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Stock Market Development and Financial Structure of Non-Financial Firms

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Abstract: The study seeks to investigate the relationship of stock market developent with financial structure of firms in Pakistan. Quantitative approach is used in this study. For this purpose, secondary data is obtained from published annual reports of 100 non-financial firms listed in Pakistan Stock Exchange from 2008-2018. The data related to stock index is obtained from daily KSE 100 stock index ranging from 2008 to 2018. Dynamic panel model has been used; two step system GMM panel estimators are applied for empirical testing of hypothesis. The study indicates that two stock market development measures like stock market capitalization and trading volume increases the debt level in financial structure. However, stock market volatility decreases the optimal financial structure of firms. The study is beneficial for corporate managers for efficient and optimal financial decision making. Moreover, the study has novel contribution in the relationship of various stock market development measures with number of financial structure measures.

Keywords: Stock market capitalization, trading volume, stock market volatility, financial structure

INTRODUCTION

The initial decade of 21st century observed massive fluctuations in worldwide business cycle that eventually effects the firm value. Financing policy is the major and basic area of corporate finance and transitional economies and developing countries knows less about it (Omran & Pointon, 2009). The stock market might not perform efficiently in developing countries and it might not promote the stock market; giving the huge financial cost and poor financial structures (Singh, 1999; Yartey & Adjasi, 2007). Stock market liberalization are central to financial liberalization and any financial liberalization is incomplete without development and establishment of stock markets (Yartey & Adjasi, 2007). The establishment of stock markets boost the domestic savings as well as quality and quantity of investment. The financing choices are very important and critical for a firm in order to achieve success and from point of view of earnings as well (Bancel & Mittoo, 2004). The financial markets have undergone tremendous changes and are increasing integrated (Cosh (Cosh, Hughes, & Singh, 1992). The capital allocation would produce more productive investments in a developed financial system (Boyreau-Debray & Wei, 2005). The illiquidity equity markets are the determinant factors of stock market development in the world. The better stock market development enables the firms to mobilize the capital efficiently and helps to optimize the financial structure (Isshaq, Bokpin, & Onumah, 2009). The equity markets and firms operating in those equity markets are bearing serious financial burden after the financial crisis. Since capital accumulation in a developed market structure is fundamentally important for long term growth of a firm and for enlargement of an economy. Therefore, the stock market development is foremost factor for the future economic growth and firm's survival (R. Levine & Zervos, 1998). The developed stock markets are highly concentrated, less volatile, more liquid, and are accompanied with high stock market capitalization. Stock market capitalization, trading volume and stock market volatility are most likely factors, representing the stock market development. This leads to the expectations towards optimal financial structure (Agarwal & Mohtadi, 2004). A well-developed stock market minimizes the cost in relation to financial structure and maximizes the benefits (Myers & Majluf, 1984) The optimal financial policy is the amount of debt and equity that result in the lowest WACC for the firm.

The equity and debt mix in optimal financial structure have been under debate from last some years regarding its determination, evaluation and accounting. Firm value depends on mixture of its past and future investments. An appropriate financial mix has to opt for these investments. Moreover, financing decisions significantly depends on phase of business cycle. Incorrect financial decisions may lead a firm towards bankruptcy where a vicious

cycle starts that may create more incorrect decisions with rest of financing policy available to the firm (Eriotis, Vasiliou, & Ventoura-Neokosmidi, 2007). The variation in financing policy and the performance of company has a great effect on the funding arrangement of firms (Nicoleta-Adriana, 2018). This variation in financial policy is greatly influenced by various firm specific determinants that how the organization should finance itself (Brounen, De Jong, & Koedijk, 2006; Deesomsak, Paudyal, & Pescetto, 2004; Mac an Bhaird & Lucey, 2010; Serrasqueiro, Armada, & Nunes, 2011). Previous studies provide diverse and fickle propositions between the financial structure and stock market development in developed economy. Some studies found significance between financing policy and liquidity position of firm (Abdulla, 2017; Klasa, Ortiz-Molina, Serfling, & Srinivasan, 2018). Others found significant evidence between financing policy and financial perfromance of firm (Abor & Biekpe, 2007; Awan & Bashir, 2016; Dudley & James, 2018).

