Research Journal of Finance and Accounting
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.7, No.1, 2016

Determinants of Capital Structure of Banks in Pakistan: An Empirical Approach

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Abstract
Purpose – The purpose of this study is to identify the determinants of capital structure of banks and to determine the impact of determinants on bank's financial leverage.
Design/methodology/approach – The study uses the sample of 21 banks of Pakistan listed on Karachi Stock Exchange (KSE) and data was collected from their annual reports during the period 2006-2010. These annual reports were gathered through KSE, different databases and websites of banks. The correlation and regression analysis are used to analyze the impact of determinants on bank's financial leverage.
Findings – The study examines the impact of determinants on bank's financial leverage. The result finds three independent variables (profitability, growth and tax) out of seven independent variables statistically significant related with leverage. The results also find remaining four variables (size, assets tangibility, Non-Debt tax shield and dividend payout ratio) statistically insignificantly related with leverage.
Originality/value – Most of the studies on capital structure determinants are with reference to developed countries. This study will contribute to the literature by determining the impact of determinants on bank's financial leverage because very few studies have been conducted on the banking industry of developing countries like Pakistan. This study also adds a new variable of dividend payout ratio as determinant of capital structure of banks in Pakistan.
Keywords: Capital structure, KSE, Non-debt tax shield, Dividend Payout ratio, Leverage

1. Introduction:

Capital structure is simply the mix of debt and equity where a firm has to bear lowest cost of financing and ultimately increase the value of firm. Thus, in order to maximize the value of firm different financing options can be used (Hijazi and Tariq, 2006) for example issuance of debt, lease financing, warrants, convertible bonds, forward contracts and trade bond swaps etc but the main focus is to choose the structure which maximize the overall value of the firm (Vasiliou et al., 2009).

With regarding the selection of optimal capital structure, firms choose different capital structure according to their operations and nature of business. For this purpose different theories were presented that explained the choice of capital structure in different contexts and in different businesses. Capital structure matters to most firms but different firms in different environment choose optimal capital structure to maximize their value and minimize their cost of capital. Hunjra et al., (2011) argue that decisions relate to capital structure choice positively affect the organizational performance and found positive and significant relationship between capital structure decision, dividend policy and organizational performance. Whereas poor decision on capital structure policy may lead a firm to severe financial distress but becomes an information signal and can mitigate conflicts between management and shareholders (Chen and Chen, 2011).Capital structure is also linked with ownership structure of firms because firms with higher institutional shareholdings avoid using debt financing (Chen and Strange, 2006).

Delcoure (2007) found that other factors that influence the leverage decisions include financial constraints of banking systems, discrepancy in legal systems governing firm's operations and shareholders, sophistication of equity and bond markets, and corporate governance. Nowadays firms follow new pecking order theory for example first they prefer retained earnings, equity, bank and then debt because of the differences in institutional and legal environment (Delcoure, 2007 and Chen, 2004).

The choice of optimal capital structure of banks is much probably similar to those non financial firms which give capital requirements the second priority. Different theories relating to optimal capital structure of banks were developed by Flannery (1994), Myers and Rajan (1998), Diamond and Rajan (2000) and Allen et al., (2009) according to which capital requirement are not essentially important for banks. But still few researchers identify and discuss the choice of capital structure of banks. The primary purpose of banks is to provide liquidity and extend credit through lines of credit (Kashyap et al. 1999) and thus wants to hold less amount of capital and increase their lending (Houston et al. 1997 and Akhavein et al. 1997).

Mishkin (2000) argues that as banks wants to hold less capital because of high cost so it is not necessary to examine the capital structure choice of banks because the bank capital requirements is the major determinants of bank." Whereas Colombo (2001) concludes that banks choice regarding capital structure influenced due to the imperfections in the financial markets. Gropp and Heider (2009) found that "in order to determine the capital structure of banks capital regulation may be of second importance and discuss whether regulations or market forces determine banks capital structures". Other important factor which influence the capital structure decisions is the environment of the firm in which they operate (Deesomsak et al., 2004) as well as the legal environment plays a minimal role in common stock policy but institutional environment and their international operations influenced the financing policies of firms (Bancel and Mittoo, 2004).

