



## EFFECT OF FAMILY CONTROL ON CORPORATE FINANCING DECISIONS OF FIRMS: EVIDENCE FROM PAKISTAN

IMRAN YOUSAF

Air university school of management, AIR UNIVERSITY, ISLAMABAD  
E-mail: imranyousaf\_12@pide.edu.pk

SHOAIB ALI

Air university school of management, AIR UNIVERSITY, ISLAMABAD  
E-mail: shoaibali\_12@pide.edu.pk

ARSHAD HASAN

Dean of Management and Social Sciences Department, CAPITAL UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, ISLAMABAD  
Email: arshad@cust.edu.pk

Recibido: 23 de Febrero de 2019

Aceptado: 20 de Mayo de 2019

### ABSTRACT

This study examines the effect of family control on corporate financing of the firms in Pakistan over the period 2005 to 2017. Moreover, this study also investigates, whether family control moderates the impact of firm specific factors on corporate financing of the firms. This study is employed the GMM model for panel data estimation. The results of mean difference univariate analysis show that family firms are different from non-family firms based on different financial characteristics. Multivariate analysis results reveal that family control significantly impacts the corporate financing decisions of the firms. In addition, firm size, tangibility, profitability, non-debt tax shield, dividends and liquidity are found to be the important determinants of corporate financing decision of the firms. The moderation analysis reports that family control plays a significant moderating role between the relationship of firm's characteristics (i.e. size, tangibility and probability) and debt ratios of the firms in Pakistan. These findings reveal useful insights for investors, banks, regulator and business families of the Pakistan.

**Keywords:** Capital structure, Family firm, Non-family firms, Moderating effects, GMM.

### RESUMEN

Este estudio examina el efecto del control familiar sobre el financiamiento corporativo de las empresas en Pakistán durante el período de 2005 a 2017. Además, este estudio también investiga si el control familiar modera el impacto de los factores específicos de la empresa sobre el financiamiento corporativo de las empresas. Este estudio utiliza el modelo GMM para la estimación de datos de panel. Los resultados del análisis univariado de la diferencia de medias muestran que las empresas familiares son diferentes de las empresas no familiares en función de diferentes características financieras. Los resultados del análisis multivariado revelan que el control familiar afecta significativamente las decisiones de financiamiento corporativo de las empresas. Además, se considera que el tamaño de la empresa, la tangibilidad, la rentabilidad, la protección fiscal sin deuda, los dividendos y la liquidez son los determinantes importantes de la decisión de financiamiento corporativo de las empresas. El análisis de moderación informa que el control familiar desempeña un papel moderador significativo entre la relación de las características de la empresa (es decir, el tamaño, la tangibilidad y la probabilidad) y los índices de deuda de las empresas en Pakistán. Estos hallazgos revelan información útil para inversionistas, bancos, reguladores y familias de negocios de Pakistán.

**Palabras Clave:** Estructura de capital, Empresa familiar, Empresas no familiares, Efectos moderadores, GMM.

Clasificación JEL: G12, G32

## 1. INTRODUCTION

Capital structure decision is most important strategic decision of the firms, which is taken by the top-level management of the organization. Modigliani and Miller (1958) argue that value of the firm is not affected by the financing policy of the firm. This theory was difficult to be applicable in real world, because it has assumption of perfect capital markets. Many studies contradict the Modigliani and Miller Proposition of capital structure irrelevance. After that, many theories were presented in favor of capital structure relevance. Modigliani and Miller (1963) argue that financial leverage reduces weighted average cost of capital and increases the value of the firm. It is applicable when tax information is available. Furthermore, the tradeoff theory suggests moderate debt ratios. It says that the firm will borrow up to the point, where marginal benefit of debt (tax shields) is equal to marginal cost of debt. Tradeoff theory is based upon the cost of financial distress and agency cost (Romano and Tanewski, 2000). Many other theories of Agency cost theory (Jensen and Meckling, 1976), pecking order theory (Myers and Majluf, 1984), market timing theory (Baker and Wurgler, 2002) were presented in favor of capital structure relevance. Thus, capital structure significantly affects the value of the firm.

The corporate financing of family firms is important dimension for analysis in Pakistan. Because, majority of firms in Pakistan are family firms. Some studies reveal that family firms maintain high debt ratio as compare to non-family firms, while some studies find that family firms maintain lower debt ratio as compare to non-family firms. Thus, this is a puzzle that whether family firms maintain high debt ratio or not as compare to non-family firms. The objective of study is to examine the effect of family control on corporate financing policy of the firms in Pakistan. Moreover, this study also investigates, whether family control moderates the impact of firm specific factors on corporate financing policy of the firms.

Many theories and empirical evidences claim that family firms maintain high debt ratio. Capital structure of family firms depends upon level of agency conflicts. Family firms use more debt as compare to non-family firms to reduce the negative consequences of altruism within the firm and to control the self-interest of family agents. The firm's resources are used to fulfill the self-interests of the family through employment, incentives and privileges that they otherwise would not receive (Schulze et al. 2001). Gomez-Mejia et al. (2001) argues that family firms have higher agency cost due to retaining of incompetent family members in management. Family firms are found to be hesitant to fire incompetent family members due to personal relationship. Consequently, agency costs increase and decrease the efficiency of firm. King and Santor (2008) find that family ownership affects the capital structure of Canadian firms.

Nenova (2006) argue that family firms use high debt ratio to maintain their control over the firm. Maintaining high debt is riskier, because high debt increases the risk of bankruptcy. Moreover, family block holders maintain high debt ratio to take some benefit from firm, such as to use these cash flows for family private benefits. When cash flows used by family for privates' benefits, then family firm need more external finance in form of debt, due to less internal funds to fulfill the financing needs of firm (Rubecca Duggal, 2010).

In contrast, many theories and empirical evidences claims that family firms maintain less debt ratio as compare to non-family firms. Gallo et al. (2004) argue that family firms maintain lower debt ratio as compare to non-family firms. Financial risk aversion behavior of family firms is one of the main reasons behind maintaining low debt ratio. (Poutziouris, 2001) test the pecking order hypothesis of Myers and Majluf (1984), and explain that family firms maintain low debt ratio, because hypothesis suggest that managers will finance assets with lower cost financing option. Family firms in UK follow pecking order principle of financing (Poutziouris, 2001). Furthermore, family firms have lower portfolio diversification as compare to non-family ownership such as institutional block holders have high portfolio diversification (Andreson and Reeb, 2003a). Due to low portfolio diversification, family firms face high risk, thus family firms compensate this high risk by reducing leverage.