The increase in debt at a certain level is good for firms but increase of debt beyond the optimal level could results in default and financial distress. One of the most common reasons for the financial distress is inappropriate financing decisions. The study found that stock market development is better predicted through stock market volatility, market capitalization and trading of stocks in the market which notably explains the financial structure of the firm. An inrease in stock market volatility means that stock market is lesss developed but better market capitalization and trading valume indicates higher stock market development. Stock market volatility is worse indicator of stock market which could further worsen the market capitalization and trading volume; hence firm's operating efficiency is affected. So, the financial structure of the firm is disrtubed.

The aim of this study is to examine the relationship of stock market development with financing activities of firms in Pakistan. Pakistani equity market less developed due to high market volaitlity, less capitalization and trading of stocks in the market. Most of the firms were delisted due to inconsistent behavior of stock market and default in the payment of loans. A limited studies discussed the combination of stock market development towards the financial structure of firms in developing countries. The study extends the literature by taking three stock market development measures like stock market volatility, market capitalization of firms and trading volume that helps to define the financial structure of firms. Most of the studies used, short term debt long term debt and total debt as leverage measure but this study contributes through an additional leverage measure which is trade credit. Moreover, the defined relationship is tested through static models and the study contributes in a dyanmic panel model. Hence, this study depends on the explanation of pecking order and trade off theory because of its reliability as a well-recognized research in this specific topic.

LITERATURE REVIEW

Stock market plays a significant role in determining the financing choices of firms (Pagan, 1996). It might have different effect on firm's financing choices with variation in level of market development. High liquid stock markets smoothen the capital accumulation, long term growth and investment projects which helps them to maximize the shareholder's wealth (Busch, Bauer, & Orlitzky, 2016). The level of stock market development can be identified through stock market volatility, market capitalization and trading volume in the market. They plays a comprehensive role in financial structure of the firm. Market capitalization, trading volume and the turnover ratio are the indicators of the stock market development or performance (Agarwal & Mohtadi, 2004; Demirgüç-Kunt & Maksimovic, 1996).

The market size is an important indicator of stock market development. It is measured by market capitalization of firms as a ratio of GDP for stock market development (Beck & Levine, 2004). Market capitalization of firms stipulates the firm's ability towards efficient funds allocation and risk diversification (Sukcharoensin & Sukcharoensin, 2013). The funds availability in stock market is better for firms with higher market capitalization (Noor & Ali, 2015). The drivers of the market capitalization are the assets in terms of the prices and the risk associated with the cash flows. The better market capitalization help the firms to perform better in the market (Ewing & Thompson, 2016). Market capitalization of HOSE is positively related to volume of shares and is negatively related to the firm's financing structure (Tai, 2017). The change towards high market capitalization produces more financial resources to market that supports the businesses to issue more shares and increase their liquidity (Agarwal & Mohtadi, 2004). The debt maturity structure in capital market has positive relation with financial structure of firm (Thao & Daly, 2012).

Stock market volatility is another indicator of stock market development and it is usually measured as standard deviation of daily stock market indexes in the stock market. Volaility is measured in various ways like cash flow volatility, stock return volatility, earnings volatility, idiosyncratic volatility, stock market volatility. A greater volatility in stock market indicates the less developed stock market (Demirgüç-Kunt & Levine, 1996). A high volatility in stock shows the uncertainty in market which decrease the confidence level among investors and uncertainty about their investments (Baele & Soriano, 2010). It lower the firm's financial performance and decrease their ability to access the capital market (Dutt & Humphery-Jenner, 2013).