In this paper, we identify the factors or determinants and their impact on the level of financial leverage of the banks listed in Karachi Stock Exchange (KSE) during the period 2006 - 2010.The examination of financial leverage determination of banks listed in Karachi Stock Exchange is an area that has been investigate by few researchers.

The main objective of this study is (1) to identify the determinants of capital structure of banks and (2) to determine the impact of these determinants. This paper is consisted of eight main sections. Section 2 presents the literature review, section 3 and 4 consists of research problem, research objectives, research questions and conceptual framework, whereas section 5 consists of detailed description of methodology and variables with their measures. Detailed analysis of results discussed in section 6 and section 7 presents discussion whereas section 8 presents limitations and suggested future research.

2. Literature Review

2.1. Theories of capital structure:

2.1.1. Irrelevance theory

This theory was presented by Modigliani and Miller (1958) who proposed that the optimal capital structure does not maximize shareholders' wealth or value but later on research found that optimal capital structure maximizes the value of shareholders because of taxes, information asymmetry, bankruptcy cost and agency cost and for this purpose several theories related to capital structure have been presented. Following the arguments given by Modigliani and Miller, this study focuses to measure the determinants of capital structure in Pakistan.

2.1.2. Trade off theory

Myers (1984) proposed that firms should use high level of debt because in case of high tax rates a firm which uses high level of debt will have to pay less tax as compared to firms using low level of debt. This theory concludes that the tax advantages of borrowing should be equal to the costs of financial distress.

2.1.3. Pecking order theory

Myers and Majluf (1984) proposed that organizations or firms for financing purpose use retained earnings first and then go for debt over equity. The profitable organizations use retained earnings first because they have sufficient internal funds moreover when firms use retained earnings it signals that firm is profitable which positively impact on stock prices. Whereas the use of debt signals that the firm is not in good position which ultimately decreases the stock prices. Hence, pecking order theory suggests negative association between profitability and leverage.

2.1.4. Agency cost theory

This theory was presented by Jensen and Meckling (1976) and this theory is based on two conflicts, between (1) manager and shareholder and between (2) creditors and shareholder. The conflict between manager and shareholder can be arise as the managers manage the operations of organization and can used the resources for its own purpose which will automatically create the conflict between them. Whereas, the conflict between creditors and shareholder arise due to the moral hazards. And these two types of conflicts as discussed in agency cost theory can be solved by increasing the level of debt.

2.1.5. Signaling theory

Ross (1977) present this theory and proposed that issuance of debt positively signal the good position of company because the payment of interests and principal in the future are fixed liability which is to be paid and thus increase the trust of investors in the company. This theory shows positive relationship between the higher level of debt and trust of managers in future cash flows.

2.2. Determinants of capital structure of banks

In this study, nine major determinants of capital structure of banks explored on the basis of availability and accessibility of data. Determinants of capital structure measured in this study are based on the arguments given by trade-off theory and pecking order theory. In this way following hypothetical relationships are tested as given in table 1.1 :-

Table 1.1

Variables	**Expected Signs According To Theories**	
	Positive	**Negative**
Profitability	TOT	POT
Size	TOT	POT
Growth	POT	TOT
Non debt tax shields		TOT
Tax	TOT	
Tangible assets	TOT, POT	
Payout ratio	POT	

* Trade-off theoy (TOT)

** Pecking order theory (POT)

2.2.1. Profitability

According to pecking order theory there is negative relationship between profitability and debt level because more profitable firms use their retained earnings first because they have already sufficient internal funds and thus prefer retained earnings and then go for debt. Amidu (2007), Vasiliou (2007), Tang and Jang (2007), Akhtar and Oliver (2005), Chen and Strange (2006), Psillaki and Dashkalakis (2009), Deesomsak et al. (2009), Hijazi and Tariq (2006), Voulgaris et al. (2007), Chen and Chen (2011) and Chen (2004) empirically proved negative relationship between profitability and leverage. Where as Trade off theory imply positive relationship between profitability and debt level because if a profitable firm use more debt then it will have to pay less tax. Studies conducted by Amidu (2007) and Ahmad et al. (2011) found positive relation between leverage and profitability because of less probability of failure profitable firms demand more debt and can get at better conditions (Panno, 2010). Following the arguments given in the pecking order theory we hypothesize that; H1: *Banks with higher profitability tend to have low leverage*