Overall, some studies support high debt ratio and some support low debt ratio of family firms as compare to non-family firm. But, this study differentiate itself based upon three factors. First, this study analyses the impact of family control on corporate financing policy of the firms in Pakistan, which is not yet explored in Pakistan. Furthermore, it is also unexplored area to find, whether family

control moderates the impact of firm specific factors on corporate financing policy of firms in Pakistan. Second, this study will contribute to the body of literature by studying impact of family control on corporate financing policy in the context of emerging economy like Pakistan. It is important to study this dimension in Pakistan, because majority companies in Pakistan are family based.

Overall, this study examines the impact of family control on corporate financing policy of the firms in Pakistan. The sample data of 102 non-financial firms is used from 2005 to 2017. This study uses a GMM model for panel data analysis. This paper has been structured as follows: Section 1 is introduction. Section 2 provides an overview of existing literature on the subject. Section 3 explains the data, variables and methodology employed during empirical work. Section 4 presents and discusses the findings of the study. Finally, Section 5 briefly concludes the whole discussion.

## 2. LITERATURE REVIEW

Corporate financing decision is the one of the key strategic decision of the firm and previous studies explain that many characteristics of the firms affect the capital structure, such as family ownership, size, tangibility, profitability, dividends, non-debt tax shield, past earnings and liquidity. This section explains about the theoretical and empirical relationship between capital structures and its determinants (including family ownership).

### 2.1. Family Ownership

According to agency conflicts theory, agency conflicts may arise between firm's shareholders and managers when interests of both stakeholders are different from each other, and agency cost is high in presence of agency conflicts. But in view of agency theory, family owned firms are believed to be more beneficial than non-family firms, because owner and management are same in family owned firms. Ang et al. (2000) argue that family firms are used as solid proposition to represent non-conflicting firms with zero agency costs. McCounaughy (2000) and Anderson et al. (2003b) suggest that incentive structure in family firms creates fewer conflicts between different stakeholders of firms than non-family firms.

Andereson and Reeb (2003a) argue that two main characteristics of family firms may affect capital structure of family firms. First, family firms' shareholders do not hold well diversified portfolio due to financial constraints, while non-family firms' shareholders usually hold well diversified portfolio. Family firms' shareholders demonstrate risk averse behavior and debt uses as a tool to reduce risk, because when firms maintain less debt then cost of financial distress is low and vice versa. Family maintains low level of leverage because large proportion of wealth of family firms is at high risk due to undiversified portfolio of family firms. This characteristic explains that family firms maintain lower leverage as compare to non-family firms. Gallo et al. (2004) confirms that family firms maintain lowers leverage as compare to non-family firms because family firms are risk averse. According to trade off theory, there is a tradeoff between cost of financial distress and tax benefits; and these risk averse family firms reduces leverage and in results cost of financial distress also decreases, thus these firms may behave according to trade off theory, but very scarce empirical evidences find in literature about this assumption (Romano Tanewski and smyrnios, 2001).

Second, family firms focus on long term survival because family firms want to transfer the business to next generation. For long term survival and to avert from takeover attempt, family firms tend to be retaining control and concentrate voting power by maintaining high debt ratio in firm; instead of issuing new equity, which in results dilute ownership. Therefore, desire to 'retain control' affects the leverage decision (Anderson and Reeb, 2003a). Family firms follow pecking order theory in financing preferences, at first family firms use retained earning then debt and as a last resort, new issue of ordinary shares, because family firms want to maintain control (Chen and Ye, 2007). Poutzioris, (2001) find that when internal funds are insufficient than debt prefer to equity to fulfill financing need in family firm to retain control. On one hand 'risk reduction' desire motivates family towards maintaining low leverage, while 'retain control' objective motivates towards maintaining high leverage. Keasey et al. (2015) find that mature and young family businesses are less willing to dilute control and prefer to finance their investment with debt over equity. Ramalho et al. (2018) find that

family ownership is positively correlated with leverage of the firms. Based on family vs non-family ownership, it is hypothesized that

Hypothesis No. 1: Family firms maintain high leverage as compare to non-family firms.

## **2.2. Size**

Large size firms are more diversified and having lower bankruptcy risk as compare to small size firms (Titman and Wessels, 1988). Hence, borrowing cost can be low for large size firms, because of having low risk of default and high bargaining power over creditors. According to trade off theory, when cost of leverage decreases, it allows the firms to increase leverage. Therefore, this theory explains positive association between leverage and size of firms, because large size firms having lower cost of borrowing as compare to small size firms. Many empirical studies such as Marsh (1982) and De Jong et al. (2008) find positive relationship between leverage and size. Booth et al. (2001) also finds positive relationship between leverage and size of firm in study of developing countries. Based on past findings, it is hypothesized that

Hypothesis No. 2: Size of the firm is positively associated with the capital structure of the firms.

## **2.3. Tangibility of Assets**

Cost of borrowing becomes lower for firms having more physical or tangible assets, because tangible assets can be utilized as collateral. Furthermore, high asset tangibility lowers the creditor's risk. According to agency costs theory of Jensen and Meckling (1976), conflicts between lender and shareholder exists, and lender face agency cost, because firm may invest in riskier projects by borrowing from lender. This lender's risk of suffering agency cost of debt can be mitigated by firm's pledging fixed assets as collaterals against borrowing, thus companies having more physical or fixed assets can borrow more from lenders (Ross et al. 2008). Hence, agency theory explains about positive association between assets' tangibility and debt.

Booth et al. (2001) argue that ability of a firm to issue secured debt is high, if it owns more tangible assets. Titman and wessels (1988) conclude that there is a positive association between tangible assets and leverage. Rajan and Zingales (1995) find that assets tangibility positively affects the leverage of the firm. De jong (2008) suggests a positive correlation between fixed assets and leverage. Shah and Khan (2007) find positive relationship between tangibility of assets and leverage in firms of Pakistan. Bennet and Donnelly (1993) confirms about positive association between tangibility and leverage. In contrast, Booth et al. (2001) conducted study in ten emerging countries (including Pakistan), and find that there is a negative association between the asset's tangibility and leverage. Therefore, mix evidence is existed in literature related to the relationship between tangibility and leverage. Based on past findings, it is hypothesized that

Hypothesis No. 3: Tangibility of the firm affects the capital structure of the firms.

## **2.4. Profitability**

According to pecking order theory, firms use internal financing option of using retained earnings at first, then uses external financing option of debt, and lastly issue equity to full their financing needs (Myer et al. 1984). This show that firm with insufficient profit prefer to borrow debt then issue equity securities if financing need is not fulfilled by debt borrowings. Pecking order theory explains a negative association between profitability and leverage of firm, because more profitable firms will need less debt to finance investments. Rajan and Zingales (1995) observe a negative association between firm's profitability and leverage. Ozkan, (2001) confirms about negative association between profitability and leverage. Wiwattanakantang et al. (1999) and Booth et al. (2001) find negative association between profitability and leverage in emerging economies.