Chen, Wang, and Zhou (2014) concluded that stock return volatility reduces the leverage ratios from financial structure. Firms with high volatility in stock returns discourage the debt financing in order to avoid the default. Volatility of stock market persistently and negatively affects leverage ratios which induces to reduce the debt

burden from financial structure. Asset volatility is another indicator of reduction of leverage from financial structure that helps them to run the operations smoothly (O. Levine & Wu, 2014).

Earnings volatility is another firm specific volatility that enforce them to reduce the debt from financial structure that helps them to manage their financial policy (Fama & French, 2002). Firms that are having more level of volatility in their earnings use less leverage in their financing structure to save themselves potentially from cost of financial distress that is caused by inability to fulfil the financial obligations (Correa, Basso, & Nakamura, 2013). The high volatile stocks have the low financial performance that decreases the firm's ability to access the capital market. This increase in the cost of capital and high stock market volatility becomes the basis for the decrease in the firm's performance (Dutt & Humphery-Jenner, 2013). However, cash flow volatility is non-linearly related with proportional leverage measures that induce the reduction in debt and maturity structure (Keefe & Yaghoubi, 2016). But in some countries cash flow volatility does not have any relationship with financial structure (Mosavi, Karimipoua, Zarei, & Heidari, 2015).

Liquidity of stocks defines the trading volume which is used for stock market development. Theoretically, it refers to the buying and selling of stocks. The stock market liquidity is considered an essential concept that positively impacts the firm value and the entire economic structure (Amihud & Mendelson, 2008). It reduces the information asymmetry among the investors, shareholders, and managers where the investors can buy and sell their stocks quickly. Liquid stock markets efficiently improve the capital allocation and increase the long term growth of a firm. Firms having highly liquid stock and better trading volume can borrow the funds and sell equities to finance their investments which promotes their growth (Bayraktar, 2014). It contributes to capital formation and reduce the investment risk through portfolio diversification (Block & Hirt, 2002; R. Levine, 1991). Furthermore, the domestic stock market development in relation to stock liquidity increases the investment behaviour, thereby reduce the cost of equity capital (Bekaert & Harvey, 2000). This behaviour is more pronounced among the firms with high level of tradable shares that provides the avenue to raise long term funds with the sale of securities (Fang, Tian, & Tice, 2014).

The less liquid stock markets and trading volume inhabitants the corporate financing activities because volume of transactions is equally important as market capitalization (Booth, Kallunki, & Martikainen, 2001). The trading volume also indicates liquidity on the stock market (Demirgüç-Kunt & Maksimovic, 1996). It measures the transaction cost, develops greater efficiency and attract more investors. The volume and share value determines the ability of firms to raise equity. The total value of transaction quantities and the volume of shares shows the liquidity of stock market.

METHDOLOGY

The study aims to investigate the stock market development and financial structure of non-financial sector in Pakistan. The target population is non-financial firms and sample is consisted upon 100 non-financial firms. The reason of not getting the data from financial sector is because of requirement of capital reserve of the central bank. Furthermore, financial characteristics of financial sector are different as compared to non-financial sector (Basheer et al., 2014). Quantitative approach is used where secondary data on is obtained from published annual reports of firms listed in Pakistan Stock Exchange. The data is also obtained from the daily returns that are derived from the stock prices that are traded in stock exchange from 2008 to 2018. The financial data includes cash flow statement, income statement and statement of financial position aside with auditors and directors, reports issued by firms include in sample.

Data Estimation Method

GMM panel estimator is applied because it address the methodological issues in panel data. The leverage is endogenous variable because firm trade off the financial distress cost with tax benefits as suggested by trade off theory. This create the endogeneity problem in the model that presume to develop dynamic panel model. The difference GMM transform the regressors at first difference (Arellano & Bond, 1991) but it gives biased and poor precision in linear dynamic panel models. Moreover, weak instrument problems exist in difference GMM and variables would follows the random walk hypothesis (Blundell & Bond, 1998) which makes it an inappropriate estimation method. To overcome the weak instrument problems, system GMM is more appropriate which transform the regressors at level and first difference. This makes the more corrected standard errors and efficient estimates. Two step system GMM is applied for estimation and xtabond2 is used for this purpose (Basheer et al., 2019).

