

# DETERMINANTS OF CAPITAL STRUCTURE: EXPERIENCE OF INDIAN BANKING SECTOR

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## *Abstract*

*A company's proportion of short and long-term debt is considered when analyzing capital structure. Capital structure is firm's debt-to-equity ratio, which provides insight into how risky a company is. Capital structure decisions are related to finding out an optimum capital structure for the shareholders of the firms. This study explores on the capital structure for banks listed on the BANKEX index in India. The present study has two objectives: Firstly, to identify important determinants of capital structure and secondly to test for the applicability of trade-off and pecking order theories based on sample data drawn from the Indian Banking Industry for the ten year period 2000-01 to 2009-10. Multiple Regression Analysis has been carried out taking total debt to equity ratio as the dependent variable. Profitability, liquidity, asset structure and business risk were found as important determinants for capital structure. On the basis of the signs of the regression coefficients pecking order theory has been found to be applicable, rather than trade-off theory, a position upheld by other empirical research works in the area.*

## **INTRODUCTION**

Capital structure decision is perhaps the key strategic decision that has occupied the attention of academicians and managers. Capital structure is basically the proportion of debt and equity and finding out whether there is a capital structure that can be defined as optimum for the shareholders of the firms. To examine such issues, many theories have been developed in the literature and they generally

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focus upon the factors that are likely to impact the leverage decisions of the firms. The capital structure should be examined from the viewpoint of its impact on the value of the firm. It can be legitimately expected that if the capital structure decision affects the total value of the firm, a firm should select such a financing mix as will maximize the shareholder's wealth. Such a capital structure is referred to as the optimum capital structure. Capital structure can affect the value of a company by affecting either its expected earnings or cost of capital or both. While it is true that financing mix cannot affect the total operating earnings of a firm, as they are determined by the investment decisions, it can affect the share of earnings available to the shareholder. But the leverage can influence the value of firm through cost of capital.

The roots of modern capital structure theory can be assumed to have evolved from Modigliani and Miller (MM) theory dating back to the late 50's as one of the most influential papers in the finance literature. Capital structure decisions assumes i) replacement of one form of capital with another ii) would be optimum when cost of capital is minimized. Yet another factor is the target capital structure which is debt equity ratio deemed most appropriate by the management. Each firm works towards achieving the target capital structure. If it has a lower proportion of debt, it raises the debt to finance the investment opportunities. And if the debt is too large, the firm raises its equity capital. Firms may not be maintaining the target capital structure all the time and the deviations are not so large. Target capital structure is determined by taking several factors into account. These factors range from pure financial issues like taxes, interest to practical issues like market practices, lender's perspective and industry norms.

Modigliani and Miller made a classic contribution to explain capital structure. Their theory of capital structure substantiates the view of net operating income approach and provides behavioral explanation of the theory that capital structure is immaterial to the value of the firm. The First proposition of MM theory says that the market value of the firm is independent of its capital structure and is given by capitalizing its expected return at a rate appropriate to its class. The proposition Second (without taxes) of MM theory says that with increasing leverage the cost of equity rises exactly to offset the advantage of reduced cost of debt to keep the value of the firm constant. The proposition Third of MM theory says that with no taxes the cost of capital for levered firm and unlevered firm would be the same and equal to the capitalization rate of an all equity financed firm. MM propositions

of irrelevance of capital structure is based on the principle of arbitrage, i.e. the discrepancy in the valuation of levered firm and unlevered firm would be set right by investors by selling overvalued and buying the undervalued asset. There are other approaches to capital structure such as Net Income Approach and Traditional Approach. Net Income Approach assumes that capitalization of the firm is based on the net income derived by each supplier of capital, discounted at fixed rates, irrespective of levels of debt

On the other hand, net operating income approach assumes that value of the firm remains constant because overall capitalization rate remains constant. Traditional approach recognizes assumptions of both the approaches not wholly but in parts only. This approach recognizes the advantage of debt up to a certain level. Any increase in debt beyond a point causes cost of equity to rise.

