



Choices between Equity and Debt: An Empirical Study

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Abstract

The study expresses the overview on equity and debt called mixed of capital structure and its impact on bank performance which has been categorized as public, joint venture and private commercial bank. Different relationships among dependent and independent variables were examined to test the capital structure performance on commercial banks in Nepalese market.

Key Words: *Return on Assets, Capital Adequacy Ratio, Debt Equity Ratio, Debt Assets Ratio, Firm size*

Introduction

Equity financing refers to the fund generated by sale of stock initially. The main benefit of equity financing is that fund need not be repaid. However, debt financing is to be repaid. Both the combination of equity and debt is the capital structure mix. The decision is important because of the need to maximize returns to various organizational constituencies, and because of the impact, such a decision has on a firm's ability to deal with its competitive environment (Abor, 2005). The credit rating companies assess the capital structure and strategic planning in a firm in order to determine the credit worthiness (Drobetz & Fix, 2003). It can issue a large amount of debt or very little debt. It can arrange lease financing, use warrants, issue convertible bonds, sign forward contracts or bond swaps. It can issue dozens of distinct securities in countless combinations; however, it attempts to find the particular combination that maximizes the overall market value. The above discussion shows that the studies dealing with the impact of capital on financial performance are of greater significance. Though there are various findings as discussed above in the context of different countries, no many findings using more recent data exist in the context of Nepal. Hence, this study attempts to analyze the impact of capital on financial performance of Nepalese commercial banks.

In addition to global arena, several studies have also been conducted in Nepalese context to identify the determinants of corporate financial leverage. This was the case in Nepal also. However financial sector reform that took place since beginning of 1990s led to significant growth in the number of financial institutions, industries, and business firms in the country, including the number of listed companies at Nepal Stock Exchange (NEPSE). However, the pace of development of non-financial industries has been

somehow slower than the financial market. Although the studies related to capital structure in Nepalese context are very few, they were conducted (luring the beginning of 1990s period of pre-liberalization and privatization. The debate on what factors determine capital structure of firms still continues. In this context, the present study was undertaken with the objective to examine the major factors affecting the corporate financial leverage choice of Nepalese non-financial firms.

Research Methodology

This study is based on descriptive and casual-comparative research design to analyze the determinants and performance of capital structure of Nepalese commercial banks. This design was adopted to assess the opinions and characteristics of employees, managers and experts in Nepal. It described the real and actual condition, situation and facts. Hence, the research design adopted in this study is of descriptive type. The study also established the cause and effect relationship between selected bank capital structure variable and the financial performance of Nepalese commercial banks. More specifically the study analyzed the impact of capital adequacy ratio, debt assets ratio, debt equity ratio, firm size, financial performance of the Nepalese commercial banks. The main reason for adopting casual comparative research design was to understand the fact that whether it is possible to predict the determinants of capital structure for Nepalese commercial banks. In order to examine the role of different capital structure variables and control variable on financial performance of banks, this study contains a sample of 22 commercial banks of Nepal whose respective data were collected for the time period of 2009/10 to 2014/15 leading to a total of 132 observations.

The Model Specification

The models employed in this study intended to analyze the relationship between the performance and capital structure variables. The following regression model was used to examine the empirical relationship between the impacts of capital on financial performance of Nepalese commercial bank. Therefore, the following model equation was designed to test the hypothesis. From the conceptual framework the function of dependent variables (i.e. performance) takes the following form:

Performance = f (CAR, DAR, DER, and FS)

More specifically, the given model has been segmented into following models:

Model 1:

$$ROA_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 DAR_{it} + \beta_3 DER_{it} + \beta_4 FS_{it} + e_{it}$$

In above model, the dependent variable is the return on assets indicated by the net profit after tax divided by total assets.

Model 2:

$$TQ_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 DAR_{it} + \beta_3 DER_{it} + \beta_4 FS_{it} + e_{it}$$

In above model, the dependent variable is Tobin's Q indicated by the total market value of share and debt to total assets.

Where,



β_0 = Constant term
CAR = Capital adequacy ratio
DAR = Debt to assets ratio
DER = Debt equity ratio
FS = Firm size
ROA = Return on assets
TQ = Tobin's Q

Debt asset ratio: It is measured as the ratio of total debt (the sum of short term and long-term debt) and total asset. Debt ratio has a significant positive effect on firm performance. H1: Debt to asset ratio is positively related to the bank financial performance.