In contrast, trade off theory explains positive association between firm's profitability and leverage. According to trade off theory, firms identify target debt ratio by comparing costs and benefits of leverage. Leverage's cost is financial distress, while benefit of leverage is tax shield. Frank and Goyal (2009) argues that cost of financial distress becomes low and tax shield becomes more valuable for those firms, which are more profitable. More benefit of tax shield can attain by maintaining high debt. This shows that positive relationship between profitability and firm's leverage. (Jensen, 1986) predicts that high debt can be used to restrain management discretion for those firms having high profits or

cash flows. Therefore, trade off theory and agency cost predicts positive association of profitability and leverage. Based on past findings, it is hypothesized that

Hypothesis No. 4: Firm's Profitability impacts the capital structure of the firms.

## 2.5. Dividends

According to pecking order theory, firms with higher dividends payout ratio are experiencing the higher debt in their capital structure. Dividend payments to the shareholders reduce the amount of internal funds. When internal funds are insufficient to fulfill their financing needs, then firms borrow funds to fulfill their financing needs. Thus, this theory predicts positive relationship between the dividends and leverage of firms. (Tong and Green, 2005; Baskins, 1989) confirm the positive association between dividends and leverage of the firms.

Debt financing and dividend payments can be used as two alternative approaches to tackle the agency cost of free cash flows problem. According to agency theory, agency costs of free cash flow problems decrease with the increases of borrowing of firms. Hence, when firm borrow more to reduce agency costs, then firms leaves fewer amount to pay dividend, because large amount of interest pays against large amount of borrowings. In addition, large dividends payout can also reduce the security of bondholders or creditors. Therefore, this shows a negative relationship between dividends and leverage of firms. Trade off theory also proposed negative association between dividend and leverage of firms due to higher costs of bankruptcy. Allen and Mizuno (1989) find that when firm faces high fixed charges of financing, then firm might not pay dividends to shareholders of the firm. Frank and Goyal (2009) explains that 'dividend paying firms' have lower leverage level as compare to firms that don't or less pay dividends. Fama and French (2002) also finds negative association between the dividend payments and leverage of firms. Based on past findings, it is hypothesized that

Hypothesis No. 5: Dividends of the firm positively affect the capital structure of the firms.

## 2.6. Non-debt tax shield

Many studies explain the positive association between non-debt tax shield and leverage of firm. Bradley (1984) argue that non-debt tax shield can be used as measure of firm's assets securitability in terms of debt collateral, thus firms with more securable assets can get debt financing at lower cost as having less risk. Wald (1999) and Delcoure (2007) also confirm the positive relationship between non-debt tax shields of firm.

Hypothesis No. 6: Non-debt tax shield positively affect the capital structure of the firms.

## 2.7. Liquidity

Pecking order theory explains that firms that have more liquid assets maintain lowers amount of leverage. Liquid assets such as cash and cash equivalents are the part of internal funds. When sufficient internal funds are available to fulfill financing needs of investment, then there is no need of external finance through debt or equity. Hence, this theory predicts an inverse relationship between leverage and liquidity of the firms (Myers, 1984). Myers and Rajan (1998) find negative association between liquidity and leverage of the firms. Ozkan (2001) also finds a significant inverse association between liquidity and leverage. Based on past findings, it is hypothesized that

Hypothesis No. 7: Liquidity of firm negatively affect the capital structure of the firms.

## 3. RESEARCH METHODOLOGY

### 3.1. Data description

This study explores the effect of family control on capital structure of the firms in Pakistan. The population of study comprises of non-financial listed firms on Karachi Stock Exchange (KSE) and sample of study consists of 102 non-financial listed companies. Out of these 102 firms, 53 firms are family firms, while 49 firms are non-family firms. These sample firms are chosen from the 19 non-financial sectors of Pakistan and industry wise distribution of full sample is given in Table 1. The annual data is used for analysis and sample period of study is from 2005 to 2012. The financial data is taken from "Balance sheet analysis of stock exchange listed firms" published by State bank of

Pakistan, while data of family ownership are taken from annual financial reports of selected companies.

**Table 1:** *Distribution of the full sample by industry*

Industry description	Family firms	Non-family firms	% Family firms
Personal Goods (Textile)	17	2	89.4
Construction and Materials	4	5	44.4
Electricity	1	4	20
Travel and Leisure	2	1	66.6
General Industrials	4	1	80
Automobile and Parts	5	1	83.3
Food Producers	7	3	70
Engineering	1	1	50
Forestry (Paper and Board)	2	1	66.6
Chemicals	5	4	55.5
Pharma and Bio Tech	2	4	33.3
Household Goods	2	1	66.6
Fixed Line Telecommunication	1	3	25
Tobacco	0	2	0
Industrial Transportation	0	1	0
Oil and Gas	0	11	0
Multiutilities (Gas and water)	0	2	0
Electronic and Electrical Goods	0	1	0
Software and Computer Services	0	1	0
<b>Total</b>	<b>53</b>	<b>49</b>	

### 3.2. Model

This study uses the panel data framework to analyze the effect of family control on corporate financing decisions of the firms. This study is using the balanced panel data of 102 cross sectional firms over the 13-year period. The Panel data analysis assists to investigate time series as well as cross sectional data simultaneously. This study uses the Generalized Method of Moments (GMM) model. Because, GMM model is the efficient analytical method, which can handle the econometric problems of endogeneity and omitted variable biasness. The lag dependent and explanatory variables are used as instruments, following Arellano and Bond (1991).

The functional form of our models is as follows

$$\begin{aligned}
 Lev_{it} = & \alpha_0 + \alpha_1(FD)_{it} + \alpha_2(Size)_{it} + \alpha_4(Tangibility)_{it} + \alpha_3(Prof)_{it} \\
 & + \alpha_5(Dividends)_{it} + \alpha_6(NDTS)_{it} + \alpha_7(Past Earnings)_{it} \\
 & + \alpha_9(Liquidity)_{it} + u_{it}
 \end{aligned}$$

Many family firms' definitions are available in the literature. Villalongs and Amit (2006) explain that family firm is the firm in which founder or family member is officer, director; or owns at least 5 percent of firm's equity. (Barth et al., 2005) define family firm if at least 33% of the shares of the firm are owned by one person or one family. This study defines the family firm as the firm which fulfill (a) and (b) condition or solely (c) Condition; (a) At least two individuals related by blood or marriage are directors (or CEO) of the firm; (b) Individuals from family owns at least 20 percent of shareholdings; (c) if at least 33% of the shares of the firm are owned by one person or one family. Firm is categorized

as family firm which fulfills the both (a) and (b) conditions or solely (c) Condition and all other firms categorized as non-family firms.

