Effect of Family Control on Corporate Financing Decisions: A Case of Pakistan

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July 2016

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PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS
ISLAMABAD
2016

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Designed, composed, and finished at the Publications Division, PIDE.

C O N T E N T S

ABSTRACT

This study aims to examine the effect of family control on the corporate financing decision of firms in Pakistan. This sample of study comprises of 100 non financial firms that are listed on Karachi Stock Exchange. This study uses the annual financial data from 2005 to 2012. The study findings of univariate analysis show that a significant difference exists between family and non family firms on the basis of many characteristics of firms. The results of multivariate analysis demonstrate that family firms maintain significantly high "total debt ratio" and "short term debt ratio" as compare to non family firms. There are two reasons of maintaining high debt ratio by family firms as compare to non family firms. First, Family firms don't want to dilute their ownership and that's why family firms fulfil their major financing need from debt instead of issuing new share to extract financing from market. Second, family firms in Pakistan use extra cash flows for their private benefits. In result of this, family firm need more external finance (as compare to non family firms) in form of debt to fulfil the financing needs of the firm.

Keywords: Capital Structure, Family Ownership, Family Firm, Leverage, Dilute Ownership

1. INTRODUCTION

Capital structure decision is most important strategic decision taken by the top level management of the organisation. Modigliani and Miller (1958) developed Capital structure theory first time and argue that value of the firm effected by investment decision and not affected by the financing policy of the firm. Theory was built upon many constraints and ceteris paribus due to which in real world difficult to applicable. After this base theory, many relevant theories have been developed such as Trade off theory [Jensen and Meckling (1976); Myers (2001)]. According to this theory, optimal targeted level of leverage is the point where marginal benefit of debt is equal to marginal cost of debt. Tradeoff theory is based upon cost of financial distress, agency cost and effects of tax [Romano and Tanewski (2000)]. And underlying assumption of this theory is that there is a tradeoff occurs between high risk of financial distress and tax benefit due to high debt proportion. As leverage will be high then firm can gain tax benefit of high debt and agency cost also decrease due to high proportion of debt. On the other hand firm face cost in form of higher probability of financial distress of firm by maintaining high leverage. This tradeoff increases the value of firm but also weaken the financial position of the firm.

However, capital structure of family firms depends upon level of agency conflicts. Family firms use more debt as compare to non family firms to limit the negative consequences of altruism within the firm and in order to control the self-interest of family agents. And resources of the family use to fulfil 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. This will in return increase the agency costs and decrease the efficiency of firm.

Family block holders maintain high debt ratio to take some benefit from firm such as to pay themselves higher dividend or use these cash flows for family private benefits. In both these cases, when cash flows used by family to pay higher dividend to themselves and used for privates benefits, family firm need more external finance in form of debt due to less internal funds to fulfil the financing needs of firm [Rubecca Duggal (2010)].

Every country law defines the ownership cut off point up to which control becomes contestable. Nenova (2006) argue that family firms use high debt ratio to maintain their control over the firm. Maintaining high debt to control

organisation is the expensive and more risky way because high debt increases the risk of bankruptcy. To maximise the firm survival, this high firm specific risk is very important for the family firms with undiversified portfolio. McConaughy, *et al. (*2001) argue that capital structure use as proxy for control risk and firms maintain high leverage to reduce control risk.

Firm could continue to borrow up to the point where marginal cost of financial distress becomes equal to marginal benefit of the interest tax shield [Kraus and Litzenberger (1973)]. In contrast to above findings, family firms maintain lower leverage below the optimal level. Gallo, Tapies and Cappuyuns (2004) argue that family firms maintain lower debt ratio as compare to non family firms. Financial risk aversion behaviour of family firms is one of the main reasons behind maintaining low debt ratio. So there are different results of studies about capital structure behaviour in family firms of different countries. Myers and Majluf (1984) test pecking order hypothesis and explain that family firms maintain low debt ratio, because hypothesis suggest that managers will finance assets with lower cost financing option available and issue less risky security available to reduce cost. Family firms in UK follow pecking order principle of financing [Poutziouris (2001)]. Monetary cost of financing is not the only cost but other costs also effect financing decision. If firm focus on issuing shares to fulfil financing needs than family firm's goals like maintains control, independence and transfer business to next generation successfully are sacrificed. And issuing shares is much expensive option due to goals scarification cost and this non monetary cost also explain family firms financing behaviour by following pecking order principle.