Econometric Model

This section of study explain the econometric model which is used for achieving the objectives of study. Financing policy is very important for every business. It is the mixture of debentures, equity share capital, long term loans, retained earnings, preference share capital and other long term sources of funds that are used to run the business. Moreover, stock market development is a significant factor explaining the financial structure of the firm. Keeping in view two corporate finance theories like pecking order theory and trade off theory, firm

maintain an optimal financial structure or follows the hierarchical patterns of financing. Firm trade off the financial distress cost with tax benefits while going for an optimal level of financial structure. This particular treats financial behaviour as endogenous in nature that enables us to develop a dynamic panel model.

$$FS_{it} = \beta_1 FP_{i,t-1} + \beta_2 SMD_{it} + \beta_3 Liq_{it} + \beta_4 Tang_{it} + \beta_5 Prof_{it} + \beta_6 NDTS_{it} + \beta_7 FS_{it} + \varepsilon_{it}$$

In the above equation FP_{it} is the dependent variable and it is the financial structure of a firm, which is measure through short term, long term, total debt and trade credit of the business. SMD_{it} is the stock market development of firm i at time t which is measured as market capitalization over GDP, annual standard deviation of daily stock market index and trading volume as ratio of GDP (Sulong, Saleem, & Ahmed, 2018). LIQ_{it} is the current ratio and is measured as current assets over current liabilities, $Tang_{it}$ is the property, plant and equipment as ratio of total assets, profit is the net income over total assets, $NDTS_{it}$ is the non-debt tax shield and is measured as depreciation over total assets, FS_{it} represents the firm size and is used as natural lag of total assets.

Variables calculation

Table 1: Variables Calculation

Variables	Measured by	Symbol	References
Dependent Variable Financial Structure	• Short term debt • Long term debt • Total debt • Accounts payable • Market Leverage	STD LTD TD A/P Mktlev	(Ahmed & Hla, 2019; Delcoure, 2007; Feidakis & Rovolis, 2007; Liu & Hou, 2019; Mukherjee & Mahakud, 2010)
Independent Variable Stock Market Development: • Market Capitalization • Stock market volatility • Trading volume	• Total stock market capitalization of the firms as a proportion of GDP. • Standard Deviation of Daily Market Price Index. • The total value of shares traded to GDP.	M Cap SMV TV	(Sulong et al., 2018)
Control Variables • Profitability • Tangibility • Liquidity • Non –debt tax shield • Firm size • Leverage	• Net Income to total assets • Fixed assets to total assets • Current assets to current liabilities • Depreciation expense to total assets • Log of Total sales • Total debt-to-equity ratio	Prof Tang Liq NDTS FS Lev	(Ahmed & Hla, 2019; Jiang, Shen, Lee, & Chen, 2021; Kayo & Kimura, 2011)

RESULTS AND DISCUSSION

This section shows the estimation results about the relationship between the variables and their discussions. The results related to descriptive statistics, correlation analysis and estimation results are presented in this part of study. It shows the testing of relationship and empirical hypothesis testing.

Descriptive Statistics

The descriptive statistics help to manage and present the distribution of variables. All the variables in this descriptive statistics represents that data is normally distributed with no outliers. Hence, it fulfil the regression assumption of normality in data. The results related to the descriptive statistics are shown in Table 4.1. It shows the average behavior, standard deviation, minimum and maximum observation of values.