Debt to equity ratio: It is a measure of proportion of debt to shareholders' funds in the total financing of a business. The ratio indicates how much money was raised as debt. Aburub (2012) found that debt to equity ratio has a positive impact on firm performance evaluation measures. Based on this, the following hypothesis has been developed:
H2: Debt to equity ratio is positively related to the bank financial performance.

Capital adequacy ratio: It is a specialized ratio used by banks to determine the adequacy of their capital keeping in view their risk exposures. Bourke (1989) found that there is positive relationship between the financial performance and capital adequacy ratio and concluded that higher the capital adequacy ratio, higher would be the bank profitability. Based on this, the following hypothesis has been developed:
H3: Capital adequacy ratio is positively related to the bank financial performance.

Firm size: The size of the bank is measured in terms of the total assets. Sufian et al. (2009) found a positive impact of firm size on performance. Jonsson (2008) showed that bigger firms have higher profitability as compared to smaller firms. Lee (2009) revealed that firm size plays a remarkable role in explaining profitability. Based on this, the following hypothesis has been developed:
H4: Firm size is positively related to the bank financial performance.

Presentation and Data Analysis

Estimated regression results of TQ on CAR, DAR, DER, FS, for public sector

banks

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	0.16	0.04	6.06	0.01
Residual	13	0.09	0.01		
Total	17	0.25			
Coefficients					
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	
Intercept	-2.50	1.14	-2.20	0.05	
CAR	0.01	0.00	1.41	0.18	
DAR	0.01	0.00	2.91	0.01	
DER	0.00	0.00	0.90	0.38	
FS	0.09	0.04	2.16	0.05	

From the above calculation the adjusted R square is 0.54.

The above table presents the coefficients of positive significant with capital adequacy ratio, debt assets ratio, debt equity ratio and firm size. Similarly, the significance frequency of total result present as 0.01 presented above on anova table.

Estimated regression results of ROA on CAR, DAR, DER, FS, for joint venture

banks

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance</i>
Regression	4	4.46	1.12	4.65	0.01
Residual	25	6	0.24		
Total	29	10.47			

	<i>Coefficients</i>	<i>Standard Errors</i>	<i>t Stat</i>	<i>P-Value</i>
Intercept	-1.51	39.28	-0.04	0.97
CAR	0.01	0.08	0.13	0.9
DAR	0.14	0.46	0.31	0.76
DER	-0.27	0.26	-1.02	0.32
FS	-0.26	0.34	-0.77	0.45



Summary and Conclusion

The major conclusion of the study is that capital adequacy ratio and debt asset ratio are the major factors affecting bank's financial performance in Nepalese commercial banks. The results reveal that capital adequacy ratio has negative relationship with financial performance of public sector banks. This indicates that increase in the capital adequacy ratio leads to decrease in the financial performance. However, capital adequacy ratio has positive relationship with financial performance of joint venture banks and private commercial banks. This indicates that increase in the capital adequacy ratio leads to decrease in the financial performance. The results also show that debt asset ratio has negative relationship with public sector banks and joint venture banks.

The study also concludes that capital adequacy ratio has positive impact on financial performance of joint venture banks and private commercial banks. This indicates that higher the capital adequacy ratio, higher would be the financial performance. However, capital adequacy ratio has negative impact on financial performance of public sector banks. This indicates that higher the capital adequacy ratio, lower would be the financial performance. The study also concludes that debt asset ratio has negative impact on the financial performance of public sector banks and joint venture banks.



Reference

- Abor, J. (2005). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. *Journal of Risk Finance*, 6(3), 438-447.
- Aburub, N. (2012). Capital structure and firm performance: Evidence from Palestine stockexchange. *Journal of Money, Investment and Banking*, 4(23), 35-54.
- Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking and Finance*, 13(1), 65- 79.
- Drobtz, W., & Fix, R. (2003). What are the determinants of capital structure? Some evidences for Switzerland. *Journal of Financial Economics*, 30 (3), 14-26.
- Jonsson, B. (2007). The relationship between size and profitability of Icelandic firms. *Bifrost Journal of Social Sciences*, 1(3), 43-55.
- Lee, J. (2009). Does size matter in firm performance? Evidence from US public firms. *International Journal of the Economics of Business*, 16 (2), 189-203.
- Sufian, F., & Habibullah, M. S. (2009). Determinants of bank profitability in a developing economy: Empirical evidence from Bangladesh. *Journal of Business Economics and Management*, 10(3), 207-217.