

The Impact of Capital Structure and Firm Size on Financial Performance of Commercial Banks in Nepal

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Abstract

This paper aimed to examine the impact of capital structure and firm size on financial performance of Nepalese commercial banks. The study used a sample of 14 commercial banks covering government owned, joint venture and private banks over the period 2013/2014– 2018/2019 with secondary sources of data. Regression analysis was used in the estimation of functions relating the Return on Assets (ROA) and Earnings per Share (EPS) with measures of capital structure and firm size (total assets). The results revealed a negative relation of ROA and EPS with capital structure (Debt/Equity). However, it showed a positive relationship of ROA and EPS with size (total assets). The findings provided the evidence in support of high-level equity capital employed in the capital structure of Nepalese commercial banks.

Keywords: capital structure, financial performance, commercial banks, return on assets, earning per share

Introduction

In finance, capital structure refers to the way in which an organization is financed a combination of long-term capital. Capital structure decisions are among the most important and crucial decisions for any business because of their effect on the performance of firms (Birru, 2016). It is important because of the need to maximize returns of the firms, and because of the impact, such a decision has on the firm's ability to deal with its competitive environment (Abor, 2005). The relationship between capital structure and financial performance is considerable importance to all banking industry. The banking industry is especially sensitive to changes in financial leverage due to their low level of equity capital to total assets (AL- Kayed et al., 2014). In addition, the capital structure of banks is highly regulated. One of the important issues during the capital structure decision-making is to deal with the determination of optimal capital structure of the firm (Chandra & Sharma, 2015).

The Modigliani-Miller theorem opened a literature on the fundamental nature of debt versus equity. The capital structure of a firm is the result of various financing source. In the perfect capital markets, the costs of different forms of financing do not vary independently and therefore there is no extra gain. As a consequence of taxes, differences in information and agency costs, the financing clearly matters the gain. Capital is a necessary requirement for any business. The capital requirement for the business depends upon the nature of the business, the size of the business and different policies related to the business. Capital required is raised mainly from two sources, equity and debt. Equity provides the ownership of an individual over the firm while debt is the borrowed fund with fixed charges (interest or coupon rate). The capital structure refers to the proportion or mix of financing methods (i.e. debt and share/equity capital). Also, it can be termed as the composition of long-term finance such as long-term debt, preference capital and equity capital. Capital structure is decided as per the need of the company, so the capital structure varies from one another. For example, some companies use share capital only and others may use high debt capital while may choose a different mix of sources. A good capital structure will reduce the overall cost of capital for the capital employed. The low cost of capital means the high discounted value of the cash flows which will be generated in the future. This will maximize the overall value of the firm. The objective of the capital structure is to find the lowest possible cost of capital and consequently maximizing the value of the firm.

Modugu, (2013) studied on different dimensions of capital structure and concluded that the companies' assets are financed by either internal or external capital. The determination of appropriate mix of capital source is one of the strategic decisions and public interest entities are confronted for. In deciding whether to finance the firm's assets with equity, debt or both, certain conditions must first be considered. A wrong composition of a firm's capital structure can result in liquidity and solvency problems. In taking this strategic decision, managers must of necessity apply caution in ensuring that a right mixture of equity and debt are used to harness the benefits accruable from such combination. Financing a company solely with equity or debt may not be an optimal capital structure decision. Capital structure decision affects the value of the firm. A proper balance between debt and equity is necessary to ensure a trade-off between risk and return to the shareholders. The bank should decide the capital structure so that the value is maximized. There should be proper practice for making optimal capital structure so that cost of capital is minimized and the firm's value is maximized. The Modigliani-Miller theorem opened a literature on the fundamental nature of debt

versus equity. The capital structure of a firm is the result of various financing sources. In the perfect capital markets, the costs of different forms of financing do not vary independently and therefore there is no extra gain. As a consequence of taxes, differences in information and agency costs, the financing clearly matters the gain (Visinescu, & Micuda, 2009).