The results indicated that the short term debt has an average value of 0.2977 with standard deviation 0.9560. It means that firms in Pakistan are maintaining average 29.77% short term debt of total assets. In Pakistan tax rate is very high that enforce the firms to go for short term debt financing for the purpose to gain tax benefits. The long term debt in the table shows the average value of 0.1662 while the standard deviation is 0.4801. It means that average long term debts are 16.6% of total assets. The total debt shows the average value of 0.5097 while the standard deviation is 0.9201. These findings suggested that average total liabilities of non-financial sector are 50.97% of their total assets. Average accounts payable of firms in Pakistan are 11.23% of total assets. Average market leverage is 0.4261 with standard deviation 0.7701. The minimum and maximum values of the market leverage are 0.1015 and 0.6144 respectively.

The results of the study represents that average market capitalization in non-financial sector of Pakistan is 22.39% of GDP while it has the standard deviation 0.5566. Moreover, average trading volume of firms in

Pakistan is 25.89% of GDP while the minimum and maximum trading volume is 0.0114 and 0.3810 respectively. Average stock market volatility is 0.4919 with standard deviation of 0.2727. Overall, the average behavior of control variables is within normal distribution and hence no outliers.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std.dev.	Min	Max
STD	1200	0.2977	0.9560	0.0750	0.4772
LTD	1200	0.1662	0.4801	0.1070	0.6030
TD	1200	0.5097	0.9201	0.1820	0.7846
AP	1200	0.1123	0.9671	0.0425	0.1670
Mktlev	1200	0.4261	0.7701	0.1015	0.6144
MCap	1200	0.2239	0.5566	0.0501	0.5230
TV	1200	0.2589	0.2888	0.0114	0.3810
SMV	1200	0.4919	0.2727	0.0450	0.9287
Prof	1200	0.0811	0.6814	-0.3671	0.7324
Tang	1200	0.4285	0.1899	0.2154	0.7778
Liq	1200	0.2399	0.2565	0.0870	2.7557
NDTS	1200	0.0965	0.0627	0.0560	0.2401
FS	1200	9.0663	0.6163	6.6232	15.5804

Note: The table shows the descriptive statistics of the variables used in the 2006–2017 models for non-utility firms and non-financial firms Until descriptive statistics are published, all variables used in the model are winsorized at 1 percent level in both distribution tails. Every column in the table lists measurements, mean, standard deviation, average, minimum, percentile 25, percentile 50, and percentile 75, respectively. Such figures are based on the variables short-term, long-term and overall debt ratios (book leverage), accounts payable, market leverage, amount of trading, volatility of the stock market, business risk. Profitability, tangibility, liquidity, company size and non-debt tax shield."

Correlation Analysis

The correlation analysis is the strength or direction of relationship between the variables of study. This direction of relationship might be perfect positive or perfect negative. The findings in relation to correlation analysis are presented in Table 4.2. All the variables in this correlation analysis are partially correlation, indicating no multicollinearity. It shows the rough picture about the relationship and it is difficult to draw the conclusion based on it.

Table 3: Correlation Analysis

	STD	LTD	TD	Ap	Mktlev	MCap	TV	SMV	Prof	Tang	Liq	NDTS	FS
STD	1.0000												
LTD	0.0318	1.0000											
TD	0.4317	0.2421	1.0000										
AP	0.0560	0.0499	0.0339	1.0000									
Mktlev	0.0337	-0.0143	-0.0451	0.0069	1.0000								
MCap	0.0541	0.0835	0.0904	0.0437	-0.0921	1.0000							
TV	0.0043	-0.0057	-0.0398	0.0496	-0.0532	0.0636	1.0000						
SMV	0.0107	-0.01	0.0104	-0.00	-0.030	0.0522	0.0412	1.0000					