2.2.2. Growth

According to pecking order theory firms having high growth opportunities needs internal funds which is not sufficient and therefore also needs external funds which shows positive relation between growth and leverage. Chen (2004), Chen and Strange (2005), Tang and Jang (2007), Ahmad et al. (2011), Voulgaris et al. (2007) and Hijazi and Tariq (2006) empirically found positive correlation between growth and leverage. Whereas studies conducted by Amidu (2007) and Deesomsak (2004) proved negative correlation between growth and leverage because firms with high growth potential will tend to have lower leverage. Following the arguments given in the pecking order theory we hypothesize that; H2: *Banks with higher growth rate tend to have high leverage.*

2.2.3. Tax

According to trade off theory tax is positively related with leverage because when the tax rate increase the use of debt by firms also increases. Therefore, a positive relationship exists between leverage and effective tax rate (Ahmad et al. 2011) whereas Amidu (2007), empirically proved positive correlation between short term debt and tax and negative correlation between long term debt and tax. Following this line of reasoning we could hypothesize that; H3: *There is a positive relationship between tax and leverage of banks*

2.2.4. Size

Trade off theory implies positive relationship between size of the firm and debt level because if the firm is large then there is less chance of bankruptcy which will make it easy to borrow at better conditions. Decloure (2007), Deesomsak (2004), Psillaki and Daskalakis (2009), Vasiliou (2009) and Chen and Chen (2011) empirically found positive relation between size of firm and leverage. Whereas study conducted by Amidu (2007) found positive relationship between short term debt and size of the firm. Pecking order theory implies negative or inverse relation between size of the firm and leverage. Various studies conducted by Chen (2004), Chen and Strange (2006), Ahmad et al. (2011) and Hijazi and Tariq (2006) empirically proved negative relationship between size of the firm and leverage. Following this line of reasoning we could hypothesize that; H4: *There is a negative relationship between size and leverage of banks.*

2.2.5. Tangible assets

There is also exists positive relationship between fixed assets and leverage because firms have more fixed assets can borrow against their fixed assets which can also save firms in case of default or failure. Chen (2004) found positive relationship between tangible assets and long term debt and concludes it as an important criterion in banks credit policy. Other studies conducted by Decloure (2007), Chen and Strange (2005), Oliver and Akhtar

(2005), Vasiliou (2009), Ahmad et al. (2011), Hijazi and Tariq (2006), Voulgaris et al. (2007) and Chen and Chen (2011) empirically found positive correlation between tangible assets and leverage. Whereas, studies conducted by Psillaki and Daskalakis (2009) and Amidu (2007) empirically proved negative correlation between tangible assets and leverage because firms with large holdings of tangible asssets can generate sufficient funds and thus do not need for external financing. Consequently, the following hypothesis is proposed; H5: *There is a positive relationship between assets tangibility and leverage of banks*

2.2.6. Non debt tax shields

According to trade off theory tax is positively related with leverage but in case of non-debt tax shields the interest tax benefit will be lower which implies negative relationship between leverage and non-debt tax shields and thus assumes a negative relationship between leverage and non-debt tax shields. Thus there is direct and positive relationship between long term debt, short term debt and non debt tax shields (Decloure, 2007). Whereas, negative relationship was empirically proved because decision and choice of capital structure influenced by the environment in which they operate (Deesomsak, 2004). Following the arguments given in the trade-off theory we hypothesize that; H6: *There is a negative relationship between Non-debt tax shield and leverage of banks.*