The importance of an appropriate capital structure is, thus obvious. There is a viewpoint that strongly supports the close relationship between leverage and value of a firm. There is an equally strong body of opinion which believes that financing mix has no impact on the shareholder's wealth and the decision on financial structure is irrelevant. But in real world taxes are very much there and thus MM's propositions should be acceptable which suggest 100 percent leverage to maximize shareholder's value and minimize the cost of capital. This in turn means that shareholders must favor high debt firms compared to low debt firms. Contrary to the theoretical positions the practice has been exactly opposite. The most successful firms have little or no debt. Also most of the firms that have failed had high amount of debt. For instance, the merchant banks in US which collapsed in wake of recession were highly leveraged. One of the factors that seem to dominate the tax advantage is the financial distress the firm undergoes when it assumes debt. Financial distress is the difficulty a firm may face in fulfilling its commitments, including the interest to be paid to the lenders of the funds. It may range from minor liquidity crisis to total insolvency. When financial distress becomes severe and firm actually makes a default in the commitments, the cost associated with debt increase significantly. Financial distress is dependent upon many factors such as cost structure of products, levels of competition, technological innovations, stability of demand etc. In a levered firm one can also encounter conflict of interest between shareholders and debt holders. The conflict of interest is not very apparent but becomes exaggerated under conditions of high debt with mounting costs of financial distress. These conflicts are visible when firms are on the verge of

bankruptcy. With the introduction of cost of financial distress and cost of agency with increasing debt the tax advantages of debt reduces. This gives rise to a tradeoff between the advantage and disadvantage of debt. It is perceived balance between the advantage and disadvantage of debt and the cost of financial distress and agency that will determine the optimum level of debt in a firm. The tradeoff theory suggested that the profitable firms in high tax brackets may borrow more as they have larger amount of tax shield that will benefit them. The most successful firms have given preference for equity over debt. Gordon Donaldson (1961) conducted a study to examine the capital structure pattern of the industry. The study suggests the pecking order of financing which specifies that firms i) will finance from internal accruals, then ii) raise debt or convertible debt and finally iii) resort to issue equity. The deployment of internally generated funds for projects is viewed rather positively and as healthy sign by the capital markets. On the other hand raising equity issue may cause a doubt and some concern that stocks of the firm may be overpriced and hence it wants to raise capital by equity route. Moreover debt does not let the control dilute or curtail benefits of existing equity shareholders.

### **Backdrop of Indian Banking Sector**

The Indian Banking Industry, which is governed by the Banking Regulation Act, 1949 can be broadly classified into two major categories, non scheduled banks and scheduled banks. Scheduled banks comprise commercial banks and the cooperative banks. In terms of ownership, commercial banks can be further grouped into nationalized banks, the State Bank of India and its group banks, regional rural bank and private sector banks (old/new domestic and foreign). These banks have around 67000 branches spread across the country (researchandmarkets.com).

The first bank in India was established in 1786. From 1786 till today, the journey of Indian Banking System can be segregated into three distinct phases. They are mentioned below:

- Early phase from 1786 to 1969 of Indian Banks.
- Nationalization of Indian Banks upto 1991 prior to Indian banking sector reforms.
- New phase of Indian Banking System with the advent of Indian Financial

### and Banking Sector Reforms after 1991.

The Reserve Bank of India (RBI), as the central bank of the country, closely monitors developments in the whole financial sector. The banking sector is dominated by Scheduled Commercial Banks (SCBs). As of March 2002, there were 296 Commercial banks (SCBs). As at end-March 2002, there were 296 Commercial banks operating in India. This included 27 Public sector banks (PSBs), 31 Private, 42 Foreign and 196 Regional Rural Banks. Also, there were 67 scheduled cooperative banks consisting of 51 scheduled urban cooperative banks and 16 scheduled state cooperative banks. Scheduled commercial banks touched on the deposit front, a growth of 14 % as against 18% registered in the previous year. And on advances, the growth was 14.5% against 17.3% of the early year. State Bank of India is still the largest bank in India with the market share of 20 percent. ICICI and its two subsidiaries merged with ICICI Bank, creating the second largest bank in India with a balance sheet size of Rs. 1040 bn. Higher provisioning norms, tighter asset classification norms, dispensing with the concept of 'past due' for recognition of NPAs, lowering of ceiling on exposure to a single borrower and group exposure etc., are among the important measures in order to improve the banking sector.

A minimum stipulated Capital Adequacy Ratio (CAR) was introduced to strengthen the ability of banks to absorb losses and the ratio has subsequently been raised from 8 percent to 9 percent. It has been increased to 12 percent (from the year 2004) on the Basle Committee recommendations.

