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Commercial Banks Performance in Ghana: Does Capital Structure Matter?

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Abstract

This study seeks to investigate the relationship between capital structure and commercial banks performance in Ghana. Using a panel data of listed commercial banks spanning from 2010-2015, the Ordinary Least Squares regression model is employed to estimate the functions relating to bank performance (measured by Return on Equity) with measures of capital structure. The findings show statistically significant relationship between commercial banks' performance and all the capital structure measures (the ratios of short-term debt to total capital, long-term debt to total capital, and total debt to total capital). Whereas total debt and banks' performance are positively correlated, short-term debt and long-term debt are inversely related to banks' performance. In essence, using large proportion of debt significantly enhance commercial banks performance in Ghana.

Keywords: Capital Structure, Commercial Banks, Performance, Ghana

1. Introduction

Capital structure plays a vital role in the success of businesses because of its impact on firms' profitability (Zeitun and Tanni, 2014). One crucial issue confronting managers today is how to choose the optimum source of financing that would minimize the firm's cost of capital and improve return to owners of the business (Awunyo-Vitor & Badu, 2012). Research suggests that for a firm's survival, especially in very difficult circumstances, capital structure is essential to measure growth and performance (Voulgaris, Asteriou & Agiomirgianakis, 2004).

According to Puwanenthiren (2011), capital structure refers to a mixture of a variety of long term sources of funds and equity shares including reserves and surpluses of an enterprise. In financial terms, it explains how firms finance their assets through the combination of equity, debt, or hybrid securities (Saad, 2010).

The relationship between capital structure and firm performance has been studied extensively according to literature (for example; Zeitun & Tian, 2014; Ebaid, 2009; Abor, 2005). However, there is no consensus about the effect of capital structure on the performance of firms.

Considering the extensive literature on the impact of capital structure on firm performance in the developed countries and other emerging markets, little literature exists in the context of Ghana especially in the banking industry. This study therefore extend the empirical literature on capital structure in Ghana by examining the effect of capital structure on the profitability of commercial banks in Ghana especially those listed on the Ghana Stock Exchange.

2. Literature Review

Empirical results on the relationship between capital structure and firm performance have gone both ways. Whereas some researchers argue that there is a positive relationship between capital structure and performance, others document that capital structure and performance are negatively related.

For instance, Khan (2012) examined the relationship between capital structure and the performance of 36 engineering firms on Karachi Stock Exchange for the period 2003-2009. The findings indicate a negative but significant relationship between financial leverage measured by short term debt to total assets (STDTA) and total debt to total assets (TDTA) and firm performance (measured by return on assets (ROA), gross profit margin (GPM) and Tobin's Q).

Gatsi and Akoto (2010) employed a panel data methodology in examining the effects of capital structure on profitability of Ghanaian Banks. A total of 14 banks were covered over the period 1997-2006. It was observed that, 87% of capital of banks in Ghana is made up of debt: out of which 65% constitute short term debt and 22% long term debt. Their findings support previous studies that stress the fact that banks are highly leverage institutions and also the importance of short term debt over long term debts in firm financing in Ghana.

Puwanenthiren (2011) assessed the correlation between capital structure and financial performance in Sri Lanka for the period 2005-2009. Using some selected companies in the Colombo stock Exchange of Sri Lanka, the study found that capital structure (debt/equity ratio) had negative correlation with firms' performance (measured by Net profit, Return on Investment, and Return on Assets).

Ebaid (2009) revealed that capital structure has a very weak relationship with performance on the emerging market economy of Egypt. He showed that capital structure (measured by short term, long term and total debt to total assets) related insignificantly with firms' performance (measured by return on equity). From his findings, short term debt and total debt to total assets related negatively and significantly with firms performance. Also, long term debt related negatively and insignificantly with performance. The results further reported insignificant relationship between capital structure and gross profit margin.

Nimalathan and Valeriu (2010) investigated the impact of capital structure on profitability of listed manufacturing companies in Sri Lanka. Employing a secondary data for the period 2003-2007, the analysis showed that Debt-equity ratio is positively and strongly associated with all profitability ratios (Gross Profit, Operating Profit, and Net Profit).