Three ratios such as “total debt to total assets”, “long term debt to total assets” and “short term debt to total assets” are used as proxy of capital structure of the firm. FD denotes family dummy that equal 1 for family firm and 0 otherwise. Natural logarithm of total assets is used as a proxy of firm size. Fixed assets divided by total assets is used as measure of tangibility. Return on assets is used as a proxy of profitability. Dividend scaled by total equity is used as a proxy of dividends. Depreciation expense scaled by the total assets is used as proxy of non-debt tax shields. Retained earnings scaled by total assets is used as a measure of past earnings. The ratio of current assets to current liabilities is used to measure the liquidity of firm.

## 4. EMPIRICAL RESULTS

### 4.1. Descriptive statistics and analysis

#### 4.1.1. Summary statistics and Correlation Matrix

Table 2 exhibits that debt ratio full, family and non-family firm’s sample. The average total debt ratio is higher for family firms as compare to non-family firms. Moreover, it reveals that debt is major source of financing in non-financial listed firms of Pakistan as compare to equity, because debt ratio is 59.7% in overall sample. This study uses total debt, long term debt and short-term debt ratios as proxies of leverage. The average long-term debt ratio is higher for family firms than non-family firms. However, the average short-term debt ratio of family firms is lower as compare to non-family firms. Thus, family and non-family Pakistani firms rely more on short term debt as compare to long debt, because average short-term debt ratio is higher as compare to long term debts in both family and non-family firms. Moreover, the mean value of tangibility is higher for family firm’s as compare to non-family firms. The mean and standard deviation of non-family firm’s profitability (ROA) is higher than family firms. In addition, the mean value of dividend is higher for non-family firms as compare to family firms. Lastly, mean value of liquidity is higher in family firms as compare to non-family firms in Pakistan.

**Table 2: Summary Statistics**

<b>Panel A: Summary statistics for the full sample</b>										
	<b>TD/TA</b>	<b>LTD/TA</b>	<b>STD/TA</b>	<b>SIZE</b>	<b>TANG</b>	<b>ROA</b>	<b>DIV</b>	<b>NDTS</b>	<b>RE/TA</b>	<b>LIQ</b>
<b>Mean</b>	0.597	0.13	0.467	15.788	0.481	0.054	0.079	0.025	0.204	1.832
<b>Median</b>	0.582	0.081	0.429	15.777	0.483	0.045	0.016	0.021	0.262	1.155
<b>Maximum</b>	9.134	1.001	9.134	20.257	0.974	1.912	6.956	0.646	0.884	138.53
<b>Minimum</b>	0.007	0	0.007	8.536	0	-0.72	-0.07	0	-10.49	0.024
<b>Std. Dev.</b>	0.43	0.148	0.412	1.781	0.217	0.129	0.294	0.036	0.566	5.487
<b>Obs.</b>	1212	1212	1212	1212	1212	1212	1212	1212	1212	1212
<b>Panel B: Summary statistics for the family firm’s sample</b>										
	<b>TD/TA</b>	<b>LTD/TA</b>	<b>STD/TA</b>	<b>SIZE</b>	<b>TANG</b>	<b>ROA</b>	<b>DIV</b>	<b>NDTS</b>	<b>RE/TA</b>	<b>LIQ</b>
<b>Mean</b>	0.607	0.146	0.462	15.157	0.526	0.038	0.033	0.025	0.184	2.01
<b>Median</b>	0.574	0.106	0.408	15.164	0.536	0.029	0.004	0.024	0.237	1.112
<b>Maximum</b>	9.134	1.001	9.134	18.592	0.974	1.912	3	0.646	0.884	138.53
<b>Minimum</b>	0.007	0	0.007	8.536	0	-0.52	-0.07	0	-10.49	0.024
<b>Std. Dev.</b>	0.517	0.138	0.51	1.454	0.193	0.122	0.145	0.033	0.655	7.52
<b>Obs.</b>	630	630	630	630	630	630	630	630	630	630

**Panel C: Summary statistics for the non-family firm's sample**

	TD/TA	LTD/TA	STD/TA	SIZE	TANG	ROA	DIV	NDTS	RE/TA	LIQ
<b>Mean</b>	0.586	0.113	0.473	16.472	0.432	0.073	0.128	0.024	0.226	1.639
<b>Median</b>	0.592	0.046	0.457	16.672	0.423	0.068	0.047	0.015	0.274	1.229
<b>Maximum</b>	1.954	0.875	1.827	20.257	0.923	0.423	6.956	0.458	0.836	8.737
<b>Minimum</b>	0.076	0	0.073	11.372	0	-0.72	0	0	-3.524	0.098
<b>Std. Dev.</b>	0.309	0.156	0.268	1.85	0.23	0.133	0.39	0.04	0.45	1.204
<b>Obs.</b>	582	582	582	582	582	582	582	582	582	582

Table 3 reveals the correlation matrix of different key variables of the study. Results reveal that firm size and tangibly are positively and significantly correlated with long term debt, while negatively and significantly correlated with short-term debt. Moreover, firm's profitability and dividends are negatively and significantly correlated with total, long term and short-term debt. Non-debt tax shield of firm is positively and significantly correlated with long term debt of the firms. Lastly, firm's liquidity is negatively correlated with the total, long and short-term debt of the firms.

**Table 3: Pearson Correlation Matrix**

Correlation	TD/TA	LTD/TA	STD/TA	Size	Tang	ROA	Div	NDTS	RE/TA	Liq
<b>TD/TA</b>	1									
	----									
<b>LTD/TA</b>	0.395	1								
	(0.000)	----								
<b>STD/TA</b>	0.831	-0.086	1							
	(0.000)	(0.003)	----							
<b>Size</b>	0.033	0.180	-0.072	1						
	(0.252)	(0.000)	(0.012)	----						
<b>Correlation</b>	<b>TD/TA</b>	<b>LTD/TA</b>	<b>STD/TA</b>	<b>Size</b>	<b>Tang</b>	<b>ROA</b>	<b>Div</b>	<b>NDTS</b>	<b>RE/TA</b>	<b>Liq</b>
<b>Tang</b>	0.051	0.611	-0.278	0.185	1					
	(0.075)	(0.000)	(0.000)	(0.000)	----					
<b>ROA</b>	-0.538	-0.305	-0.389	0.096	-0.238	1				
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	----				
<b>Div</b>	-0.355	-0.238	-0.216	0.241	-0.229	0.596	1			
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	----			
<b>NDTS</b>	0.044	0.142	-0.039	-0.124	0.182	0.003	-0.045	1		
	(0.124)	(0.000)	(0.170)	(0.000)	(0.000)	(0.919)	(0.116)	----		
<b>RE/TA</b>	-0.607	-0.287	-0.431	0.083	-0.219	0.428	0.391	-0.027	1	
	(0.000)	(0.000)	(0.000)	(0.004)	(0.000)	(0.000)	(0.000)	(0.351)	----	
<b>Liq</b>	-0.587	-0.363	-0.570	-0.047	-0.339	0.438	0.378	-0.124	0.535	1
	(0.000)	(0.000)	(0.000)	(0.099)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	----