Retail Banking is the new mantra in the banking sector. The home loans alone account for nearly two third of the total retail portfolio of the bank. According to one estimate, the retail segment is expected to grow at 30-40 percent in the coming years. Net banking, phone banking, mobile banking, ATMs and bill payments are the new buzz words that banks are using to lure customers. With a view to provide an institutional mechanism for sharing of information on borrowers/potential borrowers by banks and financial institutions, the Credit Information Bureau (India) Ltd (Cibil) was set up in August 2000. The Bureau provides a framework for collecting, processing and share credit information on borrowers of credit institutions. State Bank of India and Housing Development and Finance Corporation are the promoters of Cibil.

The RBI is now planning to transfer its stake in the State Bank of India,

National Housing Bank and National Bank for Agricultural and Rural Development to the private players. Also, the government has sought to lower its holding in PSBs to a minimum of 33 percent of total capital by allowing them to raise capital from the market. Banks are free to acquire shares, convertible debentures of corporates and units of equity oriented mutual funds, subject to a ceiling of 5 percent of total outstanding advances (including commercial paper). The finance ministry spelt out structure of the government-sponsored ARC called the Asset Reconstruction Company (India) Limited (Arcil), this pilot project of the ministry would pave way for smoother functioning of the credit market in the country. The government will hold 49 percent stake and private players will hold the rest 51 percent-the majority being held by ICICI Bank (24.5 percent). Therefore, it would be interesting to know how debt equity ratios of banks listed on the BANKEX and also the various factors influencing the capital structure of these banks vary.

### **OBJECTIVE OF THE STUDY**

The twin objectives of the present study are as follows:-

- To consider important variables that impact the debt-equity choice of a company and test for their applicability by means of multiple regression analysis in the context of Indian Banking Sector.
- On the basis of signs of the coefficient in the above multiple regression analysis results, examining the applicability of tradeoff or pecking order theories for the Indian Banking Sector.

### **DETERMINANTS OF CAPITAL STRUCTURE**

Although the MM theory assumes that investors have the same financial information about a firm as with the managers, which is referred to as asymmetric information, in practice, however managers have access to insider information. This viewpoint was not supported by Myer and Majluf (1984) who accept that managers have superior information about the actual value of the company. The information costs associated with debt and equity issues have led Myer (1984) to argue that a firm's capital structure reflects the accumulation of past requirements. According to the Pecking Order Theory of Myer (1984), companies prioritize their sources of financing-from internal financing to equity issues-according to law of least effort or of least resistance, preferring to raise equity as a financing

means of last resort. Hence, internal funds are likely to be utilized first, and only when they get exhausted, the firms will apply to the new debt issues. Even if they rely on external financing, the firms issue cheapest security, starting with debt to hybrid securities such as convertible bonds and issue of equity only as a last resort. Tax benefits are assumed to have second order effect. The debt ratio varies when there is an imbalance between internal funds and investment opportunities. The dependent variable measuring debt equity was considered as Leverage. The capital structure considered is defined as ratio of total debt to total equity ;

$$\text{Capital Structure} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

**Asset Structure:** A positive correlation is expected between asset structure and leverage ratios under trade-off theory. More tangible assets mean companies can afford high debt equity ratios. This has been supported in the studies of Rajan and Zingales (1995) and Frank and Goyal (2009). The rationale underlying this factor is that tangible assets are easy to collectivize and thus they reduce agency cost of debt. Among the various reliable factors for explaining market, leverage tangibility is one that maintains a positive correlation with the leverage. No specific relation is assumed under pecking order theory between debt equity ratio and tangibility. Here asset structure measured as ratio of net fixed assets to total assets.

**Size of the company:** Larger companies tend to have higher level of indebtedness. This fact was supported by Shapiro and Titman (1985) in their study, in which they discussed that because of insolvency risks, firms would avoid debt. Since larger firms have a chance to be more diversified, they have little bankruptcy risk. Castanias (1983) also supported this relationship between size and leverage. Data consisting of many small and non publicly traded firms had been selected. An increase in size may lead to-less business risk per rupee of assets invested, easier access to borrowing markets, more tax offsets per rupee of assets or different marginal tax rates and lower cost of default per rupee of assets. Warner (1977) also suggested that bankruptcy costs would be higher for smaller firms. Evidence was drawn from a number of rail road firms which were in bankruptcy proceedings between 1933 and 1955. In this respect trade-off theory may suggest a positive relation between debt and firm size. Alternatively Kakani (1999),

following Weston and Brigham (1981) argued that larger firms, in case of financial requirements, may go for additional issue of external equity, which will have very little impact on its control. Myers and Majluf (1984) suggested that information asymmetries are less in case of larger firms and therefore they have the advantage to issue equity instead of debt. Thus, negative relation is expected under pecking order theory between debt and firm size. Natural logarithm of total assets is considered as better measure of size.