A research by King and Santor (2008) examined the linkage between family ownership, firm performance and capital structure on Canadian firms. Based on Tobin's q ratio, the result showed that self-supporting family owned firms with a single share class have similar market performance compared to other firms, superior accounting performance based on ROA, and higher financial leverage based on debt-to-total assets. Comparatively, family owned firms which use dual-class shares have valuations that are lower by 17% on average relative to broadly held firms, even though having similar ROA and financial leverage.

Taani (2013) examined the impact of capital structure on performance of 12 commercial banks listed on Amman Stock Exchange during 2007-2011. He found that bank performance measured by net profit, return on capital employed and net interest margin related significantly and positively with total debt, whereas total debt had insignificant relationship with return on equity in the banking industry of Jordan.

Abor, (2005) investigated the relationship between capital structure and profitability of listed firms on the Ghana Stock Exchange (GSE) for a five year period. The findings established a significantly positive relationship between the ratio of short-term debt to total assets and ROE. However, a negative relationship between the ratio of long-term debt to total assets and ROE was found. With regards to the relationship between total debt and return rates, the results showed a significantly positive association between the ratio of total debt to total assets and return on equity. The researcher suggested that profitable firms in Ghana depend more on debt as their main financing option.

Pandey (2004) provided an insight into the relationship between capital structure and profitability. The study employed secondary data of 208 companies listed on the Kuala Lumpur stock exchange from 1994 to 2000. The results showed a saucer-shaped relationship between capital structure and profitability. This was seen to be due to the interplay of agency cost, cost of external financing and interest and tax shield.

A study by Gleason, Mathur and Mathur (2000) on the relationship between culture, capital structure and performance used data from retailers in 14 European countries. The empirical findings showed that capital structures differ by the cultural classification of retailers. The result also shows that retailer performance is not dependant on cultural influence.

Akintoye (2008) examined the sensitivity of performance to capital structure on selected food and Beverage Companies in Nigeria. The results showed that performance indicators (Earnings Before Interest and Taxes, Earnings Per Share, and Dividend Per Share) and the measures of leverage (Degree of Operating Leverage and Degree of Financial Leverage) are significantly sensitive.

3. Methodology

3.1 Sample Size and Data

The study targeted all commercial banks listed on the Ghana Stock Exchange. A total of seven commercial banks were found at the time of the study. In all, five of the commercial banks were sampled. The selected banks were GCB Bank Limited, CAL Bank Limited, Standard Chartered Bank Ghana Limited, Ecobank Ghana Limited, and Societe Generale Ghana. The reason for choosing listed banks is for convenience which allows easy access to data. The main sources of data for this study comprised mainly secondary data obtained from the annual financial statements of the selected banks.

3.2 Description of Variables

The literature on firms performance (for example; Amaral-Baptista et. al, 2011; Khrawish, 2011; Qin and Dickson, 2012; Nazir and Afza, 2009; Flamini et al., 2009) have used ROA and ROE as the common financial performance measures. In this study, ROE is used as a measure of bank performance which serves as the dependent variable. The capital structure explanatory variables are ratios of short-term debt to total capital, long-term debt to total capital, and total debt to total capital. The table below describes the dependent and the independent variables used in this study.