The financing or capital structure decision influences the shareholder return and risk (Birru, 2016). The market of the share is also affected by the capital structure decision (Harris & Raviv, 1990). The financial manager of a firm has to analyze the merits and demerits of various sources of funds before selecting the best one keeping in mind the optimal capital mix or the one that reduces the capital cost. The decision regarding capital structure is a continuous process. It is said to be an optimal one when it maximizes the market value of the firm. The relationship between capital structure and financial performance of the firm has been a subject of considerable debate. In examining the impact of capital structure on firm performance, two kinds of performance measures can be identified in the existing finance literature, namely, the traditional accounting measures of performance return on assets, return on equity, earnings per share and Tobin's Q and profit efficiency measures such as frontier efficiency (Berger and di Patti, 2006).

The banking sector has an important role in the development of the country. Economic development and financial development are closely related. Effective, efficient and disciplined banking systems can bring rapid changes to the economy. The banking sector promotes capital formation; investment and promotion of trade, commerce and industry. The banking sector is the financial institution that accepts deposits from the public and provides loans to the public. Bank has various sources of income; they lend money as loans, services like Automated Teller Machine (ATM) service, annual charges and more. Rajakumaran, and Yogendrarajah, (2015) empirically investigated impact of capital structure on profitability in trading companies in Sri Lanka taking capital structure as independent variable capital structure of the company's is measured by leverage ratios of Debt to Equity Ratio and Debt to Assets Ratio whereas Gross Profit Ratio, Net Profit Ratio, Return On Assets, Return On Equity and Return on Capital Employed are used as the dependent variables. The study revealed that 44% of the total assets in the trading companies of Sri Lanka are representing by debt and on the basis of correlation analysis debt to equity ratio and debt to total assets ratio positively and moderately correlated with gross profit ratio, negatively and moderately correlated with net profit ratio, positively and weakly created

with return on capital employed and negatively and weakly correlated with other profitability ratios.

There has been a debate centered on whether the proportion of debt usage is relevant or irrelevant to individual firm's value. Eriotis et al. (2002) who investigated the relationship between debt-to-equity ratio and firm's profitability. Fama and French (2002), Gill, Biger & Mathur (2011) found a positive relationship between capital structure and profitability. Goyal (2013) identified a positive relationship of debt with profitability. The study of Twairesh (2014) also found the significant impact of leverage on firm's performance. Pouraghajan & Malekian (2012); Quang & Xin (2014) found a significant and negative impact with statistical significance on firm's financial performance. Ibrahim (2009) identified that the capital structure has a weak to no impact on firm performance. Olokoyo (2013) showed a significant negative effect of leverage on firm's performance. Study by Zeitun & Tian (2007) in taking 167 Jordanian companies over fifteen-year period, found a significant negative impact of firm's capital structure on the firm's financial performance. In addition Doku, Kpekpena & Boatengthe (2019) examined that bank capital to asset ratio has a strong and found positive driver of bank financial performance. The empirical relationship between a firm's size, structure, and profitability has been found that size is positively correlated with profitability (Gichura, 2011), with the profit rate of the market positively correlated with the concentration ratio and negatively correlated with the marginal concentration ratio (Adams and Buckle, 2003). Most of the Nepalese commercial banks have used debt capital. In this context, this study tried to answer the following questions in the Nepalese commercial banking literature:

- Is there relationship between capital structure and financial performance?
- Does capital structure impact on ROA?
- Does capital structure impact on EPS?
- Does the bank's size affect on financial performance?

Objective of the Study

The general objective of this study was to examine the impact of capital structure and firm size on financial performance of commercial banks in Nepal. The other specific objectives were:

- To identify the impacts of capital structure on ROA.

- To analyze the impacts of capital structure on EPS.
- To examine the effects of bank's size on financial performance.

Methodology

The study uses fourteen banks covering government owned, joint venture and private banks. Data for 6 fiscal years period (2013/2014–2018/2019) have been taken for the study. ROA and EPS have been taken as the financial performance measure to identify the impact of capital structure (Debt/Equity) and the size (total assets). This study has followed descriptive research design using secondary sources of data. Banks using both debt and equity capital are taken as sample under judgmental basis. Regression analysis was used in the estimation of functions relating the ROA and EPS with measures of capital structure and total assets.

Following regression model was developed for the examination.

$$EPS = \beta_0 + (\beta_1 \times D/e) + (\beta_2 \times Size) + \mu$$

$$ROA = \beta_0 + (\beta_1 \times D/e) + (\beta_2 \times Size) + \mu$$

Where: EPS= Earnings per Share, ROA=Return on Assets, D/E = Debt-equity ratio, Size= Total assets, β_0 =constant, β_1 and β_2 are coefficients of variables included in the model and μ is error term.