**Growth Opportunities:** Companies with high market value in relation to book value have lower indebtedness level. Myer (1984) states a negative relationship between growth and financial leverage due to high interest rates or restrictive covenants that discourage debt taking. Myer (1977) argued that firms with growth opportunities may find it difficult and costly to rely on debt for financing, as the degree of risk may be high for growth oriented investments. Thus, a negative relationship is assumed under trade-off theory. Pecking Order theory given by Myer starts from asymmetry of information, in which managers know more about the opportunities, risks and values of the company than agents outside the company do. A positive relation is expected between debt and growth opportunities as high growth firms have greater needs for funds. Growth in net sales is taken as indicator of growth opportunities.

**Profitability:** A profitable firm has the potential to absorb a large amount of interest payments and thus derive tax shield arising out of a high debt ratio which is not the case with a less profitable firm. Thus a positive relation can be expected between profitability and debt ratio according to trade-off theory. On the other hand, pecking order theory suggests a negative relation as high profits mean a larger amount of retained earnings, given the dividend policy which is usually sticky and lesser reliance on external finance. Profitability plays an important role in leverage decisions. There are two measures of profitability such as Return on Asset (RoA) and Profit Margin on Sales (PMS). RoA represents the contribution of firm's assets on profitability creation. RoA may also be called profit to asset ratio. RoA is thus the ratio between Net profit after taxes and average total assets. Profit margin on sales (PMS) is the ratio of operating income over total sales. Salawu, R.O. and Agboola, A.A. (2008) in their paper analyzed the determinants of non financial firms in Nigeria using panel of 33 firms. Statistical tests were performed for a period 1990-2004. The results revealed that profitability is positively associated to total debt and long term debt. However, Jensen (1986)

advocated a negative relationship in case of an ineffective market for corporate control. The rationale is that under an ineffective market for corporate control, even if a firm has high profits, lenders may be reluctant to lend, as debt no longer serves as effective monitoring device. Conversely, in case of an effective market to corporate control a positive relationship is expected to prevail. Here, profitability is defined as ratio of operating profit before interest and tax to capital employed.

**Business Risk:** Both tradeoff and pecking theories suggest a negative relation between business risk and debt equity ratio as financial prudence suggests that firms having high business risk in the form of variability in the operating profit should not go for high financial risk in the form of high debt equity ratio. Business risk is measured as the coefficient of variation in operating profits.

**Non debt tax shield (NDTS):** A negative relationship is expected under the tradeoff theory between NDTS and debt ratios. Pecking order theory considers tax benefits whether arising out of debt or non debt sources as of secondary importance and hence no relation is expected. De Angelo and Masulis (1980), considered items like depreciation, research and development expenditure that also provide tax shield but are not related to debt. The larger the quantum of non debt tax shield the lesser will be the motivation of managers to go in for debt in their capital structure. It is measured as:

$$\text{NDTS} = (\text{PBIT} - \text{I} - \text{T} / 0.30) / \text{Total Assets}$$

where,

PBIT= Operating Profit; I= Interest Payments; T= Amount of Tax

Average tax rate during the study= 30%

**Liquidity:** Amihud and Mendelson (1986) note that managers who are concerned about increasing the liquidity of their firm's financial claims can do so through corporate policies such as going public, voluntary disclosure, and distributing ownership among a wider base of shareholders. The fact that increases in liquidity through such corporate decisions can increase value suggests that increases in liquidity can also lower the cost of capital. As per pecking theory, a negative relation is expected between liquidity and debt as firms have a preference for internal funds over external. This is captured by maintaining liquidity. Firms that are maintaining their liquid resources are not essentially in the need of debt or

borrowings from outside. Alternatively, tradeoff theory suggests that a firm should have high liquidity in order to service high debt. Even Jensen's (1986) free cash flow suggests a positive relation between liquidity and debt ratio as cash rich firms should have a tendency to acquire additional debt so that very little extra cash is available for managers to squander, after meeting the debt servicing obligation. Here, Liquidity is taken as ratio of Current Assets to Current Liabilities and Provisions)

## **RESEARCH METHODOLOGY**

### **NATURE AND SOURCES OF DATA**

For this study, secondary data was collected from CMIE database 'Prowess'. The period of study is from the year 2001 to 2010. Raw data had been made suitable for analysis as per the methodology.