Table 1: Description of Variables

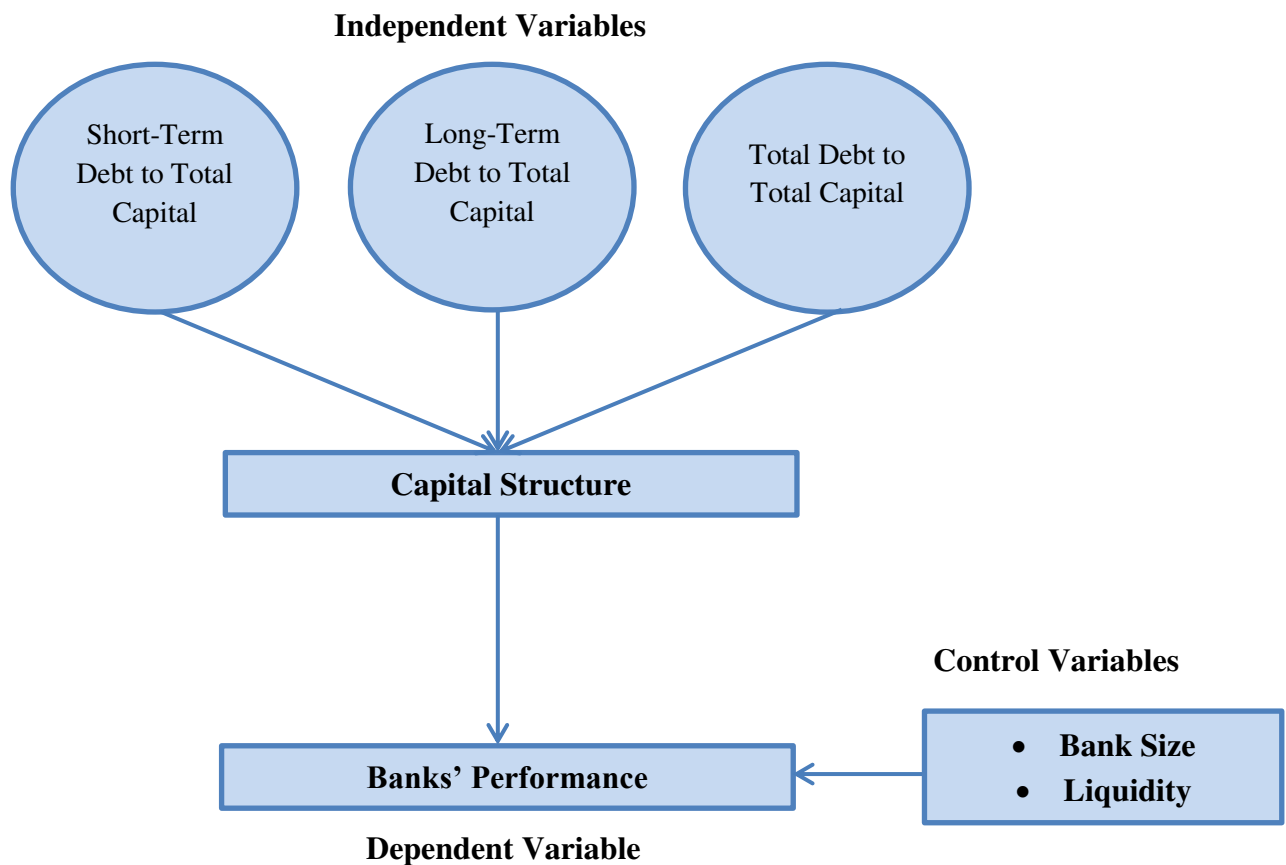
Variable	Measurement
Dependent Variable	
Return on Equity (ROE)	Net Profit after tax divided by Total Shareholders' Equity
Independent Variables	
Ratio of Short-term Debt to Total Capital (STDC)	Short-term Debt divided by Total Capital
Ratio of Long-term Debt to Total Capital (LTDC)	Long-term Debt divided by Total Capital
Ratio of Total Debt to Total Capital (TDC)	Total Debt divided by Total Capital
Control Variables	

Bank Size (SIZE)	The Natural Logarithm of Total Assets
Liquidity (LIQ)	Ratio of Loans to Deposits

3.3 Conceptual Framework of the Study

Based on the variables outlined in **Table 1**, the following conceptual framework has been developed for this study, which diagrammatically explains how capital structure impacts on banks performance whilst controlling for other variables that are more likely to affect banks performance.

Figure 1: Conceptual Framework



3.4 Model Specification and Analytical Approach

To determine the relationship between capital structure and banks' performance, a panel regression model was used which is specified as follows:

$$ROE_{it} = a_0 + \beta_1 STDC_{it} + \beta_2 LTDC_{it} + \beta_3 TCD_{it} + \beta_4 SIZE_{it} + \beta_5 LIQ_{it} + \varepsilon$$

From the model, the subscript i represents individual banks, t denotes the sample period from 2010-2015, and the symbol a refers to the intercept. ROE is the dependent variable which represents bank performance. Short-term debt to total capital, long-term debt to total capital, total debt to total capital, bank size, and liquidity are represented by $STDC$, $LTDC$, TCD , $SIZE$, and LIQ respectively. ε refers to the error term, and β_1 to β_5 represent the model coefficients.