2.2.7. Payout ratio

Dividend policy can also be an important determinant of capital structure because according to Pecking order theory which implies positive relationship between dividend payment and leverage because when a firm pays dividend the retained earnings decreases which ultimately force the firm to go for debt. Ahmad et al. (2011) found positive and significant relationship between dividend payout ratio and leverage. Accordingly, we propose the hypothesis as; H7: *There is a positive relationship between dividend payout ratio and leverage of banks.*

Table 1.2:

Hypothesis	Description
H1	*Banks with higher profitability tend to have low leverage.*
H2	*Banks with higher growth rate tend to have high leverage.*
H3	*There is a positive relationship between tax and leverage of banks.*
H4	*There is a negative relationship between size and leverage of banks.*
H5	*There is a positive relationship between assets tangibility and leverage of banks.*
H6	*There is a negative relationship between Non-debt tax shield and leverage of banks.*
H7	*There is a positive relationship between dividend payout ratio and leverage of banks.*

3.0 Research Objectives

The main objectives of this study include:

(1) to identify the determinants of capital structure of banks

(2) to determine the impact of determinants on bank's financial leverage.

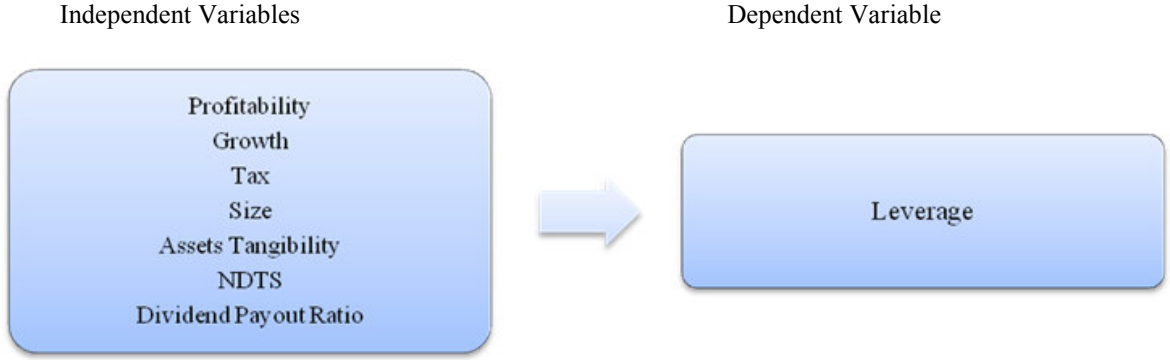
3.1. Research Questions

(1) What are the major determinants of capital structure of Pakistan banking industry?

(2) How do these determinants affect on banks financial leverage?

4. Conceptual Framework

Figure: 1



5. Research Methodology

5.1. Population and Sampling Technique

Population includes all the banks of Pakistan listed on KSE. Total 25 banks are listed on KSE. Random sampling technique is used in this study. Thus sample size of this study consists of 21 banks after excluding micro-finance banks, investment banks and specialized banks because of non availability of data in their annual reports and

secondly, they are involved in commercial banking.

5.2. Data Collection Methodology
Finally 21 banks of Pakistan listed on KSE are selected and data was collected from the annual reports during the period 2006-2010. These annual reports were gathered through KSE, different databases and websites of banks.

5.3. Multiple Regression Equation
To determine the impact of determinants on bank's financial capital structure choice, it would be beneficial to apply multiple regression to the dependent and independent variables. The regression line gives an estimation of the linear relationship between a dependent and one or more independent variables. Therefore the equation for our regression model is:
LVG = β0 + β1 (PF) 1i + β2 (SZ) 2i + β3 (GWT) 3i + β4 (TA) 4i + β5 (NDTS) 5i + β6 (TX) 6i + β7 (POR) 7i + ei
Where
LVG = Leverage
PF = Profitability
SZ = Size
GWT = Growth
TA = Tangible Assets
NDTS = Non- debt Tax Shields
TX = Tax
POR = Dummy variable, Payout Ratio
e = the error term

Table 1.3: Variables and their measure

Variables	Measurement
Leverage	Total debt/Total Assets
Profitability	Pre-tax profit/Total Assets
Size	Log of total assets
Growth	Percentage in total assets
Tangible Assets	Fixed assets or Tangible assets/Total assets
Non- debt Tax Shields	Depreciation+Amortization/Total assets
Tax	Total tax/ Profit After Taxation
Payout Ratio	Dummy variable, 0 for no dividend payment, 1 for dividend payment.