#### **Sample**

In order to have a good benchmark of Indian Banking sector BSE Bankex sector index has been chosen. BSE Bankex is the Banking index product from BSE stable and is used as a proxy of the banking industry as it represents 12 stocks which account for 90 percent of the banking stocks market capitalization on BSE stock index. Thus tracking its performance would be a good indicator of banking industries performance.

A few important features of Bankex are given below:

- **BANKEX** will track the performance of the leading banking sector stocks listed on the BSE.
- **BANKEX** is based on the free float methodology of index construction.
- The base date for **BANKEX** is 1<sup>st</sup> January 2002.
- The base value for **BANKEX** is 1000 points.

The **BANKEX** has underperformed the market since February 16, 2009 with a decline of 11.6 percent compared to 4.5 percent fall in the benchmark BSE Sensex due to global downturn.

There are 20 banks under consideration. Yes Bank has been excluded from the analysis due to non-availability of data.

**Model Formulation**

Debt Equity Ratio as indicator of capital structure is taken as dependent variable. The independent variables taken as determinants of capital structure as defined earlier are profitability, growth opportunities, liquidity, asset structure, size, non debt tax shield and business risk.

For the analysis of pooled data for ten years, i.e. 2001 to 2010 correlation matrix was constructed and the technique of multiple linear regression analysis was used. An attempt was made to develop a multiple regression equation using identified key variables. The Model used is:

$$Y_i = \alpha + \sum_{i=1}^n b_i x_i + \varepsilon_i$$

Where,  $\alpha$  is the regression constant and  $b_i$ s are regression coefficients and  $\varepsilon$  is the error component.

The regression coefficient indicates the amount of change in the value of dependent variable with a unit change in independent variable.  $r^2$ -the coefficient of determination, gives an estimate of the proportion of variance of dependent variable accounted for by the independent variable. The value of  $r^2$  varies between 0 and 1. An  $r^2$  of zero means that the predictor accounts for none of the variability of 'Y' by 'X'. An  $r^2$  means perfect prediction of Y by X and that 100 percent of variability of 'Y' is accounted for by 'X'. The higher the value of  $r^2$ , the closer the relationship between the variables. SPSS 15 is used for analysis of pooled data.

**RESULTS AND DISCUSSION**

Correlation matrix in Table 1, highlights that the correlation of debt equity ratio with profitability, growth opportunities, liquidity and asset structure is significant at 1 percent level of significance followed by size which is significant at 5 percent level of significance. The results of multiple regression model fitted with all determinants of capital structure and debt equity ratio as dependent variable are given in Table 4. The major determinants of capital structure for banking industry are profitability, liquidity, asset structure and business risk are highly significant at 1 percent level of significance. Size and Non Debt tax shield (NDTS) are significant determinant at 10 percent level of significance for debt equity ratio. The only variable growth opportunities (GO) has no significance value for capital

**Table 1: Correlations Results**

	Capital structure	Profitability	GO	Liquidity	Asset structure	Size	NDTS	Risk
Capital structure	1	-.524(**)	.226(**)	-.245(**)	.302(**)	.184(*)	.064	-.143
Profitability		1	-.228(**)	.128(**)	.195(*)	-.214(*)	.011	-.192(*)
GO			1	-.108	.226(**)	.025	.048	.211(*)
Liquidity				1	.200(**)	-.221(*)	.061	-.058
Asset structure					1	-.213	.203(**)	.064
Size						1	-.078	-.199(**)
NDTS							1	-.087
Risk								1

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

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

**Table 2: Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.776(a)	.603	.596	1.165409

**Table 3: ANOVA Results**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	334.007	7	47.715	35.132	.000(a)
Residual	220.025	162	1.358		
Total	554.032	169			

