Valuation Based Test of Market Timing Theory Jawad Asif¹, Sayyed Khawar Abbas², Hafiz Ali Hassan²

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Abstract: The Optimal Capital Structure has been remained most important to any kind of decision making. All decisions follows the budget. This study is consisted upon 52 firms and 572 observations and data covers the time span of 2002 to 2012. Moreover, for the testing of Market timing theory this study utilized three control variables which are not significant. It can be easily inferred whenever firms will face deficit they will get the more capital from equity and misevaluation will increase this phenomenon.

Keywords: Market Timing Theory, Capital Structure, Change in Equity, Deficit

1. INTRODUCTION

The optimal capital structure is always being a crucial element in financial decision making for the development of business growth. The optimal use of financial resources is pivotal for maximization of revenues and shareholders' benefit. The conventional theory of capital structure entails finance is not the only factor which generates revenue rather the optimal combination of debt and equity is responsible for optimal business growth. According to Brendea (2012), capital structure refers to the utilization plan of funds for organizations' long-term projects. The funds are usually in the form of debt, hybrid securities and reserve funds. The prime responsibility of a financial manager is to manage and consume funds with the objective of maximization of stakeholders' benefits.

According to Hovakimian (2006), in this scenario, it is a common dilemma to develop an optimal capital structure while there are lots of complexities around resulting from macroeconomic indicators, globalization, and uncertainty in the international market. Baker & Wurgler (2002), argued when a firm issues equity, it transmits a negative signal towards outside market, therefore, firms move towards debt financing which is a cheaper source. Moreover, the shareholders prefer to invest in undervalued securities due to the asymmetric information in the market.

2. LITERATURE REVIEW

Liu et al. (2005), stated the capital structure decision of an organization is always anxious towards the performance of fixed assets. In case of the perfect capital market, the firm does not need to worry about market situations for making of capital decisions. Earning power and risk association with capital decision determines the financial worth of a firm. Lemmon et al. (2005), explained the financing structure either by debt or equity does not affect the value of the firm. This theory is known as Modigliani-Miller theory. The theory contended decisions regarding dividend distribution also do not affect the value of the firm. Under this theory, only long-term financing decisions are analyzed while shortterm decisions are ignored. Brendea (2012), further explained according to Modigliani-Miller hypothesis firms do not affected from market fluctuations, bankruptcy, nonexistence of taxation and agency cost. Similarly, it does not matter whether the firm is raising capital from equity financing or debt financing and cost of debt financing is lower than the cost of equity financing due to its lower level of risk.

Shaym-Sunder & Myers (1999), stated another approach by which managers evaluate cost and benefits plans is trade-off theory. The trade-off hypothesis emphasis on an optimal plan where the combination of debt financing and equity financing balances marginal costs and benefits.

Lemmon et al. (2005), resultantly, managers first prefer to attain finance from external financing by issuing debenture, then preferred stock and equity remains the last option. According to pecking order theory presented by Myers (1984), a firm must raise funds by using its retained earnings and selling off its marketable securities. The further need should be accompanied by debt financing, preference shares, and equity. Elliot et al. (2007), argued a firm changes it capital structure according to its stock price fluctuations. Lemmon (2005), stated many firms do not estimate market fluctuations and issue stock and repurchase irrespective of the fact their stock prices undervalued or overvalued.

Baker & Wurgler (2002), presented market timing theory which is an efficient approach in capital structure domain. This approach progressively challenges the trade-off theory and pecking order theory and presenting a rational base for optimal capital structure. The building block for market timing theory is asymmetric information among managers and shareholders. According to Alti (2006), corporate shareholders disvalue the stock prices on spreading false market information. Managers took the advantage while benefiting the existing shareholders and make short time financing according to their financial requirements. When market prices are lower than fair prices, the firm issues debt and balances its capital structure with cost and benefits analysis.

Miglo (2010), contended market timing theory is criticized on two dimensions. Proxy for the market to book ratio and persistence element. Studies showed mixed results over the intended level of capital structure. Lemmon & Zender (2004), found a historical market to book ratio is negatively associated with current leverage and also suggested the adjustment of target leverage is slow. Liu (2005), confirmed

the previous study results and further demonstrated slow adjustment towards targeted market leverage by examining the firms stock returns impact on market leverage. Kayhan & Titman (2007), further confirmed the slow adjustment as per their research findings. Brendea (2012), stated the market timing consequences are a short run in nature. Likewise, the outcome of equity market timing is negatively associated with the capital structure.

Currently, the performance of stock market has become a crucial factor in the progress and development of an economy. The growing reputation of stock markets has attracted many researchers and economists to understand the economy's trend and to predict future outcomes. Due to globalization and rapid socio-economic developments, the financial markets are competing with each other at all the levels across boundaries. The capital market has to be very efficient and vigilant for its growth and development. Foreign investment is a strong component of the development of any country. It plays a vital role in the growth and progress of developed nations. A strong stock market like New York stock exchange or Tokyo stock exchange directly attracts the foreign investment, therefore, the role of the stock market is very crucial now a day. In Pakistan, there were 3 stock exchange companies working under government supervision. Karachi stock exchange was the biggest amongst them. It was nominated for the best stock exchange market of the world back in 2002. Karachi stock exchange 100 indexes were launched in 1991 and in very short time it became very popular and a reflector of Karachi stock exchange performer. Later in 2017, they were merged into one company name Pakistan stock exchange.