6. Results and Analysis

Table1: Descriptive Statistics

Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Leverage	105	.0009	9.2463	.927609	.8349150
Profitability	105	-.1047	.6786	.014577	.0833233
Growth	105	-7.7360	100.0000	1.558966	82.2006647
Tax	105	-4.5724	716.0568	1.185026	84.5835892
Size	105	9.6047	12.0162	1.108646	.5443548
Assets Tangibility	105	.0015	.5050	.051919	.0823362
NDTS	105	.0000	.0346	.003664	.0044868
Dividend Payout Ratio (Dummy variable)	105	.0000	1.0000	.714286	.4539206
Valid N (listwise)	105				

6.1. Descriptive Statistics
Table 1 provides the summary of the descriptive statistics of the dependent variable (leverage) and independent variables. The table shows mean value of leverage of banks 0.9276. Profitability, measured as the ratio of pre-tax profit to total assets representing mean value of 0.014577 indicating 1.45%. Whereas the mean value of growth, tax and size according to the table was 1.55896, 1.185026 and 1.108646 respectively. Assets tangibility reported a mean value of 0.051919 which shows that fixed assets constitutes 5.19% of total assets of the banks included in

sample size. Non-debt tax shield (NDTS) and dividend payout ratio reported a mean value of 0.003664 and 0.714286 respectively.

Table2: Correlation Analysis

Variables	Leverage	Profitability	Growth	Tax	Size	Asset Structure	Non-debt tax shield	Dividend payout ratio
Leverage	1							
Profitability	.251**	1						
Growth	-.937**	-.209*	1					
Tax	.811**	.208*	-.760**	1				
Size	-.006	.213*	-.103	-.027	1			
Asset Tangibility	.182	-.009	-161	.123	-.006	1		
Non-debt tax shields	.659**	.071	-.634**	.532**	-.244**	.141	1	
Dividend payout ratio	.072	.150	-.156	.087	.531**	.020	-.058	1

**.Correlation is significant at 0.01 level (2-tailed).
*.Correlation is significant at the 0.05 level (2-tailed).

6.2. Correlation Analysis

The table 2 shows the summary of correlation coefficient between dependent variable (leverage) and seven independent variables. The table shows positive relationship 0.2551 between leverage and profitability and is consistent with the trade-off theory. The results shows negative relation between growth and leverage (-0.937) and supported by trade-off theory. The table shows the positive relationship (0.811) between tax and leverage which is consistent with the trade-off theory. Whereas, the coefficient of correlation between size and leverage was (-.006) representing negative relationship and shows that as size increases the demand for leverage also increases and is also supported by pecking order theory.

Leverage and asset tangibility had a correlation value of (0.182) indicating positive relationship which means as the fixed assets increases the use of debts also increases and is supported by both pecking order theory and trade-off theory. There is positive correlation between leverage and non-debt tax shields as the value of correlation coefficient was (0.659) and shows that level of debt increases with the increase in non-debt tax shields. But this correlation results is not consistent with the trade-off theory which implies negative relationship between leverage and non-debt tax shields. The table shows positive relationship between leverage and dividend payout ratio and is supported by pecking order theory.