Family firms have low 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, so family firms compensate this high risk by reducing leverage. Because when leverage is lower, then risk reduces and High risk of portfolio compensate by low risk of leverage. Some studies show that family firms maintain high debt ratio as compare to non family firms; and some studies find vice versa results. So this study focuses to examine the capital structure behaviour of family and non firms in Pakistan.

2. LITERATURE REVIEW

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

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 owned firms because in family owned firms, owner and management are same. 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 then non family firms counterparts.

Andereson and Reeb (2003a) argue that two main characteristics of family firms may affect capital structure decision of family firms. First, family firms' shareholders do not hold well diversified portfolio due to financial constraints and non family firms' shareholders usually hold well diversified portfolio. Family firms' shareholders demonstrate risk averse behaviour 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, Tappies, and Cappuyns (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 trade off 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, so 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. So, desire to 'retain control' and effects 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 in order to retain control. On one hand 'risk reduction' desire motivates family towards maintaining low leverage and 'retain control' objective motivates towards maintaining high leverage. On the basis of family vs non family ownership, it is hypothesised that

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

Tangibility of Assets

Cost of borrowing can be low for those firms which having more physical or tangible assets as compare to firm with less physical assets because tangible assets can be utilised as collateral, so high tangibility of assets 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 and may transfer the wealth from lender to shareholder. And this lender's risk of suffering agency cost of debt can be mitigated by firm's pledging fixed assets as collaterals against borrowing, so 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 assets tangibility and leverage.

Profitability

According to pecking order theory, firms use internal financing option of using retained earnings at first then external financing option of debt at second and then external financing option of issuing shares at third priority to fulfil 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 cost of financial distress and 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. So, trade off theory and agency cost predicts positive association of profitability and leverage.

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, any decrease in cost of leverage allows the firms to increase leverage. So 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.

On the other hand, Frank and Goyal (2009) argue that larger firms are well known and having older history of adding retained earnings in their capital structure. According to pecking order theory, firm fulfil their financing need at first priority from retained earnings and if retained earnings of large firms are high then there is no need to use second option of borrowing, so this explains a negative relationship between leverage and size of firm. Rajan and Zingales (1995) argue that more information have to be provided by large firm to outside investors than small firms, so large firms having less asymmetric information problem should prefer more equity as compare to debt. This study explains about negative relationship between leverage and size of firm. This study explains about negative association between leverage and size of firm. Many empirical studies such as Kale, *et al.* (1991) and Jung, *et al.* (1996) finds also negative relationship between leverage and size of firm. Chen (2004) finds negative association between leverage and size of firm in emerging economy of China.

Growth

According to pecking order theory by Myers and Majluf (1984), internal funds may be insufficient to finance positive investment opportunities in high growth period of firms, then firm use external source of funds to fulfil the financing needs of growth opportunities. From external sources of finance debt

and equity, firms prefer debt because of lower information cost associated with debt issues as compare to equity financing. Hence, this theory explains positive relationship between growth and leverage of the firm. Chen (2004) finds positive association between growth opportunities and leverage of firms. Tong and Green (2005) also predict positive association between growth opportunities and leverage of firms.

On the other hand, agency cost theory by Jensen and Meckling (1976) explains that leverage increases with lack of growth opportunities. Jensen (1986) suggests that debt serves to limit agency cost of managerial discretion for firms having lack of investment opportunities. Hence, this theory explains negative relationship between growth opportunities and firm's leverage. Slutz (1990) predicts negative relationship between leverage and growth opportunities of firms. Frank and Goyal (2009) finds negative relationship between leverage and growth opportunities of firms.

Non Debt Tax Shield

Trade off theory predicts a negative relationship between non debt tax shield and debt of the firm [Titman and Wessels, *et al.* (1988)]. Firms having large amount of non debt tax shields are expected to use less debt because non debt tax shields are substitute for tax shields or tax benefits from debt financing. Marginal tax saving from an additional unit of debt decreases with the increase in non debt tax shields because with increase in leverage, cost of financial distress increases and marginal benefit becomes low [DeAngelo and Masulis, *et at.* 1980)]. Hence, this shows an inverse association between debt and non debt tax shields. Bennet and Donnelly, (1993) finds negative relationship between leverage and non debt tax shields of the firms.

On the other hand, some studies explain 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 securability in terms of debt collateral, so firms with more securable assets can done debt financing at lower cost as having less risk as compare to firm with less securable assets. Non debt tax shield is highly correlated with tangibility and they do not include proxy of tangibility in their study, which also affects the leverage of firm. Wald (1999) and Delcoure (2007) also confirm the positive relationship between non debt tax shields of firm.