		66		23	7								
Prof	-0.0423	-0.0912	-0.1226	0.0243	0.0100	-0.0085	0.0250	-0.0156	1.0000				
Tang	0.1542	0.2744	0.2459	0.0392	-0.0796	0.0257	0.0158	-0.0072	-0.0089	1.0000			
Liq	-0.0169	-0.0766	-0.0670	0.0833	0.0044	0.0567	0.0511	0.0401	0.0527	-0.0244	1.0000		
NDTS	0.0064	0.0068	-0.0742	-0.0952	0.0302	-0.0045	0.0407	0.0431	0.0038	0.0459	0.0668	1.0000	
FS	-0.0123	-0.0055	0.0762	-0.0316	-0.0969	0.1304	-0.0124	0.0603	0.1594	0.0178	0.0775	-0.0449	1.0000

Note: this table shows the matrix of association between variable dependent and explanatory variables. It shows the direction in which variables are related. The connection is between short-term, long-term and overall debt ratios (book leverage), accounts payable, market leverage, market capitalization, and amount of trade, volatility of the stock market, business risk, competitiveness, tangibility, liquidity, non-debt tax shield and corporate size

Financial Structure and Stock Market Development

The results related to effect of stock market development on financial structure of listed firms in Pakistan are presented in Table 4.3. The lagged dependent variable is shown as independent variable to make the model as dynamic. It is concluded based on the results that significance of lagged dependent variable ensure the dynamic panel model. The current financial decisions are dependent upon previous year's financial decisions. It shows the mean reversion behavior of financial structure where firm deviates from optimal financial structure and then with a faster speed of adjustment transition towards target level of financial structure. The deviation is due to current market situations but later the speed of adjustment helps them to establish an appropriate financial structure. Hence, these findings supports the trade-off theory of optimal financial structure.

Stock market capitalization as an indicator of stock market development is a significant factor of increase of leverage in financial structure of non-financial firms listed on Pakistan Stock Exchange. The findings suggested that stock market is developed for firms with better market capitalization and they prefers the debt financing their financial structure. These firms have better reputation in the market and more investors are attracted towards those firms. Moreover, they are in high profits due to high operational efficiency and better credit rating in the market. Financial institution grant them loans on easy terms and conditions due to low risk propensity. This particular situation induce them to go for debt financing while establishing the financial structure. In this way, they can achieve the shareholders wealth maximization. Therefore, it is concluded that market capitalization induce the firms to increase the debt level in their financial structure (Thao & Daly, 2012). However, the findings contradicts with (Fang et al., 2014) where higher market capitalization leads to equity financing.

Trading volume is another measure to stock market development which shows a noteworthy positive relation with financial structure of non-financial firms in Pakistan. Trading volume shows the liquidity position of stocks in the market. The liquid stocks can be easily buy and sell in market. The better trading volume indicates that stocks have better trading behavior in the market. Better liquidity of stock means stock market is well developed and companies in such markets prefers the debt financing. Firms operating in such markets are better in their operations and they can easily meet their debt obligations. They go for debt financing due to investment opportunities and tries to obtain the optimal financing policy. The stock market liquidity is considered an essential concept that has a positive impact on the firm value and the entire economic structure (Amihud & Mendelson, 2008). Firms having highly liquid stock and better trading volume can borrow the funds to finance their investments which promotes their growth (Bayraktar, 2014).

Stock market volatility shows a negative and significant relationship with the financial structure of firms in Pakistan. Volatility in stock market worsen the information asymmetries problem and is vulnerable for the financial system (Yartey & Adjasi, 2007). It creates the uncertainty in the market and firms operating in an uncertain environment face the risk in their operations. It adversely affects the market conditions and market value

of equity. Stock returns and stock prices have too much variation under such circumstances. Firms operating in uncertain market bear the high risk of decease in their earnings and investment. Moreover, financial institutions offer high interest rates to the firms needed finance. They also have decreased loan payment potential, and

default may result in high cost of financial distress. They also have high chances of default and bankruptcy. Therefore, it is indicated that high stock market volatility would lead the firms to decrease their debt financing. This decrease in debt financing would save them from default and financial distress cost. Smith and Yamagata (2011) found the positive impact of market volatility on leverage. Stock market development is a viable factor of external finance (Yartey & Adjasi, 2007). Overall, the findings are in support of trade off theory and pecking order theory.