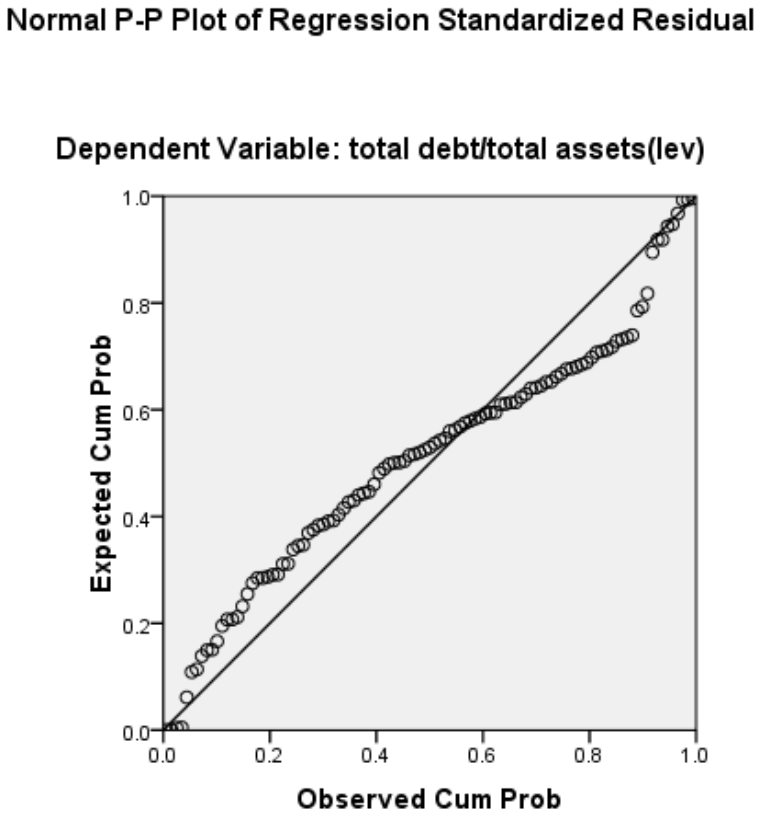
6.3. Regression Assumptions

Durbin-Watson test was applied to diagnose first order autocorrelation problem. The value of Durbin-Watson shown in table 4 is 1.785 which is closer to 2.0 and thus regression model is the appropriate method. White's hetroscedasticity test using E-Views software was applied. Since nR^2 is lesser than the 5% critical value of χ^2 in all models, thus we can accept the null hypothesis and can conclude that there is no hetroscedasticity.

Multiple regression tables also show the values of Tolerance and variance Inflationary Factor (VIF) as shown in table 6. The values of Tolerance range from 0 to 1 and thus shows less multicollinearity like profitability (0.906), growth (0.304), tax (0.405), size (0.600), Assets tangibility (0.970), NDTS (0.499) and dividend payout ratio (0.706). Whereas the values of VIF as shown in table profitability (1.104), growth (3.285), tax (2.471), size (1.666), Assets tangibility (1.031), NDTS (2.002) and dividend payout ratio (1.416) range from 0 to 10 and thus shows less multicollinearity.

Linearity assumption is confirmed through scatter diagrams between independent and dependent variables. Normal probability plots of the residuals shown in figure 2 confirm no serious violation of normality assumption.

Figure 2: Normal Probability Plot



6.4. Regression Equation

LVG = β0 + β1 (PF) 1i + β2 (SZ) 2i + β3 (GWT) 3i + β4 (TA) 4i + β5 (NDTS) 5i + β6 (TX) 6i + β7 (POR) 7i + ei

Using SPSS version16, results of the regression equation for the years 2006 to 2010 are shown in tables 1 to 5:

Table 3: Summary of Regression Equation (2006-2010)

Year	Regression Equation
2006-2010	LVG = 1.963 + .681 (PF) 1i + -.008 (SZ) 2i + .002 (GWT) 3i + -.086 (TA) 4i + .315 (NDTS) 5i + 10.705 (TX) 6i + -.072 (POR) 7i + ei (R-Square = 91.4%)

Table 4: Results of Regression

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.956[a]	.914	.908	.2531191	1.785

a. Predictors: (Constant), Profitability = (pretax profit/total assets), Growth = (%change in assets), Tax = (total tax/profit-after taxation), Size = (log of total assets), Assets Tangibility = (fixed assets/total assets), NDTS = (dep+amort/total assets), Dividend Payout Ratio = dummy variable, 0 for nonpayment otherwise 1.

b. Dependent Variable: Leverage = (total debt/total assets)

Table 5:

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	66.282	7	9.469	147.791	.000[a]
	Residual	6.215	97	.064		
	Total	72.497	104			

a. Predictors: (Constant), Profitability = (pretax profit/total assets), Growth = (%change in assets), Tax = (total tax/profit-after taxation), Size = (log of total assets), Assets Tangibility = (fixed assets/total assets), NDTS = (dep+amort/total assets), Dividend Payout Ratio = dummy variable, 0 for nonpayment otherwise 1.

b. Dependent Variable: Leverage = (total debt/total assets)

6.4.1 Model Summary and ANOVA

The table 4 provides the model summary of regression analysis. The R-square value (0.914) shows that the 91.4% variance in dependent variable (leverage) is due to independent variables (profitability, growth, tax, size, assets tangibility, NDTS and dividend payout ratio). Whereas the value of adjusted R-square is slightly lower than R-square which is 0.908. The R represents the correlation between the observed and predicted values of the dependent variable. The value of R according to the table is (0.956) representing positive and strong relationship. The table 4 shows the value of F-statistic and thus the model is significant at the 1% level of significance.

Table 6:

Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (constant)	1.963	.645		3.042	.003		
Profitability	.681	.313	.068	2.177	.032	.906	1.104
Growth	-.008	.001	-.739	-13.711	.000	.304	3.285
Tax	.002	.000	.203	4.335	.000	.405	2.471
Size	-.086	.059	-.056	-1.466	.146	.600	1.666
Assets Tangibility	.315	.306	.031	1.031	.305	.970	1.031
NDTS	10.705	7.828	.058	1.367	.175	.499	2.002
Dividend Payout Ratio	-.072	.065	-.039	-1.099	.275	.706	1.416

6.5.1. Profitability (H1)

The table 6 shows that the value of coefficient (0.681) indicating positive relationship between profitability and leverage. The relationship is statistically significant with t-statistic value of 2.177 and p-value of 0.032.Thus the results accept the hypothesis 1 and supported by pecking order theory which implies that profitable banks preferred their retained earnings first which is sufficient for financing and they do not need to rely on debt. The result is also consistent with the studies of Amidu (2007) and Ahmed et al. (2011) who empirically proved positive relationship between profitability and leverage.

6.5.2. Growth (H2)

The coefficient value (-.008) indicates negative relationship between growth and leverage. But the relationship is statistically significant with t-statistic value of -13.711 and p-value of 0.000.Thus the results accept the hypothesis 2 and supported by trade off theory which implies negative relation between growth and leverage.

The result is consistent with studies of Amidu(2007) and Deesomask (2004) that proved negative relation between growth and leverage.

6.5.3. Tax (H3)

The table shows that positive and significant relationship between tax and leverage with coefficient value of (0.002), t-statistics value of (4.335) and p-value of (0.000). Thus the hypothesis 3 is also accepted which is supported by trade-off theory according to which tax is positively related with leverage because when the tax rate increase the use of debt by firms also increases. Ahmad et al. (2011) and Amidu (2007) empirically proved positive correlation between short term debt and tax and negative correlation between long term debt and tax.

6.5.4. Size (H4)

The table shows statistically insignificant and negative relationship between size and leverage with coefficient value of value of (-0.086), t-statistics value of (-1.46) and p-value of (0.146). The result rejects the hypothesis 4 according to which there is negative relationship between size and leverage which implies that large banks do not need to rely on debt. Pecking order theory implies negative or inverse relation between size of the firm and leverage. Various studies conducted by Chen (2004), Chen and Strange (2006), Ahmad et al. (2011) and Hijazi and Tariq (2006) empirically proved inverse relation between size of the firm and leverage.

6.5.5. Assets Tangibility (H5)

The table shows positive but statistically insignificant relationship between assets tangibility and leverage with coefficient value of value of (0.315), t-statistics value of (1.031) and p-value of (0.305). The result rejects the hypothesis 5 according to which there is positive relationship between assets tangibility and leverage. Pecking order and trade-off theory both suggest that firms with more fixed assets can borrow against their fixed assets which can also save firms in case of default or failure. Studies conducted by Decloure (2007), Chen and Strange (2005), Oliver and Akhtar (2005), Vasiliou (2009), Ahmad et al. (2011), Hijazi and Tariq (2006), Chen (2004), Voulgaris et al. (2007) and Chen and Chen (2011) empirically found positive correlation between tangible assets and leverage.