Business Risk

According to trade off theory, higher volatility of earning increases the likelihood of financial distress. When costs of financial distress are larger, an increase in earnings volatility decreases leverage of firm. Bradely (1984) predicts negative association between earning volatility and leverage of firm and shows consistent results with trade off theory findings. DeAngelo and Masulis

(1980) argue that an additional unit of debt increases the chances of firm's bankruptcy. Based on publicly available information, investors face difficulty in forecasting of future earnings due to high volatility of earnings; and high volatility is an indication of high risk. Hence, investor demands a high premium against high risk in order to lend fund to company. In result, this drives up the cost of debt. So this shows a negative relationship earning volatility and leverage of firm because high earning volatility increases the cost of debt and decreases the leverage level. Marsh (1982) and De Miguel and Pindado (2001) finds negative association between leverage and earning volatility.

Jaffe and Westerfield (1987) finds that relationship between leverage and earning volatility may not be monotonic and under certain conditions this relation can be positive. Jarrell and Kim (1984) explains 'U' shaped dependence between two variables. Thies and Klock (1992) find a positive relationship between short term debt and earnings volatility of firms. Due to credit rationing, firms are restricted in their extent to borrow large long term loans in presence of high earning volatility, therefore firms cover these deficiencies of financing by using short term debt. So this shows positive association between short term debt and earning volatilities. Shenoy and Kock (1996) explain another reason of positive association between earning volatility and demand for debt. As high leverage firms having significantly greater amount risk associated with them i.e. there may be bidirectional relationship between earning volatility and leverage instead of unidirectional relationship from risk to leverage. Huang and Song (2006) find that there is a positive association between the business risk and leverage of the firms in emerging economy of China.

Dividends

Dividend decision of the firm affects the capital structure. 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 fulfil their financing needs then at second priority firms borrow funds to meet up their financing needs and this theory predicts positive relationship between the dividends and leverage of firms. Tong and Green (2005) and 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 decreases 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. And large dividends payout can also reduce the security of bondholders or creditors. So, 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 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 pay dividends. Fama and French (2002) also finds negative association between the dividend payments and leverage of firms.

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 fulfil 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.

According to agency cost theory, when large amount of free cash flows available to firms then managers can invest these large amount of cash flows in wasteful investments or negative net present value projects rather than utilising these cash flows efficiently to increase the value of firm. So, debt financing is used to mitigate these uneconomical actions by binding managers to use extra cash flows to pay interest payments against debt. This theory shows a positive association between liquidity and leverage of the firm [Jensen and Meckling (1976)].

According to trade off theory, there is a positive association between liquidity and leverage of the firm. High liquidity firms have greater ability to fulfil their short term obligations on time and as a result cost of financial distress also decreases. Shleifer and Vishny (1992) argue that debt capacity of firm having more liquid assets increases because liquid assets use as better collateral against short term borrowings and high liquid asset holding firms can done their repayments of borrowings easily as they come due. This shows a positive relationship between liquidity and leverage of the firms. Sibikov (2009) finds positive association of liquidity and leverage of the firm.

3. RESEARCH METHODOLOGY

3.1. Data Description

This study explores the effect of family ownership on capital structure of the firms in Pakistan. This population of study comprises of all non financial listed firms on Karachi Stock Exchange (KSE) and sample of study consists of

100 non financial public limited companies that are listed on Karachi Stock Exchange (KSE). Out of these 100 firms, half are family firms and half are non family firms. These sample firms are chosen from 19 non financial sectors of Pakistan and distribution of full sample by industry exhibits in Appendix Table 1. The annual based data is used for analysis and sample period of study is from 2005 to 2012. The data of study is taken from "Balance sheet analysis of stock exchange listed firms" published by State bank of Pakistan and data of family ownership are taken from annual financial reports of selected companies.

3.2. Model

This study uses the panel data framework to analyse the effect of family ownership on corporate financing decisions of the firms. This study is using the balanced panel data of 100 cross sectional firms over the 8 year period of time and this study sample consist of 800 observations. The Panel data analysis assists to investigate time series as well as cross sectional data simultaneously.