Table 4: Estimation results between financial structure and stock market development

Financial Structure is the independent Variable in all the Columns					
Variables	**STD**	**LTD**	**TD**	**Trade Credit**	**Mktlev**
Lev $_{(t-1)}$	0.5747*** (0.0166)	0.516*** (0.0306)	0.6211*** (0.0239)	0.85431*** (0.0443)	0.2030*** (0.0677)
MCap	0.0139*** (0.0044)	0.040*** (0.112)	0.0344*** (0.0065)	0.04374*** (0.0185)	0.0278*** (0.0101)
TV	0.0104** (.0049)	0.058*** (0.020)	0.05296*** (0.0138)	0.0484* (0.0266)	0.1221*** (0.0280)
SMV	-0.0243*** (.0042)	-0.105*** (0.017)	-0.0562*** (0.0099)	-0.0744** (0.0382)	-0.0405** (0.0213)
Prof	0.0449*** (0.0095)	-0.0216 (0.0344)	-0.11312*** (0.0213)	0.1987*** (0.0708)	0.0701*** (0.0253)
Tang	0.1269*** (0.0073)	0.0486* (0.028)	0.1190*** (0.024)	-0.1452*** (0.0390)	-0.0222 (0.0312)
Liq	0.0197*** (0.0022)	0.0030 (0.014)	0.0320*** (0.0082)	0.0049 (0.0317)	-0.0038 (0.0248)
NDTS	0.0412 (0.0142)	-0.393*** (0.0916)	-0.2606*** (0.0625)	-0.3376** (0.1768)	-0.0958 (0.0982)
FS	0.0001 (0.0009)	0.0353*** (0.007)	0.0022 (0.0060)	-0.0431* (0.0234)	0.0094 (0.0133)
Cons	0.0260*** (0.0074)	0.2333*** (0.069)	0.18525*** (0.0575)	0.5956*** (0.2302)	0.2181* (0.1218)
AR(1)	0.000	0.000	0.000	0.000	0.000
AR(2)	0.456	0.283	0.099	0.949	0.854
Sargen/Hansen	0.865	0.418	0.414	0.795	0.821
No. of Instruments	71	76	93	61	61
No. of Groups	100	100	100	100	100

Note: The above table shows the estimation results and two step system GMM estimator is applied. MCap is the market capitalization of firm as GDP ratio, TV is the trading volume as GDP ratio, SMV is daily standard deviation of stock indexes, Prof is the net income to total assets, tang is fixed assets to total assets, Liq is current assets over current liabilities, NDTS is depreciation over total assets and FS is natural log of total assets. AR (1) is significant, AR (2) is insignificant, Hansent test is also insignificant which indicates that GMM is correctly specified and no over identification issues.

CONCLUSION

The study aims to find the nexus between stock market development and financial structure of non-financial firms listed in Pakistan. For this purpose, data is collected from annual financial statements of firms over the period 2008 to 2018. Two step System GMM estimator is applied for empirical testing of hypothesis. Three proxies of stock market development like stock market volatility, trading volume and market capitalization of firms are used. Short term debt, long term debt, total debt, trade credit and market leverage are used to identify the financial structure of the firms. The stock concluded that firm's market capitalization and trading are likely to increase the bool leverage and market leverage. Firm increases the level of debt in their financial structure due to the increase in market capitalization and trading volume. However, stock market volatility significantly decrease the debt from financial structure of firms. Overall, the study concluded that stock market development is a significant factor in defining the financial structure of firms, offering strong support for both pecking order and trade-off theories. It is strongly related to the financing policy, both economically and statistically. This study is very helpful for the corporate managers in proper decision making. A proper combination of debt and

equity is essential for the success and growth of a firm. In future, the research could be done with additional variables in financial sector and across the countries.

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