6.5.6. NDTS (H6)

The table shows statistically insignificant and negative relationship between NDTS and leverage with coefficient value of value of (10.705), t-statistics value of (1.367) and p-value of (0.175). Thus the result rejects the hypothesis 6 according to which there is negative relationship between NDTS and leverage. Decloure (2007) and Ahmad et al. (2011) empirically proved direct and positive relationship between debt and non debt tax shields whereas negative relationship was empirically proved because decision and choice of capital structure influenced by the environment in which they operate (Deesomsak, 2004).

6.5.7. Dividend Payout Ratio (H7)

The table shows statistically insignificant and negative relationship between dividend payout ratio and leverage with coefficient value of value of (-0.072), t-statistics value of (-1.099) and p-value of (0.275). The result rejects the hypothesis 7 according to which there is positive relationship between dividend payout ratio and leverage. The results is not consistent with the previous study because some banks included in sample size was established in 2006 and due to losses dividend was not paid to shareholders.

Table 6: Results

Hypothesis	Description	Results
H1	Banks with higher profitability tend to have low leverage.	Accept
H2	Banks with higher growth rate tend to have high leverage.	Accept
H3	There is a positive relationship between tax and leverage of banks.	Accept
H4	There is a negative relationship between size and leverage of banks.	Reject
H5	There is a positive relationship between assets tangibility and leverage of banks.	Reject
H6	There is a negative relationship between Non-debt tax shield and leverage of banks.	Reject
H7	There is a positive relationship between dividend payout ratio and leverage of banks.	Reject

7. Discussion

The purpose of this study to identify the determinants of capital structure of banks and to determine the impact of these capital structure determinants on banks listed in Karachi Stock Exchange (KSE) during the period 2006 - 2010. The results found three independent variables (profitability, growth and tax) out of seven independent variables statistically significant. The results also found remaining four variables statistically insignificantly related with leverage. From the analysis it is concluded that hypothesis H1, H2, H3 accepted whereas H4, H5, H6, and H7 rejected. The results concludes and found three variables (profitability, growth, tax) as an important determinants of capital structure of banks in Pakistan and thus significantly affected the bank's financial leverage.

This study suggests that that profitable bank preferred their retained earnings first which is sufficient for financing and they do not need to rely on debt. And the firms having high growth opportunities need internal funds which is not sufficient and therefore also needs external funds which shows positive relation between growth and leverage. Moreover, tax is positively related with leverage because when the tax rate increase, the

use of debt by firms also increases. The result rejects the hypothesis 4 according to which there is negative relationship between size and leverage which implies that large banks do not need to rely on debt. Pecking order and trade-off theory both suggest that firms with more fixed assets can borrow against their fixed assets which can also save firms in case of default or failure but the results find positive relationship between assets tangibility and leverage. The result concludes negative relationship between leverage and non-debt tax shields because in case of non-debt tax shields the interest tax benefit will be lower. The study also founds statistically insignificant and negative relation between leverage and dividend payout ratio because some banks included in sample size was established in 2006 and due to losses dividend was not paid to shareholders. However banking industry of Pakistan may use the findings of this study in selecting the optimal capital structure which positively enhance the firm's value.

8. Limitations & Future Research

This study has some limitations for example the sample size of the study consisted of only 21 banks. Micro-finance banks, investment banks and specialized banks excluded from this study because of non availability of data in their annual reports. As this study used only banks data so that the results could not be generalizable to any other sector of Pakistan.

Future studies can include other variables like book leverage, market leverage etc as dependent variables. Other direction for future research includes:

(1) To determine the impact of dividend policy on banks financial leverage and on banks financial performance.
(2) To determine the mediating role of industry type and the environment in which organizations operate on the banks financial leverage.

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