This study uses the fixed effect model to find the effect of family control on dividends policy of firm. Different methods of estimation are used for the panel data models such as fixed effect method, random effect method and every method has its own assumptions. It is appropriate to use Hausman test for the selection of better method of estimation from both fixed effect method and random effect method. So, this study uses fixed effect method to estimate the effect of family ownership on financing decision. The functional form of our models is as follows

$$
\begin{aligned}
Lev_{it} = \alpha_0 \ + \ &\alpha_1 (FO)_{it} + \ \alpha_2 (Tang)_{it} + \alpha_4 (Size)_{it} \quad + \alpha_3 (Prof)_{it} \\
&+ \ \alpha_5 (Growth)_{it} \ + \alpha_6 (NDTS)_{it} + \alpha_7 (BusinessRisk)_{it} \\
&+ \alpha_8 (Div)_{it} + \alpha_9 (Liquidity)_{it} \ + \alpha (Industrydummy)_i \\
&+ \ u_{it}
\end{aligned}
$$

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. This study defines the family firm as the firm which fulfil two conditions simultaneously; (a) At least two individual related by blood or marriage are directors (or CEO) of the firm; (b) Individuals from family owns at least 20 percent of shareholdings. Firm is categorised as family firm which fulfils the both two conditions and all other firms are categorised 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. In this study, fixed assets divided by total assets use as measure of tangibility. Natural logarithm of sales is to be used as a proxy of size of firm. Return on assets is to be used as a proxy of profitability of firm and return on

assets defines as the ratio of earnings before interest and taxes divided by total assets of the firm. Market value of assets (book value of firm assets plus market value of equity less book value of equity divided by book value of the assets) is used as a proxy of growth of the firm. Depreciation expense scaled by the total assets of the firm is used as proxy of non debt tax shields. Standard deviation of the percentage changes in operating income of firm is used as a measure for business risk or earning volatility. Amount of dividends divided by number of outstanding shares use as proxy for dividends per share. 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*

Appendix Table 2 exhibits that average total debt ratio in Pakistani listed firms are 0.592 with highest 3.107 and lowest 0.076. This shows that debt is major source of financing in non-financial listed firms of Pakistan as compare to equity. Breaking total debt ratio into two parts indicates that average long term debt ratio is 0.140 and average short term debt ratio is 0.453. This shows that listed non financial firms in Pakistan are fulfilling their financing needs more from short term debts as compare to long term debts. Tangibility has a mean value of 0.478 with a lowest value of 0.001 and highest value of 0.973.

Appendix Table 3 and Table 4 shows family and non family descriptive summary, respectively. Table 3 shows that average total debt ratio is 0.611 with minimum 0.097 and maximum value 3.107. Appendix Table 4 exhibits that average total debt ratio is 0.574 with minimum value of 0.076 and maximum value of 1.415. This reveals that leverage of family firms is higher than non family firm. Table 3 exhibits that average profitability ratio is 0.086 with standard deviation 0.106 of family firms. And Table 4 shows that average profitability ratio is 0.145 with standard deviation of 0.145 of non family firms. This reveals that rate of return on assets in family firms are low and less volatile as compare to non family firms.

4.1.2. *Correlation Matrix*

Appendix Table 5 reveals the correlation matrix of different key variables of the study. Leverage is negatively correlated with dividends of the firms which is consistent with agency theory that "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". Leverage (lev1 and lev2) is positively correlated with tangibility of the firms because as fixed assets use as collateral against borrowing so as more the tangible assets firms have then more

the firms can get financing through borrowing. There is a positive correlation between leverage (lev1 and 2) and market to book ratio is consistent with agency cost theory which explains that leverage increases with lack of growth opportunities.

4.1.3. *Mean Difference Univariate Analysis*

Appendix Table 6 presents the mean differences in leverage, dividends, investment as well as other variables for family firms and non family firms. The univariate analysis shows that family firms behave differently than non family firms in several aspects. Family firms employ significantly higher total debt and long term debt level in their capital structure as compare to non family firms, which is consistent with results of [Nenova (2006)]. According to this study, family firms use high debt ratio to maintain their control over the firm. The difference between the short term debt ratio of family and non family firms is not statistically significant at 10 percent level.Size, profitably, M/B ratio, business risk and liquidity of family firms is significantly lower than non family firms and mean difference is statistically significant at 1percent in all these characteristics of firms.

4.2. Multivariate Regression Analysis

Hausman test is used for selection of appropriate method from fixed and random effects model for panel estimation. The p-value for hausman test is 0.0001 which is less than 1percent and this shows that random effects are not consistent and efficient. So, this study prefers the parameters estimates of fixed effect model for panel estimation.