#### 4.1.2. Mean difference univariate analysis

Table 4 represents the results of difference of mean test for family and non-family firm's variables. The univariate analysis shows that family firms behave differently than non-family firms in several aspects. Family firms maintain significantly higher total debt and long-term debt level in capital structure as compare to non-family firms, which is consistent with results of (Nenova, 2006). Moreover, the difference between the short-term debt ratio of family and non-family firms is not statistically significant at 10 percent level. Size, profitability and dividends of family firms are significantly lower than non-family firms. In addition, tangibility and liquidity of the family firms is significantly found to be higher as compare to non-family firms in Pakistan.

**Table 4: Difference of mean test for family and non-family firms**

	<u>All</u>	<u>Family</u>	<u>Non-Family</u>	<u>t-statistic (2)- (3)</u>
	1	2	3	4
<b>TD/TA</b>	0.597	0.607	0.586	1.753*
<b>LTD/TA</b>	0.130	0.146	0.113	3.876***
<b>LTD/TA</b>	0.467	0.462	0.473	-0.828
<b>SIZE</b>	15.788	15.157	16.472	-14.515***
<b>TANG</b>	0.481	0.526	0.432	8.177***
<b>ROA</b>	0.054	0.038	0.073	-4.764***
<b>DIV</b>	0.079	0.033	0.128	-6.056***
<b>NDTS</b>	0.025	0.025	0.024	1.258
<b>RE/TA</b>	0.204	0.184	0.226	-1.264
<b>LIQ</b>	1.832	2.010	1.639	1.991*

Note: This table provides the results of difference of means tests for key variables between family and non-family firms. The sample comprises the 53 family and 49 non-family firms and covers 2005 through 2017.

\* Significance at 10% level.

\*\* Significance at 5% level.

\*\*\* Significance at 1% level.

#### 4.2: Multivariate Regression Analysis

The regression results are given in Table 5, 6 and 7. This study uses three proxies of leverage as dependent variable. It estimates the results by using Generalized Method of Moments (GMM), which is reported in Model 1 to Model 5. For robustness check, it estimates the regressions by using ordinary least square technique and Random Effect model. The results of OLS model and Random effect model are reported in Model 6 and Model 7 respectively.

Table 5 reports the results of total debt determinants. Model 1 reveal that family control has significantly positive impact on total debt ratio. This coefficient shows that family firms maintain significantly higher total debt ratio as compare to non-family firms in Pakistan. An explanation of this result is that family firms may keep high debt ratio to maintain control over the firm or to avoid dilution of ownership of the firm (Nenova, 2006). Another possible explanation is that when family firms use cash flows for private benefits, then family firm need more external finance in form of debt to fulfill the financing needs of the firm, due to this reason, there is positive association between family ownership and leverage of the firms (Rubecca Duggal, 2010). Moreover, the firm size, profitability, dividend and non-debt tax shield significantly and positively affect the total debt ratio of the firms. However, tangibility, past profitability, and liquidity significantly and negatively impact the total debt ratio of the firms in Pakistan.

Model 2-5 reveal the moderating effect of family control on relation of firm size, tangibility, profitability and dividend on the total debt ratio of the firms. Model 2 reports that the interaction

coefficient of  $FD*Size$  is significantly negative, showing that family control plays moderating role between the relationship of size and total debt ratio. The effect of firm size ( $0.253-0.635=-0.382$ ) on total debt ratio is negative for family firms, while effect of firm size (0.253) on total debt ratio is positive for non-family firms. Model 3 reports that the interaction co-efficient of  $FD*Tang$  is found to be significantly positive, showing that family control plays a moderating role between the relationship of tangibility and total debt ratio. The effect of tangibility ( $-2.146+4.207=2.061$ ) on total debt ratio is found to be positive for family firms, while effect of tangibility (-2.146) on total debt ratio is negative for non-family firms. Model 4 reveals that interaction co-efficient of  $FD*ROA$  is found to be significantly positive, showing that family control plays a moderating role between the relationship of profitability and total debt ratio of the firms. The effect of profitability ( $-3.354+6.183=2.829$ ) on total debt ratio is found to be positive for family firms, while effect of profitability (-3.354) on total debt ratio is negative for non-family firms. Model 5 reveals that interaction co-efficient of  $FD*DIV$  is found to be insignificant, showing that family control does not play a moderating role between the relationship of dividends and total debt ratio of the firms.

Table 6 shows the results of long-term debt determinants. Model 1 reveal that long-term debt ratio is positively and significantly affected by the family control. This coefficient shows that family firms maintain significantly higher long-term debt ratio as compare to non-family firms in Pakistan. Moreover, the firm size, tangibility, dividend and non-debt tax shield significantly and positively affect the long-term debt ratio of the firms. However, profitability, past earnings and liquidity significantly and negatively affect the long-term debt ratio of the firms in Pakistan.

Model 2 reveals that the interaction coefficient of  $FD*Size$  is significantly negative, showing that family control plays moderating role between the relationship of size and long-term debt ratio of the firms. The effect of firm size ( $0.548-1.555=-1.007$ ) on long-term debt ratio is negative for family firms, while effect of firm size (0.548) on long-term debt ratio is positive for non-family firms. Model 3 shows that the interaction co-efficient of  $FD*Tang$  is found to be significantly negative, showing that family control plays a moderating role between the relationship of tangibility and long-term debt ratio of the firms. The effect of tangibility ( $2.411-4.937=-2.526$ ) on long-term debt ratio is found to be negative for family firms, while effect of tangibility (2.411) on long-term debt ratio is positive for non-family firms. Model 4 reports that interaction co-efficient of  $FD*ROA$  is found to be significantly positive, showing that family control plays a moderating role between the relationship of profitability and long-term debt ratio of the firms. The effect of profitability ( $-5.802+12.301=6.499$ ) on long-term debt ratio is found to be positive for family firms, while effect of profitability (-5.802) on long-term debt ratio is negative for non-family firms. Model 5 reveals that interaction co-efficient of  $FD*DIV$  is found to be insignificant, showing that family control does not play a moderating role between the relationship of dividends and long-term debt ratio of the firms.