**Table 4: Multiple regression results**

Variable	Coefficient	Std. Error	Significance	VIF
(Constant)	6.517	1.142	.000	
Profitability	-3.385	.300	.000**	1.477
GO	.003	.003	.267	1.228
Liquidity	-.225	.059	.000**	1.312
Asset structure	7.658	.898	.000**	1.352
Size	-.155	.096	.108*	1.544
NDTS	-1.675	1.019	.102*	1.089
Risk	-.040	.006	.000**	1.317

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.10 level (2-tailed)

**Table 5: Explanatory variables and their relationship with Debt Ratio**

Variables	Definition	Expected Relationship		Actual Relationship	Beta (p values)
		Trade-off Theory	Pecking order Theory		
Asset Structure	Fixed Assets/Total Assets	Positive	No specific	Positive	7.658 (0.000)**
Profitability	Operating Profits/ Capital employed	Positive	Negative	Negative	-3.385 (0.000)**
Growth Opportunities	Net sales	Negative	Positive	Positive	0003 (0.267)
Size of the Firm	Natural Logarithm of Total Assets	Positive	Negative	Negative	-0.155 (0.108)*
NDTS	(PBDIT- I - T/ .30)/Total Assets	Negative	No Specific	Negative	-1.675 (0.102)*
Liquidity	Current Assets/ Current Liabilities	Positive	Negative	Negative	-0.225 (0.000)**
Business Risk	Coefficient of variation of Operating Profits	Negative	Negative	Negative	-0.40 (0.000)**

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.10 level (2-tailed)

structure concerning Indian banking industry. To check whether multicollinearity problem exists in the present study Variance Inflation Factor (VIF) is calculated for each of the explanatory variables and given in Table 4. These values range from 1.08 to 1.5 and are much less than the rule of thumb range of 5-10, the maximum value of VIF that suggest the existence of multicollinearity problem as indicated in Gujarati and Sangeetha (2007). The study is, therefore, not affected by the problem of multicollinearity.

The value of r-square in Table 2 is 0.60 suggests that 60 percent of the variation in capital structure is explained by the determinants considered in study. Still, there is need to consider other factors as 40 percent of the variation is left unexplained.

From Table 4, the relation of debt equity ratio with profitability is negative in alignment to pecking order theory, which also means high profit, signifies a larger amount of retained earnings and lesser reliance on external finance. The sign of growth opportunities is positive with debt equity ratio but the coefficient is very low near to zero showing no significant effect on debt equity ratio. Thus, as per the direction of relationship it follows pecking order theory. Size of the firm is also negatively associated with debt equity ratio suggesting larger firms take less debts and issues more equity. This relationship also aligns with pecking order theory. Both trade-off and pecking order theory suggests a negative relationship of debt equity ratio with business risk and in Indian banking industry it seems to follow both. In case of NDTs, pecking order theory assumes no specific relation, here a negative relationship is observed but it is not found significant at 1 percent level of significance for debt equity ratio. The last determinant liquidity also follows the pecking order theory, as it is negatively associated with debt equity ratio for Indian banking industry. So, banks having more liquidity prefer less debt. ANOVA results are given in Table 3.

## CONCLUSION

This study was conducted to find the major determinants for capital structure in Indian banks listed under BSE BANKEX index. The capital structure of a company consists of a particular combination of debt and equity issues to relieve potential pressures on its long-term financing. These results are interesting since they do provide a comprehensive picture of the determinants of capital structure in a developing country. The study is essentially a cross-sectional regression

analysis over the ten-year period. This approach is preferred over panel regression. Panel data regression is usually chosen, *inter alia*, to get over problems of multicollinearity and inadequacy of degrees of freedom, which are not expected to be present in the study. Time series regression analysis is about trends over a long period of time, which becomes a separate study by itself. Our empirical findings reveal that profitability, liquidity, asset structure and business risk significantly affect capital structure determination of banks. Therefore, profitability is one of the most important determinants for capital structure as stated in the research paper of Sahoo and Omkarnath (2005).

Results show that Size and Non Debt tax shield (NDTS) are significant determinants at 10 percent level of significance for debt equity ratio and growth opportunities (GO) is only non-significant variable for capital structure concerning Indian banking industry. Going by the signs of independent variables as given in Table 5, pecking theory seems to be applicable more relative to the trade-off theory. While the present study lends support to pecking theory, we cannot conclusively refute applicability of trade-off theory as the signs of asset structure and NDTS are in accordance with trade off theory. For drawing, any such conclusion the study may have to be extended by including more variables and other sectors as well.

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