A regression result in Appendix Table 7 suggests that family ownership has a positive impact on total debt ratio of the firms, as the coefficient of the family ownership binary variable is 0.095. 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)] or to avert from takeover attempt for long term survival up to next generations. Another explanation is that when cash flows use by family for private benefits then family firm need more external finance in form of debt to fulfil 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)].

Total debt ratio is significantly affected by the tangibility of the firms and 1percent increase in tangibility leads to 0.22 percent of increase in total debt ratio of the firms. And this relationship is in accordance with agency theory prediction, [Jensen and Meckling (1976)] explain that conflicts between lender and shareholder exists and lender face agency cost because firm may invest in

riskier projects by borrowing from lender and may transfer the wealth from lender to shareholder. And this lender's risk of suffering agency cost of debt can be mitigated by using fixed assets as collateral against borrowing, so companies having more fixed assets can borrow more from lenders [Ross, *et al.* (2008)].

This study provides evidence about the existence of significant negative association between size and total debt ratio of the firms and this result is consistent with pecking order theory, which argues that firm fulfil their financing need at first priority from retained earnings and if retained earnings of large firms are high then there is no need to use second option of the borrowing, so this explains a negative association between leverage and size of firm and Frank and Goyal (2009) argues that large size firms are well known and having older history of adding retained earnings in their capital structure.

It is found that there is a significant negative association between profitability and total debt ratio of the firms and this relationship is consistent with pecking order theory which explains that firm with loss or insufficient profit prefer to borrow debt at second priority. And results shows that 1 percent increase in profitability leads to 0.36 percent decrease in total debt ratio.

Regression results show that there is a significant positive association between growth and total debt ratio of the firms and this relationship is in line with pecking order theory proposed by Myers and Maljuf (1984), which argue that internal funds may not be sufficient to finance positive investment opportunities in high growth period of firms, then firm use external source of funds such as debt at second priority to fulfil the financing needs of growth opportunities.

There is a significant positive association between the business risk and total debt ratio of the firms and these results are in line with the study of [Huang and Suang (2002)]. Liquidity shows a significant negative association with total debt ratio and these results are consistent with the pecking order theory which exhibits that when sufficient internal funds are available to fulfil financing needs of investment then there is no need of external finance through debt or equity. Electricity sector, Engineering sector, fixed line telecom sector, oil and gas sector, Gas and water and electrical goods sector's dummies positively and significantly affect the total debt ratio of the firms.

Regression results in Appendix Table 7 shows that effect of family ownership on long term debt ratio is insignificant. Results in Table 8 exhibits that there is a positive and significant relationship between family ownership and short term debt of the firms and coefficient of family firm is 0.108. This shows that family firms maintain higher short term debt ratio as compare to non family firms in Pakistan. In Pakistan, mostly firms fulfil their short as well as long term need of finance from short term debt, that why family ownership affect upon short term debt is significant and family ownership affect upon long term debt ratio is insignificant.

5. CONCLUSIONS

This study empirically investigates the behaviour of family firms towards capital structure of the non-financial listed firms for the period of 2005-2012 by using univariate and multivariate analysis. Univariate analysis shows that family and non family firms are different on the basis of many characteristics of firms such as total debt ratio, long term debt ratio, size, profitability, tangibility, liquidity, business risk and dividend per share. Hence, family firms behave differently from non family firms in Pakistan.

Total debt ratio and short term debt ratios are significantly affect by family ownership but long term debt ratio is not significantly affect by family ownership, this shows that family firms prefer to fulfil their financing needs majority from short term debt. Instead of financing long term projects from long term debts, generally firms in Pakistan fulfil most of their long and short term financing needs from short term debts.

Family firms maintain significantly high "total debt ratio" and "short term debt ratio" as compare to non family firms. There are two reasons of maintaining high "total debt ratio" and "short term debt ratio" by family firms. First, family firms don't want to dilute their ownership, and want to transfer ownership to next generation successfully; that's why family firms fulfil their major financing need from debt instead of issuing new share to extract financing from market. Second, family firms in Pakistan use extra cash flows for their private benefits. In result of this, family firm need more external finance (as compare to non family firms) in form of debt to fulfil the financing needs of the firm. Third, family firms may retain high debt ratio to gain maximum tax benefit.

Limitations and Future Research

This study's analysis focuses only on non-financial listed firms and there is a further need to examine the effect of family firms on corporate dividend policy of financial listed firms of Pakistan. Further, analysis can be done by using private firms instead of using only listed firms. This study only focuses on Pakistan's family firms. Because of different institutional and country level factors of emerging economies, we cannot assume that the results of developed countries can be readily generalized to other emerging countries. So, there can be comparison of dividends policy of family firms in different emerging economies and developed economies.