3. METHODOLOGY

Data source is annual balance sheet published by State Bank of Pakistan, which includes tangibility, deficit, changes in EF*VP is the proxy for capturing market timing behavior. equity, profitability for the time period 2002 to 2012. Non-Financial Sector containing communication, tobacco, energy and fuel, sugar, textile, cement, paper and board, and transportation. More specifically, companies are the part of analysis which share capital change during the period. The Sample size contains 52 firms and observation are 572 taken from Karachi Stock Exchange.

ModelBasic model of the study can be constructed as: $\Delta E = \alpha + \beta 1 \text{ DEF } + \beta 2 (\text{DEFit } * \text{VPit}) + \text{ eo}$ Where as

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\Delta E = E_{t} - E_{t-1}
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Deficit =**DEF** = Δ **E**+ Δ **D** whereas Δ **Debt**= **Dt**-**Dt**-1 and Δ

Equity= Et- Et-1 To calculate the Misevaluation

Intrinsic Value= RECF (1+g) / (Ke-g)

Residual equity cash flow

Ke=Cost of equity

Ke=1/PE ratio

EPS = Earnings per share =Income after taxes/ total number of shares outstanding

G=Growth

 $Fv=Pv(1+i)^n$ whereas Fv= Future Value, Pv= Present Value ,I= Growth rate and N= number of years

Vp = Market Value/ Intrinsic Value

Model with control variable

 $\Delta E_{it}=\beta 0+\beta 1$ (DEF_{it}) + $\beta 2$ (DEF_{it}*VP_{it}) + $\beta 3$ (size_{it}) + $\beta 4$ (Profitability_{it}) + $\beta 5$ (Tangibility_{it}) + e_0 Where DEF=deficit of the company if positive and surplus if negative.

D

Variable	Augmented Dickyfuller	Phillop Perron	P value	Status	Decision
Change in Equity	-20.1459	-19.9801	0.0000	Level	Stationary
DEF	-19.9782	-20.7261	0.0000	Level	Stationary
DEF*DVP	-24.4926	-24.4878	0.0000	Level	Stationary
Р	-22.7627	-22.7606	0.0000	Level	Stationary
S	-23.9865	-23.9865	0.0000	Level	Stationary
Т	-5.1434	-5.8086	0.0000	Level	Stationary
critical values:					
	1% level		-3.4416		
	5% level		-2.8664		
	10% level		-2.5694		

Phillip Perron and Augmented Dicky Fuller (ADF) results shows data is stationary and OLS can be run upon data. Regression result table								
Variable	Coefficient	Std. Error	t-Statistic	Prob.				
С	90.6457	52.3729	1.7308	0.0840				
DEF	0.5500	0.0193	28.5150	0.0000				
DVP	0.5892	0.1245	4.7337	0.0000				
Р	0.0000	0.0001	0.5847	0.5590				
S	0.0049	0.0162	0.3002	0.7641				
Т	-0.0002	0.0019	-0.1264	0.8994				
R-squared	0.610177							
Adjusted R-squared	0.606702							
F-statistic	175.6227	Durbin-Watson		1.9381				
Prob(F-statistic)	0.0000							

R Squared shows that dependent variable can be explained will all independent variables up to 61%. Moreover, model fit as probability is less the .05. Durbin Watson also show there is no autocorrelation.

Control variables of probability, tangibility and size are not significant variables because these specific variables are the determinants of leverage according to all studies before. These does not determine equity. Now precisely, estimator of deficit shows significant results and explains whenever company going to raise the financing it will give the 55% preference to equity. As this can be inferred if VP>1 stock is undervalued and if VP<1 then it is overvalued, VP=1 is means stock is correctly valued. Behavior of market timing (Dvp) shows value (0.5892) which is slight greater. Now this can be understand if there will be misevaluation equity finance will be at preference of firm.

4. CONCLUSION AND FUTURE DIRECTION

The results demonstrates that each time of deficit firms will spawn their funds through equity and misevaluation will strengthen managers' tendency to raise financing through equity. These findings are lined up of the verdict of Baker & Wurgler (2002) and Alti (2006) that firms alter their capital structure using market timing theory. During the time span 2002 to 2012 only 2008 and 2009 were having negative impact with respect to firms then it was adjusted back to ratio. Relationship between NEDS and shareholding is negative which explains that ownership was intended to reduce the NEDS presence on board. It is because Pakistani equity market having domination of family owned companies. As we mentioned that this study is being done on KSE data, future researcher could conduct this study upon Pakistan Stock exchange.

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