Table 7 reveals the results of short-term debt determinants. Model 1 reveal that family control positively and significantly impacts the short-term debt ratio of the firms. Moreover, the firm size, profitability, dividend and non-debt tax shield significantly and positively affect the short-term debt ratio of the firms. However, tangibility, past earnings and liquidity significantly and negatively affect the short-term debt ratio of the firms in Pakistan.

Model 2 shows that the interaction coefficient of  $FD*Size$  is significantly negative, showing that family control plays moderating role between the relationship of size and long-term debt ratio of the firms. The effect of firm size ( $0.364-1.031=-0.667$ ) on short-term debt ratio is negative for family firms, while effect of firm size (0.364s) on short-term debt ratio is positive for non-family firms. Model 3 shows that the interaction co-efficient of  $FD*Tang$  is found to be significantly positive, showing that family control plays a moderating role between the relationship of tangibility and short-term debt ratio of the firms. The effect of tangibility ( $-2.561+4.319=1.758$ ) on short-term debt ratio is found to be positive for family firms, while effect of tangibility (-2.561) on long-term debt ratio is negative for non-family firms. Model 4 reports that interaction co-efficient of  $FD*ROA$  is found to be significantly positive, showing that family control plays a moderating role between the relationship of profitability and short-term debt ratio of the firms. The effect of profitability ( $-8.164+13.046=4.882$ ) on short-term debt ratio is found to be positive for family firms, while effect of profitability (-8.164) on short-term debt ratio is negative for non-family firms. Model 5 reveals that interaction co-efficient of  $FD*DIV$  is found to be insignificant, showing that family control does not play a moderating role

between the relationship of dividends and short-term debt ratio of the firms. Overall, results show that family control positively affect the total, long-term and short-term debt ratio of the firms in Pakistan. In addition, family control moderates the impact of size, tangibility and profitability on debt ratios of the firms in Pakistan.

## 5. CONCLUSIONS

The study empirically examines the effect of family control on corporate financing decision of the firms in Pakistan. Moreover, this study also investigates, whether family control moderates the impact of firm specific factors on leverage of the firms. This study is employed the GMM model for panel data estimation.

This study finds that family firm's total and long-term debt ratio is higher as compare to non-family firms. In univariate analysis, this study reveals a significant difference between total and long-term debt ratio of family and non-family firms. Moreover, Size, profitably and dividends of family firms are significantly lower than non-family firms. In addition, tangibility and liquidity of the family firms is significantly found to be higher as compare to non-family firms in Pakistan.

In multivariate analysis, family control has significantly positive impact on total, long-term and short-term debt ratio of the firms. Thus, family control is found to be the one of the important determinants of financing decision in Pakistani firms. Moreover, the firm size, dividend and non-debt tax shield significantly and positively affect the total, long-term and short-term debt ratio of the firms. In contrast, past profitability and liquidity negatively affect the total and long-term debt ratio of the firms in Pakistan. In addition, profitability significantly and positively affects the total and long-term debt ratio, while negatively affect the short-term debt ratio of the firms. However, firm's tangibility significantly and negatively affects the total and short-term debt ratio, while positively affects the long-term debt ratio of the firms. The moderation analysis shows that family control plays a significant moderating role between the relationship of firm's characteristics (i.e. size, tangibility and probability) and debt ratios of the firms in Pakistan. These findings provide useful insights for investors, banks, regulator and business families of the Pakistan.

## REFERENCES

- ALLEN, D. E., & MIZUNO, H. (1989). The determinants of corporate capital structure: Japanese evidence. *Applied Economics*, 21(5), 569-585.
- ANDERSON, R. C., & REEB, D. M. (2003a). Founding-Family Ownership, Corporate Diversification, and Firm Leverage\*. *Journal of Law and Economics*, 46(2), 653-684.
- ANDERSON, R. C., MANSI, S. A., & REEB, D. M. (2003b). Founding family ownership and the agency cost of debt. *Journal of Financial economics*, 68(2), 263-285.
- ANG, J. S., COLE, R. A., & LIN, J. W. (2000). Agency costs and ownership structure. *The Journal of Finance*, 55(1), 81-106.
- BAKER, M., & WURGLER, J. (2002). Market timing and capital structure. *The journal of finance*, 57(1), 1-32.
- BASKIN, J. (1989). An empirical investigation of the pecking order hypothesis. *Financial management*, 26-35.
- BENNETT, M., & DONNELLY, R. (1993). The determinants of capital structure: some UK evidence. *The British Accounting Review*, 25(1), 43-59.
- BOOTH, L., AIVAZIAN, V., DEMIRGUC-KUNT, A., & MAKSIMOVIC, V. (2001). Capital structures in developing countries. *The Journal of Finance*, 56(1), 87-130.
- BRADLEY, M., JARRELL, G. A., & KIM, E. (1984). On the existence of an optimal capital structure: Theory and evidence. *The Journal of Finance*, 39(3), 857-878.
- CHEN, J. J. (2004). Determinants of capital structure of Chinese-listed companies. *Journal of Business research*, 57(12), 1341-1351.
- CHEN, L., & YE, C. B. (2007). A survey of studies on small and medium-sized family business financing. *Journal of Zhejiang University (Humanities and Social Sciences)*, 37(4), 172-181.
- DE JONG, A., KABIR, R., & NGUYEN, T. T. (2008). Capital structure around the world: The roles of firm-and country-specific determinants. *Journal of Banking & Finance*, 32(9), 1954-1969.
- DE MIGUEL, A., & PINDADO, J. (2001). Determinants of capital structure: new evidence from Spanish panel data. *Journal of corporate finance*, 7(1), 77-99.
- DEANGELO, H., & MASULIS, R. W. (1980). Optimal capital structure under corporate and personal taxation. *Journal of financial Economics*, 8(1), 3-29.
- DELCOURE, N. (2007). The determinants of capital structure in transitional economies. *International Review of Economics & Finance*, 16(3), 400-415.