APPENDIX

Appendix Table 1

Distribution of the Full Sample by Industry

Industry Description	Family Firms	Non-family Firms	Percentage Family Firms in Industry
Personal Goods (Textile)	16	02	88.8
Construction and Materials (Cement)	04	05	44.4
Electricity	01	04	20.0
Travel and Leisure	02	01	66.6
General Industrials	03	01	75.0
Automobile and Parts	*05*	01	83.3
Food Producers	07	03	70.0
Engineering	01	01	50.0
Forestry (Paper and Board)	02	01	66.6
Chemicals	04	05	44.4
Pharma and Bio Tech	02	04	33.3
Household Goods	02	01	66.6
Fixed Line Telecommunication	01	03	25.0
Tobacco	00	02	0.00
Industrial Transportation	00	01	0.00
Oil and Gas	00	11	0.00
Multiutilities (Gas and Water)	00	02	0.00
Electronic and Electrical Goods	00	01	0.00
Software and Computer Services	00	01	0.00
Total	**50**	**50**	

Appendix Table 2

Summary Statistics for the Full Sample

Variables	Mean	Std Dev.	Minimum	Median	Maximum
Total Debt Ratio	0.593	0.289	0.076	0.609	3.107
Long Term Debt	0.140	0.168	0.000	0.082	1.073
Short Term Debt	0.453	0.249	0.017	0.439	2.119
DPS	6.510	19.00	0.000	1.000	249.9
Tangibility	0.478	0.226	0.001	0.481	0.973
Profitability	0.115	0.130	-0.445	0.098	0.604
Size	6.764	0.789	3.484	6.696	9.010
M/B	1.385	1.375	0.251	0.999	13.90
NDTS	0.033	0.032	0.000	0.028	0.458
Liquidity	1.515	1.246	0.139	1.107	14.51

Appendix Table 3

Summary Statistics for the Family Firm's Sample

Variables	Mean	Std Dev.	Minimum	Median	Maximum
Total Debt Ratio	0.611	0.249	0.097	0.626	3.107
Long Term Debt	0.162	0.147	0.000	0.123	0.988
Short Term Debt	0.450	0.265	0.017	0.434	2.119
DPS	1.862	6.010	0.000	0.000	110.0
Tangibility	0.531	0.191	0.007	0.529	0.965
Profitability	0.086	0.106	–0.445	0.082	0.497
Size	6.447	0.589	3.484	6.479	7.686
M/B	0.977	0.426	0.251	0.866	3.133
NDTS	0.032	0.022	0.001	0.028	0.305
Liquidity	1.405	1.262	0.211	1.050	14.51

Appendix Table 4

Summary Statistics for the Non-family Firm's Sample

Variables	Mean	Std Dev.	Minimum	Median	Maximum
Total Debt Ratio	0.574	0.265	0.076	0.594	1.415
Long Term Debt	0.117	0.183	0.000	0.035	1.073
Short Term Debt	0.456	0.232	0.055	0.452	1.212
DPS	11.157	25.38	0.000	2.500	249.9
Tangibility	0.426	0.245	0.001	0.408	0.973
Profitability	0.145	0.145	–0.267	0.116	0.604
Size	7.081	0.836	4.909	7.152	9.010
M/B	1.792	1.809	0.316	1.180	13.90
NDTS	0.034	0.039	0.000	0.029	0.458
Liquidity	1.626	1.221	0.139	1.227	8.737

Appendix Table 5

Correlation Matrix A

	Lev1	Lev2	Lev3	Div	Tang	Prof	Size	M/B	NDTS	Liq	Risk
Lev1	1.000										
Lev2	0.511	1.000									
Lev3	0.815	–0.080	1.000								
Div	–0.112	–0.151	–0.028	1.000							
Tang	0.057	0.569	–0.317	–0.185	1.000						
Prof	–0.519	–0.326	–0.379	0.308	–0.237	1.000					
Size	–0.082	–0.066	–0.055	0.147	–0.078	0.236	1.000				
M/B	–0.046	–0.144	0.045	0.322	–0.214	0.393	0.051	1.000			
NDTS	0.025	0.098	–0.036	–0.065	0.197	–0.032	–0.022	–0.025	1.000		
Liq	–0.610	–0.256	–0.532	0.098	–0.261	0.358	–0.058	0.085	–0.057	1.000	
Risk	–0.012	0.041	–0.043	0.011	0.019	0.169	0.484	0.094	0.031	0.087	1.000

Lev1 denotes to Total Debt Ratio, Lev2 denotes to Long Term Debt Ratio and lev3 denotes the Short Term Debt Ratio of the firm. Div denotes Dividends Per Share, NDTS denotes the Non Debt Tax Shield and Liq denotes the Liquidity.