The study used the Pooled Ordinary Least Squares (OLS) regression analysis to establish the relationship and the significance of the independent variables on banks performance.

4. Analysis and Results

4.1 Descriptive Statistics

Table 2 (as shown below) summarises the descriptive statistics of the dependent and explanatory variables used in this study. The performance of commercial banks measured by ROE has a mean value of 84.4%. This means that commercial banks performance for the period considered is high. It is also an indication of higher efficiency of capital invested by shareholders. The mean values of the capital structure components (short-term debt, long-term debt, and total debt to total capital) are estimated at 47.7%, 63.6%, and 111.4% respectively. This shows that commercial banks in Ghana are highly leveraged and use more long-term debt than short-term debt. With the control variables, the average values of bank size and liquidity are 6.33 and 63.6% respectively. The mean value of liquidity largely exceeds the 28.3% minimum liquidity requirements of commercial banks in Ghana as at 2013.

Table 2: Descriptive Statistics

Variables	Observations	Mean	Stand Dev.	Minimum	Maximum
ROE	30	0.844	0.279	0.520	1.559
STDC	30	0.477	0.351	0.090	1.470
LTDC	30	0.636	0.809	0.000	3.620
TDTC	30	1.114	0.960	0.320	5.090
SIZE	30	6.334	0.280	5.710	6.830
LIQ	30	0.636	0.239	0.231	1.227

4.2 Regression Results

From **Table 3** below, the R^2 of 0.460 indicates that about 46% of the variation in ROE (measure of commercial banks performance) can be explained by the explanatory variables included in the model. The values $F=4.09$, $p=0.0079$ show that the overall regression model is statistically significant, which explains the fact that the independent variables used in the regression estimation are significant factors explaining commercial banks performance.

The results of the empirical analysis show a negative but statistically significant relationship between short-term debt (STCD) and bank performance (measured by ROE). This means that commercial banks performance declines as the proportion of short-term debt used in financing activities increases. A major reason that could account for this is that commercial banks in

Ghana are unable to profitably invest customers' deposits. This result is in line with the findings of Amidu (2007).

From the analysis, long-term debt (LTDC) and bank performance are negatively related but statistically significant. This implies that as commercial banks in Ghana resort to more long-term debt in financing activities, their performance level decline.

Also, total debt (TDTC) shows significant positive relationship with bank performance. That is, as commercial banks use more debt to finance their assets relative to equity, their performance increases. This conforms to the research by Gill et al. (2011). However, some studies (for example; Abor 2007; Chiang et al, 2002) found a negative association between total debt and performance.

For the control variables, bank size shows a positive but insignificant relationship with performance. Liquidity also shows insignificant and negative relationship with performance. The insignificant relationships of the control variables and performance connote that bank size and liquidity are unable to explain the variability of commercial banks performance in Ghana for the period under study.

Table 3: Results of the Regression Analysis

Variable	Coefficients	Standard Error	t Stat	P-value
(Constant)	-0.803	1.022	-0.785	0.440
STDC	-19.108	7.911	-2.415	0.024
LTDC	-18.744	7.865	-2.383	0.025
TDTC	18.851	7.883	2.391	0.025
SIZE	0.307	0.155	1.978	0.059
LIQ	-0.419	0.210	-1.992	0.058

$R^2 = 0.460$ Observations = 30
Adjusted $R^2 = 0.348$ Probability (F-Statistic) = 0.0079
 $F(5, 24) = 4.09$

5.0 Conclusion

This study examined the relationship between capital structure and the performance of commercial banks in Ghana. The empirical results established that short-term debt and long-term debt have statistically significant negative relationship with bank performance. Total debt however has a positive and statistically significant correlation with bank performance. With regards to the control variables, bank size and performance are positively related though statistically insignificant. A negative and statistically insignificant relationship exists between liquidity and bank performance. In a nutshell, using large proportion of debt significantly influence the performance of commercial banks performance in Ghana.

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