- FAMA, E. F., & FRENCH, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *Review of financial studies*, 15(1), 1-33.
- FRANK, M. Z., & GOYAL, V. K. (2009). Capital structure decisions: which factors are reliably important?. *Financial Management*, 38(1), 1-37.
- GALLO, M. Á., TÁPIES, J., & CAPPUYNS, K. (2004). Comparison of family and nonfamily business: Financial logic and personal preferences. *Family Business Review*, 17(4), 303-318.
- GOMEZ-MEJIA, L. R., NUNEZ-NICKEL, M., & GUTIERREZ, I. (2001). The role of family ties in agency contracts. *Academy of management Journal*, 44(1), 81-95.
- HUANG, G., & SONG, F. M. (2006). The determinants of capital structure: evidence from China. *China Economic Review*, 17(1), 14-36.
- JAFFE, J.F. AND WESTERFIELD, R. (1987), "Risk and the Optimal Debt Level", in T. E. Copeland (ed.): *Modern Finance and Industrial Economics: Papers in Honour of I. Weston*, Oxford:Blackwell, UK
- JENSEN, M. AND MECKLING, W. (1976), "Theory of the firm: managerial behavior, agency costs, and ownership structure", *Journal of Financial Economics*, 3(4), 305-360.
- JENSEN, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American economic review*, 323-329.
- JUNG, K., KIM, Y. C., & STULZ, R. (1996). Timing, investment opportunities, managerial discretion, and the security issue decision. *Journal of Financial Economics*, 42(2), 159-186.
- KALE, J. R., NOE, T. H., & RAMIREZ, G. G. (1991). The effect of business risk on corporate capital structure: Theory and evidence. *The Journal of Finance*, 46(5), 1693-1715.
- KEASEY, K., MARTINEZ, B., & PINDADO, J. (2015). Young family firms: Financing decisions and the willingness to dilute control. *Journal of Corporate Finance*, 34, 47-63.
- KING, M. R., & SANTOR, E. (2008). Family values: Ownership structure, performance and capital structure of Canadian firms. *Journal of Banking & Finance*, 32(11), 2423-2432.
- KRAUS, A., & LITZENBERGER, R. H. (1973). A State-Preference Model Of Optimal Financial Leverage. *The Journal of Finance*, 28(4), 911-922.
- MARSH, P. (1982). The choice between equity and debt: An empirical study. *The Journal of finance*, 37(1), 121-144.
- MCCONAUGBY, D. L., MATTHEWS, C. H., & FIALKO, A. S. (2001). Founding family controlled firms: Performance, risk, and value. *Journal of small business management*, 39(1), 31-49.
- MCCONAUGHY, D. L. (2000). Family CEOs vs. Nonfamily CEOs in the Family-Controlled Firm: An Examination of the Level and Sensitivity of Pay to Performance. *Family Business Review*, 13(2), 121-131.
- MODIGLIANI, F., & MILLER, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American economic review*, 261-297.
- MODIGLIANI, F., & MILLER, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American economic review*, 53(3), 433-443.
- MYERS, S. (1984), "The capital structure puzzle", *Journal of Finance*, 39, 575-92
- MYERS, S. C. (2001). Capital structure. *Journal of Economic perspectives*, 81-102.
- MYERS, S. C., & MAJLUF, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics*, 13(2), 187-221.
- NENOVA, T. (2006). Takeover laws and financial development. World Bank policy research working paper, (4029).
- OZKAN, A. (2001). Determinants of capital structure and adjustment to long run target: evidence from UK company panel data. *Journal of Business Finance & Accounting*, 28(1-2), 175-198.
- POUTZIOURIS, P. Z. (2001). The Views of Family Companies on Venture Capital: Empirical Evidence from the UK Small to Medium-Size Enterprising Economy. *Family Business Review*, 14(3), 277-291.
- RAJAN, R. G., & ZINGALES, L. (1995). What do we know about capital structure? Some evidence from international data. *The journal of Finance*, 50(5), 1421-1460.
- RAMALHO, J. J., RITA, R. M., & DA SILVA, J. V. (2018). The impact of family ownership on capital structure of firms: Exploring the role of zero-leverage, size, location and the global financial crisis. *International Small Business Journal*, 36(5), 574-604.
- ROMANO, C. A., TANEWSKI, G. A., & SMYRNIOS, K. X. (2001). Capital structure decision making: A model for family business. *Journal of Business Venturing*, 16(3), 285-310.
- ROSS, A., & WESTERFIELD, R. JAFFE & JORDAN (2008). "Modern Financial Management".
- SCHULZE, W. S., LUBATKIN, M. H., DINO, R. N., & BUCHHOLTZ, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization science*, 12(2), 99-116.
- SHAH, A., & KHAN, S. (2007). Determinants of capital structure: Evidence from Pakistani panel data. *International review of business research papers*, 3(4), 265-282.
- SHENOY, C., & KOCH, P. D. (1996). The firm's leverage-cash flow relationship. *Journal of Empirical Finance*, 2(4), 307-331.
- SHLEIFER, A., & VISHNY, R. W. (1992). Liquidation values and debt capacity: A market equilibrium approach. *The Journal of Finance*, 47(4), 1343-1366.
- SIBILKOV, V. (2009). Asset liquidity and capital structure. *Journal of Financial and Quantitative Analysis*, 44(05), 1173-1196.
- STULZ, R. (1990). Managerial discretion and optimal financing policies. *Journal of financial Economics*, 26(1), 3-27.

- THIES, C. F., & KLOCK, M. S. (1992). Determinants of capital structure. *Review of Financial Economics*, 1(2), 40-52.
- TITMAN, S., & WESSELS, R. (1988). The determinants of capital structure choice. *The Journal of finance*, 43(1), 1-19.
- TONG, G., & GREEN, C. J. (2005). Pecking order or trade-off hypothesis? Evidence on the capital structure of Chinese companies. *Applied Economics*, 37(19), 2179-2189.
- VILLALONGA, B., & AMIT, R. (2006). How do family ownership, control and management affect firm value?. *Journal of financial Economics*, 80(2), 385-417.
- WALD, J. K. (1999). How firm characteristics affect capital structure: an international comparison. *Journal of Financial research*, 22(2), 161-187.
- WIWATTANAKANTANG, Y. (1999). An empirical study on the determinants of the capital structure of Thai firms. *Pacific-Basin Finance Journal*, 7(3), 371-403.