Appendix Table 6

Difference of Mean Test for Family and Non-Family Firms

	All	Family	Non Family	t-statistic
	(1)	(2)	(3)	(2)-(3) (4)
Total Debt Ratio	0.593	0.610	0.573	1.822*
Long Term Debt	0.140	0.161	0.117	3.805***
Short Term Debt	0.453	0.449	0.456	–0.378
DPS	6.510	1.861	11.157	–7.127***
Tangibility	0.478	0.530	0.426	6.741***
Profitability	0.115	0.085	0.145	–6.608***
Liquidity	1.515	1.404	1.625	–2.514**
Size	6.764	6.447	7.081	–12.393***
M/B	1.385	0.977	1.792	–8.767***
NDTS	0.033	0.032	0.033	–0.706

This table provides the results of difference of means tests for key variables between family and non family firms.. The sample comprises the 50 family and 50 non-family firms and covers 2005 through 2012.
* Significance at 10 percent level.
** Significance at 5 percent level.
*** Significance at 1 percent level.

Appendix Table 7

Effect of Family Ownership on Total Debt Ratio and Dividends per Share

	Total Debt/Total Assets (A)	
	Coefficients	t statistics
Constant	1.206	6.001***
Family Ownership	0.095	2.650***
Tangibility	0.221	3.022**
Size	–0.136	–5.893***
Profitability	–0.363	–3.522***
M/B	0.085	8.141***
Business Risk	0.000	2.802***
NDTS	0.089	0.213
Liquidity	–0.090	–10.41***
DPS	0.000	–0.834
Industry Dummy	Yes	
R-squared	0.409	

This table reports fixed effects multivariate regression results of family ownership on dividends per share and total debt ratio of the firms. The sample comprises the 100 family and non family firms and covers 2005 through 2012.
* Significance at 10 percent level.
** Significance at 5 percent level.
*** Significance at 1 percent level.

Appendix Table 8

Effect of Family Ownership on Long Term Debt Ratio and Dividends per Share

	Long-term Debt/Total Assets	
	Coefficients	t-statistics
Constant	–0.140	–1.960**
Family Ownership	–0.013	–1.030
Tangibility	0.405	15.585***
Size	0.001	0.141
Profitability	–0.195	–5.319***
M/B	0.001	0.180
Business Risk	0.000	2.923***
NDTS	0.087	0.585
Liquidity	–0.001	–0.453
DPS	0.000	–0.715
Industry Dummy	Yes	
R-squared	0.418	

This table reports fixed effects multivariate regression results of family ownership on dividends per share and long term debt ratio of the firms. The sample comprises the 100 family and non family firms and covers 2005 through 2012.
* Significance at 10 percent level.
** Significance at 5 percent level.
*** Significance at 1 percent level

Appendix Table 9

Effect of Family Ownership on Short Term Debt Ratio and Dividends per Share

	Short-term Debt/Total Assets	
	Coefficients	t-statistics
Constant	1.346	6.959
Family Ownership	0.108	3.144***
Tangibility	–0.187	–2.657***
Size	–0.138	–6.172***
Profitability	–0.164	–1.653*
M/B	0.084	8.375***
Business Risk	0.000	1.839*
NDTS	0.003	0.008
Liquidity	–0.089	–10.65***
DPS	0.000	–0.600
Industry Dummy	Yes	
R-squared	0.405	

This table reports fixed effect multivariate regression results of family ownership on dividends per share and short term debt ratio of the firms. The sample comprises the 100 family and non family firms and covers 2005 through 2012.
* Significance at 10 percent level.
** Significance at 5 percent level.
*** Significance at 1 percent level

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REFERENCES

Allen, D. E. and H. Mizuno (1989) The Determinants of Corporate Capital Structure: Japanese Evidence. *Applied Economics* 21:5, 569–585.

Anderson, R. C. and D. M. Reeb (2003a) Founding-Family Ownership, Corporate Diversification, and Firm Leverage. *Journal of Law and Economics* 46:2, 653–684.