Results and Discussion

Table 1: Relationship Analysis

	ROA	EPS	D/E Ratio	Size
ROA	1			
EPS	.723*	1		
D/E Ratio	-.493**	-.248***	1	
Size	.606*	.703*	-.138***	1

*=sig. at 0.01, **= sig. at 0.05, ***= sig. at 0.10

Table 1 presents the relationship between the arrangements of variables. As indicated by the idea of productivity, earnings per share and return on assets are the significant wellsprings of financial performance. The outcome supports to such idea. The relationship of EPS on ROA appears to be 72.3%. Nonetheless, these two have

been considered in this investigation as reliant factors and consequences for these by the free factors have been assessed independently with the regression models. The outcomes from the relationship network demonstrate that bank's EPS is contrarily connected with D/E ratio and emphatically corresponded with size. Then again, steady with the priori desire, ROA is contrarily connected with D/E ratio and emphatically connected with size increment.

Table 2: Degree of Relationship with Earning per Share

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
	.719	0.517	0.43	8.84938	5.896	0.00

- a. Predictors (*Constant*), Size, Debt- Equity Ratio
 b. Dependent Variable: Earning Per Share

Table 3: Coefficient

Model 1	Un-standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	5.912	10.926		.541	.599
D/E Ratio	-33.263	45.718	.154	-.728	.482
Size	3.0130	.000	.682	3.223	.003

- a. Dependent Variable: Earnings per Share

Table 2-3 presents model summary and regression result of the effect of debt equity proportion and size of the business on one of the significant performance measures, EPS. The outcomes of R² and adjusted R² address the degree of the variability of ward variable can be explained by the independent variable. These results express the general useful force of the regression model. The overall regression model is significant, F = 5.896, P < 001, R² = 0.517. This exhibits most outrageous 51.7% of the assortment in the earnings per share can be explained by the assortment in the variables.

Moreover, with the results of coefficients table D/E proportion is inconsequential indicator whereas size of the business huge indicator in the challenge of

Nepalese financial enterprises. From this assessment, it tends to be inferred that those Nepalese commercial banks have gained equity capital according to heading of Nepal Rastra Bank's capital extension and then debt obligation extent is declined and legitimate.

Table 4 Degree of Relationship with Return on Assets

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.733	0.538	0.454	0.00270	6.397	0.00

Predictors *(Constant)*, Size, Debt- Equity Ratio

Dependent Variable: Return on Assets

Table 5 Coefficients

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.013	.003		3.795	.003
D/E Ratio	-.028	.014	.417	-2.015	.069
Size	7.5581	.000	.548	2.648	.001

a. Dependent Variable: Return on Assets

Table 4-5 represents model summary and regression result of the effect of debt equity proportion and size of the business on one of the significant performance indicators, ROA. The outcomes of R² and adjusted R² address the degree of the variability of dependent variable can be explained by the independent variable. These results expressed the general useful force of the regression model. The overall regression model was significant, F = 6.397, P < .001, R² = 0.538. This exhibits most outrageous 53.8 % of the assortment in the return on assets that can be explained by the assortment in the variables.

Furthermore, the results of coefficient table indicate that D/E proportion is inconsequential indicator whereas size of the business huge indicator in the challenge of Nepalese financial enterprises. From this assessment it tends to be inferred that those

Nepalese commercial banks have gained equity capital according to heading of Nepal Rastra Bank's capital extension and then debt obligation extent was declined and legitimate.

Conclusion

The financing decision of capital structure and their impact on financial performance has been a major field in the corporate finance literature. This paper aimed to examine the impact of capital structure and firm size on financial performance of commercial banks. ROA and EPS were used as the financial performance indicators. The studies revealed a negative relation of ROA and EPS with capital structure (Debt/Equity) and it lied in the line of (Timsina, 2018). It indicates that, there is no impact of capital structure on ROA and EPS. However, it shows a positive relationship of ROA and EPS with total assets (Size) and lies in the line of Merikas et al., (2006) to support a positive relationship between firm size and profitability. The findings provide evidence in support of high-level equity capital employed in the capital structure of Nepalese commercial banks. This study is useful to the managers of banking industry for taking any decisions on improving financial performance.

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