of local investors towards investment in risky companies and generates a positive stock market response opposing the judgment of the *Prospect theory* that generally the investors are risk-averse. While Adami, Gough, Muradoglu, Sivaparasad (2010) supports the theory and argues a decrease in market returns with leverage. On the other hand, it seems that *the market efficiency theory* doesn't hold strong in the developing country's market for the rational decision making of investors as the level of information with each investor differs. *The uneven dissemination of market information with the investors while investing in levered companies' stocks may serve as a basic reason for the market deviation from theoretical norms.* The lack of relationship between financial leverage and value of firm stated in *MM theory* confirmed by Hasanzadeh, Torabynia, Esgandari and Kordbacheh (2013) proves to be inconsistent with the current study observations as per the investors' perceptions in the context of the stock market in Pakistan. The stated reason seems to be the weaker efficiency of the developing country's local market. *On contrary*, the research findings are aligned with Ozdagli (2013) who reveals that the value of the company varies with the change in leverage in the same direction.

Therefore, the study overcomes the empirical and theoretical literature gap in Pakistan while taking the investors' response towards the financing mix of companies as it highlights their psychology, perceptions, behavior and factors of consideration for investment in leveraged companies. The managers of the companies need to consider the factors identified by the equity investors while deciding about their capital structures so that their financing decisions may turnout attractive for maximizing the market value and response. The potential investors may be attracted towards the investment in leveraged companies with optimal financing mix made by their managers by considering the factors of importance for their investors.

Limitations of the Study

The foremost limitation of the study to collect the investors' data was the shifting of a huge chunk of investors towards online trading via personalized ID's and contact with their brokers online. It became difficult to approach as SECP bounds the brokerage houses by legislation to share any information about their clients. The data of the study is restricted to the local investors and Pakistani markets are limited bond, futures, and options market. A dynamic trading by the foreign investors uplifts performance of the market and an overlook may limit this study to the local investor trading only. There exist language barriers as most of the countrymen were not literate and understood Urdu and local languages. But the official language is English and so was the language of the survey instrument. The respondents were helped out but it was still difficult to interpret certain financial terms in the local language.

Direction for Further Research

The study provides a direction for future research. The current research may be extended towards the foreign investors investing in financial instruments other than equity. The study may also be extended to the emerging market other than PSX and other foreign markets. Following are some other suggested areas for further research;

- How the firm's stock value is influenced by using the different levels of leverage? A comparison of the fact sheet with the investors' responses
- How can derivatives minimize the company's risk of leverage for improved and positive market reaction?
- Determinants of leverage in local industries linked with an investors' behavior

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