Anderson, R. C., S. A. Mansi, and D. M. Reeb (2003b) Founding Family Ownership and the Agency Cost of Debt. *Journal of Financial Economics 68:*2, 263–285.

Ang, J. S., R. A. Cole, and J. W. Lin (2000) Agency Costs and Ownership Structure. *The Journal of Finance 55:*1, 81–106.

Baskin, J. (1989) An Empirical Investigation of the Pecking Order Hypothesis. *Financial Management* 26–35.

Bennett, M. and R. Donnelly (1993) The Determinants of Capital Structure: Some UK Evidence. *The British Accounting Review* 25:1, 43–59.

Booth, L., V. Aivazian, A. Demirguc-Kunt, and V. Maksimovic (2001) Capital Structures in Developing Countries. *The Journal of Finance* 56:1, 87–130.

Bradley, M., G. A. Jarrell, and E. Kim (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. and C. B. Ye (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., R. Kabir, and T. T. Nguyen (2008) Capital Structure Around the World: The Roles of Firm—and Country-specific Determinants. *Journal of Banking and Finance* 32:9, 1954–1969.

De Miguel, A. and J. Pindado (2001) Determinants of Capital Structure: New Evidence from Spanish Panel Data. *Journal of Corporate Finance* 7:1, 77–99.

DeAngelo, H. and R. W. Masulis (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 and Finance* 16:3, 400–415.

Fama, E. F. and K. R. French (2002) Testing Trade-off and Pecking Order Predictions About Dividends and Debt. *Review of Financial Studies* 15:1, 1–33.

Frank, M. Z. and V. K. Goyal (2009) Capital Structure Decisions: Which Factors are Reliably Important? *Financial Management* 38:1, 1–37.

Gallo, M. Á., J. Tàpies, and K. Cappuyns (2004) Comparison of Family and Nonfamily Business: Financial Logic and Personal Preferences. *Family Business Review* 17:4, 303–318.

Gomez-Mejia, L. R., M. Nunez-Nickel, and I. Gutierrez (2001) The Role of Family Ties in Agency Contracts. *Academy of Management Journal* 44:1, 81–95.

Huang, G. and F. M. Song (2006) The Determinants of Capital Structure: Evidence from China. *China Economic Review* 17:1, 14–36.

Jaffe, J. F. and R. Westerfield (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 W. Meckling (1976) Theory of the Firm: Managerial Behaviour, 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., Y. C. Kim, and R. Stulz (1996) Timing, Investment Opportunities, Managerial Discretion, and the Security Issue Decision. *Journal of Financial Economics* 42:2, 159–186.

Kale, J. R., T. H., Noe, and G. G. Ramirez (1991) The Effect of Business Risk on Corporate Capital Structure: Theory and Evidence. *The Journal of Finance* 46:5, 1693–1715.

Kraus, A. and R. H. Litzenberger (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., C. H. Matthews, and A. S. Fialko (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. and M. H. Miller (1958) The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review* 261–297.

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. and N. S. Majluf (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 and 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. and L. Zingales (1995) What do We Know About Capital Structure? Some Evidence from International Data. *The Journal of Finance* 50:5, 1421–1460.

Romano, C. A., G. A. Tanewski, and K. X. Smyrnios (2001) Capital Structure Decision Making: A Model for Family Business. *Journal of Business Venturing*, *16*(3), 285-310.

Ross, A., R. Jaffe Westerfield, and Jordan (2008) Modern Financial Management.

Schulze, W. S., M. H. Lubatkin, R. N. Dino, and A. K. Buchholtz (2001) Agency Relationships in Family Firms: Theory and Evidence. *Organisation Science* 12:2, 99–16.

Shah, A., and S. Khan (2007) Determinants of Capital Structure: Evidence from Pakistani Panel Data. *International Review of Business Research Papers* 3:4, 265–282.

Shenoy, C. and P. D. Koch (1996) The Firm's Leverage-Cash Flow Relationship. *Journal of Empirical Finance* 2:4, 307–331.

Shleifer, A. and R. W. Vishny (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. and M. S. Klock (1992) Determinants of Capital Structure. *Review of Financial Economics* 1:2, 40–52.

Titman, S. and R. Wessels (1988) The Determinants of Capital Structure Choice. *The Journal of Finance* 43:1, 1–19.

Tong, G. and C. J. Green (2005) Pecking Order or Trade-Off Hypothesis? Evidence on the Capital Structure of Chinese Companies. *Applied Economics* 37:19, 2179–2189.

Villalonga, B. and R. Amit (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.