## APPENDIX

**Table 5: Effect of family ownership on TD/TA**

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
C	-2.452 (0.000)	-3.314 (0.020)	0.813 (0.004)	0.306 (0.080)	0.294 (0.000)	0.318 (0.000)	0.423 (0.000)
FD*Size		-0.635** (0.010)					
FD*Tang			4.207*** (0.007)				
FD*ROA				6.183*** (0.000)			
FD*Div					0.079 (0.490)		
FD	1.312*** (0.000)	10.035** (0.010)	-1.943** (0.011)	-0.218*** (0.001)	0.087*** (0.000)	0.070*** (0.000)	0.052* (0.078)
Size	0.196*** (0.000)	0.253*** (0.003)	0.043*** (0.001)	0.039*** (0.000)	0.035*** (0.000)	0.033*** (0.000)	0.025*** (0.000)
Tang	-1.339*** (0.000)	-0.153 (0.292)	-2.146*** (0.001)	-0.211** (0.032)	-0.359*** (0.000)	-0.295*** (0.000)	-0.231*** (0.000)
ROA	0.658** (0.033)	-1.192** (0.042)	0.691** (0.027)	-3.354*** (0.000)	0.193* (0.055)	0.130*** (0.002)	0.076** (0.026)
Div	0.596*** (0.005)	0.507** (0.016)	0.207 (0.215)	0.502*** (0.001)	0.186** (0.030)	0.017 (0.341)	0.002 (0.851)
NDTS	2.427* (0.055)	-0.184 (0.891)	3.409*** (0.006)	0.885 (0.339)	1.619*** (0.000)	0.295** (0.036)	0.335*** (0.000)
RE/TA	-0.796*** (0.000)	-0.280* (0.065)	-0.828*** (0.000)	-0.248*** (0.001)	-0.641*** (0.000)	-0.725*** (0.000)	-0.740*** (0.000)
Liq	-0.051*** (0.000)	-0.083*** (0.000)	0.005*** (0.795)	-0.043*** (0.000)	-0.038*** (0.000)	-0.005*** (0.000)	-0.003*** (0.000)

This table reports GMM regression results (Model 1-5) of family ownership on corporate financing decision of the firms. Model 6 and 7 reports the results of OLS and Random effect model respectively. The sample comprises the 102 family and non-family firms and covers 2005 through 2017. Parentheses represents the P-value. \* Significance at 10% level. \*\* Significance at 5% level. \*\*\* Significance at 1% level.

**Table 6: Effect of family ownership on LTD/TA**

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>C</b>	-0.275 (0.000)	-9.213 (0.076)	-0.982 (0.000)	-0.894 (0.055)	-0.286 (0.000)	-0.234 (0.000)	-0.230 (0.000)
<b>FD*Size</b>		-1.555* (0.084)					
<b>FD*Tang</b>			-4.937*** (0.000)				
<b>FD*ROA</b>				12.301** (0.011)			
<b>FD*Div</b>					-0.276 (0.411)		
<b>FD</b>	0.035** (0.016)	24.395* (0.084)	2.412*** (0.000)	-0.378** (0.034)	0.044** (0.010)	0.017** (0.031)	0.024 (0.167)
<b>Size</b>	0.018*** (0.000)	0.548* (0.075)	0.010 (0.438)	0.061** (0.040)	0.018*** (0.000)	0.015*** (0.000)	0.015*** (0.000)
<b>Tang</b>	0.254*** (0.000)	0.856* (0.052)	2.411*** (0.000)	0.346 (0.107)	0.247*** (0.000)	0.282*** (0.000)	0.251*** (0.000)
<b>ROA</b>	-0.609*** (0.000)	-3.465* (0.054)	-0.774*** (0.007)	-5.802** (0.012)	-0.570*** (0.000)	-0.180*** (0.000)	-0.075*** (0.006)
<b>Div</b>	0.296*** (0.001)	0.636 (0.368)	-0.079 (0.799)	1.211** (0.044)	0.288*** (0.000)	-0.001 (0.957)	-0.002 (0.866)
<b>NDTS</b>	0.618* (0.053)	-2.893 (0.369)	-1.419 (0.222)	1.409 (0.518)	0.609** (0.051)	0.134 (0.161)	-0.003 (0.970)
<b>RE/TA</b>	-0.074*** (0.000)	0.756 (0.134)	0.103 (0.129)	-0.045 (0.762)	-0.100*** (0.000)	-0.050*** (0.000)	-0.026*** (0.000)
<b>Liq</b>	-0.004* (0.064)	-0.044 (0.117)	-0.019** (0.015)	0.034 (0.156)	0.002 (0.823)	0.000*** (0.438)	0.001 (0.293)

This table reports GMM regression results (Model 1-5) of family ownership on corporate financing decision of the firms. Model 6 and 7 reports the results of OLS and Random effect model respectively. The sample comprises the 102 family and non-family firms and covers 2005 through 2017. Parentheses represents the P-value. \* Significance at 10% level. \*\* Significance at 5% level. \*\*\* Significance at 1% level.

**Table 7: Effect of family ownership on STD/TA**

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>C</b>	0.441 (0.000)	-5.359 (0.063)	1.098 (0.001)	0.205 (0.645)	-3.830 (0.021)	0.552 (0.000)	0.616 (0.000)
<b>FD*Size</b>		-1.031** (0.042)					
<b>FD*Tang</b>			4.319*** (0.007)				
<b>FD*ROA</b>				13.046*** (0.001)			
<b>FD*Div</b>					3.068 (0.258)		
<b>FD</b>	0.068*** (0.000)	16.281** (0.041)	-2.008** (0.011)	-0.350** (0.033)	2.006*** (0.006)	0.053*** (0.000)	0.032 (0.245)
<b>Size</b>	0.022*** (0.000)	0.364** (0.031)	0.031** (0.026)	0.045 (0.108)	0.278*** (0.004)	0.018*** (0.000)	0.013** (0.027)
<b>Tang</b>	-0.604*** (0.000)	-0.123 (0.710)	-2.561*** (0.000)	-0.547** (0.022)	-2.257*** (0.001)	-0.578*** (0.000)	-0.490*** (0.000)
<b>ROA</b>	0.619*** (0.000)	-4.016** (0.016)	0.182 (0.814)	-8.164*** (0.003)	-0.045 (0.954)	0.310*** (0.000)	0.162*** (0.000)
<b>Div</b>	0.067*** (0.500)	1.183** (0.033)	0.783** (0.011)	2.771*** (0.006)	2.406** (0.024)	0.017 (0.355)	0.005 (0.750)
<b>NDTS</b>	0.985*** (0.009)	-3.206 (0.191)	1.782 (0.226)	0.472 (0.836)	1.813 (0.500)	0.161 (0.284)	0.340*** (0.004)
<b>RE/TA</b>	-0.582*** (0.000)	0.418 (0.324)	-0.751*** (0.000)	0.171 (0.487)	-0.848*** (0.000)	-0.675*** (0.000)	-0.713*** (0.000)
<b>Liq</b>	-0.011*** (0.000)	-0.056*** (0.003)	-0.003 (0.788)	-0.064*** (0.003)	-0.115** (0.046)	-0.006*** (0.000)	-0.003*** (0.000)

This table reports GMM regression results (Model 1-5) of family ownership on corporate financing decision of the firms. Model 6 and 7 reports the results of OLS and Random effect model respectively. The sample comprises the 102 family and non-family firms and covers 2005 through 2017. Parentheses represents the P-value. \* Significance at 10% level. \*\* Significance at 5% level. \*\*\* Significance at 1% level.